Final Evaluation Report

Synergy and Action for Nutrition+ (SAN+)

Child Survival Project – Koulikoro Region, MALI

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Acronyms and Special Terms

ADRA	Adventist Development and Relief Agency
Albendazole	De-worming medicine
ANC	Antenatal Care
ASACO	*Association de la Santé Communautaire* (Community Health Association)
ATN	*Assistance Technique Nationale+* (National Technical Assistance+ Project – USAID Mali's principal health sector technical assistance project)
BCC	Behavior Change Communication
BF	Breastfeeding
CARE	International NGO
CATCH	Core Assessment Tool on Child Health
CDD	Control of Diarrheal Diseases
CMAM	Community-based Management of Acute Malnutrition (also referred to as CTC)
CNIECS	*Centre National de l'Information, Education, et Communication pour la Santé* (National Center for Health Information, Education, and Communication)
ComDev	USAID Mali-funded Communications for Development project implemented by HKI
CSCom	*Centre de Santé Communautaire* (Community Health Center)
CSHGP	Child Survival and Health Grants Program
CSRef	*Centre de Santé de Référence* (Reference Health Center)
CTC	Community-based Therapeutic Care (also referred to as CMAM)
DIP	Detailed Implementation Plan
DHMT	District Health Management Team
DHO	District Health Officer
DN	*Division Nutrition* (Nutrition Division of the Ministry of Health)
DNS	*Direction Nationale de la Santé* (National Health Directorate)
DRDSES	*Direction Régionale de Développement Sociale et de l'Economie Solidaire* (Regional Directorate for Social Development and Economic Solidarity)
DRS	*Direction Régionale de la Santé* (Regional Health Directorate)
ENA	Essential Nutrition Actions (an internationally-accepted framework of seven key actions to improve nutritional status)
EOP	End-of-project
EPI	Expanded Program of Immunizations
FY	Fiscal Year
GAIN	Global Alliance for Improved Nutrition
GIK	Gifts-in-kind
HFA	Health Facility Assessment
HIS	Health Information System
HIV	Human Immuno-Deficiency Virus
HKI	Helen Keller International
HQ	Headquarters
HW	Health worker
IEC	Information, Education, and Communication

IER	*Institut d'Economie Rurale* (Rural Economy Institute)
IFA	Iron+Folic Acid
INACG	International Nutritional Anemia Consultative Group
INFO-STAT	Center for Statistics and Data Processing
IVACG	International Vitamin A Consultative Group
IPT	Intermittent Preventive Treatment (or Intermittent Presumptive Treatment)
ITN	Insecticide Treated Nets
Kènèya Ciwara	"Excellence in Health" in Bambara – district-level health initiative implemented by CARE International and its partners
KPC	Knowledge, Practice, and Coverage (Survey)
LOE	Level of Effort
LOP	Life of Project
Matrone	Auxiliary midwife; paid employee at health facility
M/DHS-2001	Mali Demographic and Health Survey 2001
M&E	Monitoring and Evaluation
MI	The Micronutrient Initiative
Misola	A locally produced complementary food
MOH	Ministry of Health
MSD	Ministry of Social Development (*Ministère du Développement Social et de l'Economie Solidaire*)
MOST	USAID flagship micronutrient project
MOU	Memorandum of Understanding
MTE	Midterm Evaluation
MUAC	Mid-Upper Arm Circumference
Muso koroba	Bambara term for older women or grandmothers
NCHS	National Center for Health Statistics
NFFA	National Food Fortification Alliance
NGO	Non-governmental Organization
NNW	National Nutrition Week
Nutrition+	Package of key nutrition actions based on ENA
OFDA	Office of Foreign Disaster Assistance (USA)
ORTM	*Office de Radiodiffusion et de Télévision au Mali* (Malian Office of Radio and Television Broadcasting)
ORS	Oral Rehydration Solution
ORT	Oral Rehydration Therapy
PRODESS	Mali's 10-year health and social development program
PROFILES	A USAID-supported nutrition policy analysis and advocacy tool
PSI	Population Services International
PVO	Private Voluntary Organization
QA	Quality Assurance
Relais	Volunteer community health agent; may be a man or woman
SAN+	Synergy and Action for Nutrition+ project
SASDE	UNICEF-implemented Accelerated Child Survival and Development project
SC-US	Save the Children US
SD	Standard Deviation

SIAN	*Semaine d'Intensification des Activités de Nutrition* (National Nutrition Week)
SIS	*Système d'Information Sanitaire* (Health Information System)
SO	Strategic Objective
SP	Sulfadoxine-pyrimethamine
TOR	Terms of Reference
TOT	Training-of-trainers
UNICEF	United Nations Children's Fund
URTEL	*Union de Radios et Télévisions Libres du Mali* (Mali Union of Free Radios and Televisions)
USAID	United States Agency For International Development
VA	Vitamin A
VAC	Vitamin A Capsule
VAS	Vitamin A Supplementation
W/A	Weight for age
WFP	World Food Program
WHO	World Health Organization
WRA	Women of Reproductive Age

TABLE OF CONTENTS

Chapter One: Executive Summary

I. Brief Project Description

From October 2005 through September 2009, Helen Keller International (HKI) and its partners implemented the "Synergy and Action for Nutrition+" (SAN+) project in all nine health districts of the Koulikoro Region in southwestern Mali. Key partners included the Ministry of Health (MOH); the Ministry of Social Development (MSD); UNICEF; the World Food Program (WFP); and a number of other national and international organizations.

The goal of the project was to improve the nutritional status, morbidity, and mortality of children 0-23 months and pregnant and breastfeeding women. The target population for the four years of project implementation included 69,396 children and 190,840 women of reproductive age. The main objectives of the SAN+ project were to:

- improve nutritional status through the decrease of the prevalence of underweight children under two years
- increase the proportion of children 6-23 months receiving Vitamin A supplementation (VAS)
- improve nutritional status through the decrease of prevalence of anemia among children 6-23 months and among pregnant women
- improve control of diarrheal disease in infants and young children
- improve maternal care during the postpartum period
- enhance the capacity of partners to plan, monitor, and sustain project interventions

The project incorporated all the key elements of the Essential Nutrition Actions (ENA) framework. Widely-used internationally for nutrition programs, the framework includes the following interventions: optimal breastfeeding; optimal complementary feeding for children 6-24 months of age, with continued breastfeeding; optimal maternal nutrition; nutritional care of the sick and malnourished child; integrated control of anemia; Vitamin A supplementation for children 6-59 months and post-partum women; and control of iodine deficiency through the promotion of iodized salt.

For the purposes of the SAN+ project, this package of interventions was referred to as Nutrition+. The project strategy focused on implementing Nutrition+ primarily at the community-level health facilities or *Centres de Santé Communautaire* (CSComs) and also at the next level up, the Reference Health Centers in each of the nine districts.

The Child Survival and Health Grants Program (CSHGP) of USAID provided the principal funding for the SAN+ project. Additional financial and in-kind resources, primarily for therapeutic treatment of malnutrition in young children, came from the USAID Office of Foreign Disaster Assistance (OFDA), the Monsanto Foundation, UNICEF, and the WFP.

II. Main Accomplishments

Overall, the project achieved most of its objectives, a result of sound project design, a committed SAN+ team, generous donors, and dedicated partners, especially those from the Ministry of Health and the Ministry of Social Development. INFO-STAT, an independent agency, measured the quantitative

indicators during the baseline and final surveys. When data on Vitamin A distribution and de-worming from the National Nutrition Week campaigns are included with the survey data, the combined results show that targets were met or exceeded for 10 out of 17 indicators, an important achievement considering that project activities spanned only a three-year period. Of the remaining seven indicators, the final survey results demonstrate that the SAN+ team made noticeable progress in reaching most of the end-of-project targets.

In terms of improvements in health services, the SAN+ team and the MOH successfully reintegrated nutrition interventions into services offered at the community and district level facilities. Interventions included the Nutrition+ package for preventive measures and therapeutic activities focused on Community Management of Acute Malnutrition (CMAM), a component supported by other funding sources. The decision to implement the project through the existing health system and the addition of a therapeutic component to the prevention activities were key factors in helping the team to achieve results.

One of the most consistent findings during the final evaluation was the success of the capacity-building activities with MOH personnel, especially those at the CSComs. When the evaluation team interviewed the CSCom agents, their district supervisors, and mothers of young children, all three groups noted that the CSCom teams were better informed about the Nutrition+ package and had improved their capacity to treat malnourished children.

In addition to re-integrating nutrition services into the health facilities and improving the capacity of MOH personnel, the SAN+ project team and its partners were also successful in effecting three changes in policy at the national level. First, zinc is now accepted as part of the protocol for the treatment of diarrheal disease. Second, the MOH added de-worming, an intervention piloted in the SAN+ zone, as an activity of the semi-annual National Nutrition Week campaigns. Third, the funding from OFDA supported the drafting and approval of a national protocol for community-based management of acute malnutrition.

In conclusion, the SAN+ project and its partners succeeded in

- increasing access to and use of curative and preventive Nutrition+ interventions in CSComs;
- improving the quality of key nutrition actions delivered by health staff to households;
- improving household knowledge and behaviors related to Nutrition+; and
- enhancing the capacity of partners to plan, implement, monitor, and sustain project interventions.

Table 1. Summary of Major Project Accomplishments

Objective 1: Improve nutritional status through the decrease of prevalence of underweight (W/A) children under two years			
Inputs	**Activities**	**Outputs**	**Outcome Indicators**
- SAN+ team, HKI, and MOH staff - Training curricula - BCC strategy and IEC materials, inc. radio - Tools for data collection, reporting, and dissemination - Financial and in-kind resources (inc. non-CSHGP funding for CMAM activities, commodities, and equipment) - Community-level support from leaders, volunteers, associations, and ASACOs	- Training (Nutrition+ , BCC, and M&E) for SAN+ team, MOH personnel, community volunteers and groups, and radios - Development and dissemination of IEC materials: health facilities, community level, and radios - Development and implementation of M&E plan - Participation in and support for National Nutrition Weeks (NNW) - non-CSHGP funded: CMAM component, inc. screening and treatment of malnourished children w/therapeutic food rations - Formation of support groups [non-CSHGP funding] - Advocacy to include malnutrition screening in NNW	- Increased knowledge of Nutrition+ and CMAM on the part of SAN+ team, MOH personnel, and communities - Increased capacity to identify, monitor, and treat malnourished children - Increased access to and availability of nutrition services, especially at CSComs	Indicator 1: % of children 0 to 23 months who are underweight (-2 SD from the median weight-for-age, according to the WHO/NCHS reference population) (17% to 13%) Indicator 2: % of infants younger than 12 months who are put to the breast within one hour of birth (28% to 54%) Indicator 3: % of children age 0-5 months who were exclusively breastfed during the last 24 hours (20% to 45%) Indicator 4: % of infants 6-8 months who received complementary feeding at least 2 times during the last 24 hours (74% to 81%) Indicator 5: % of infants 9-11 months who received complementary feeding at least three times during the last 24 hours (55% to 92%)
Objective 2: Increase the proportion of children 6-23 months receiving Vitamin A supplementation (VAS)			
Inputs	**Activities**	**Outputs**	**Outcome Indicators**
- Same as Objective 1 plus - Vitamin A capsules (VAC)	- Same as Objective 1 plus - Distribution of VAC: health facility and NNW	- Increased awareness of importance of Vitamin A for young children - Increased availability of VAC	Indicator 6: % of children 6-23 months who received VAC during the last six months (31% to 75%) <u>From National Nutrition Week (NNW) reports</u>: % of children 6-59 months in the Koulikoro Region who received VAC during the June 2008 NNW (97%) and January 2009 NNW (98%)

Objective 3: Improve nutritional status through the decrease of prevalence of anemia among children 6-23 months			
Inputs	Activities	Outputs	Outcome Indicators
- Same as Objective 1 plus - ITNs - Albendazole tablets	- Same as Objective 1 plus - Distribution of ITNs (MOH, UNICEF, PSI, USAID, etc.) - Distribution of Albendazole at NNW - Advocacy for inclusion of de-worming in NNW	- Increased awareness of importance of ITN for malaria prevention - Increased awareness of importance of de-worming for anemia prevention - ITNs more widely used - Increased availability of de-worming treatment - De-worming adopted nationally as a NNW activity	Indicator 7: % of children age 0-23 months who slept under an insecticide-treated net the previous night (48% to 69%) Indicator 8: % of children 12-23 months who received de-worming tablet during the last six months From NNW reports: % of children 12-23 months in the Koulikoro Region who received Albendazole during the June 2008 NNW (100%) January 2009 NNW (102%)
Objective 5: Improve the nutritional status of pregnant women through the decrease of anemia prevalence			
Inputs	Activities	Outputs	Outcome Indicators
- Same as Objective 1 plus - ITNs - Albendazole tablets - Iron+folic acid (IFA) - Sulfadoxine-pyrimethamine (SP)	- Same as Objective 1 plus - Distribution of ITNs (MOH, UNICEF, USAID, etc.) - Distribution of Albendazole at NNW - IFA and SP distribution - Advocacy for inclusion of de-worming in NNW	- Increased awareness of importance of ITN for malaria prevention - Increased awareness of importance of de-worming for anemia prevention - ITNs more widely used - Increased availability of de-worming treatment - De-worming adopted nationally as a NNW activity - Increased access to SP and IFA	Indicator 12: % of pregnant women who took iron/folic acid tablets during the last 24 hours (36% to 44%) Indicator 13: % of pregnant women who slept under an insecticide-treated net the previous night (48% to 67%) Indicator 14: % of women with children under 1 year who received two doses of SP during the last pregnancy (16% to 34%) Indicator 15: % of women with children under one who received a de-worming tablet during the last pregnancy (8% to 27%)

Objective 6: Improve maternal care during the postpartum period			
Inputs	Activities	Outputs	Outcome Indicators
- Same as Objective 1 plus - Vitamin A capsules - Iron+folic acid	- Same as Objective 1 plus - Distribution of Vitamin A and IFA	- Increased awareness of importance of Vitamin A and IFA for postpartum women - Increased availability of VAC and IFA	Indicator 16: % of postpartum women with under one children who received VAC within 40 days of delivery (61% to 52%) <u>From NNW reports</u>: % of women in the immediate postpartum period (w/in 40 days of delivery) in the Koulikoro Region who received Vitamin A during the June 2008 National Nutrition Week (107%) January 2009 NNW: (142%)
Objective 7: Enhance the capacity of partners to plan, monitor, and sustain project interventions			
Inputs	Activities	Outputs	Outcome Indicators
- Same as Objective 1	- Training (Nutrition+ , BCC, and M&E) for MOH and MSD personnel - Development and implementation of M&E plan - Joint planning and implementation of training activities - Joint planning exercises (district and regional levels) - SAN+ management team participation in forums and regional and national-level meetings - Joint supervision of CSComs	- More frequent supervision of and support for CSComs - Coordinated activity planning at district and regional levels - Training activities in line with MOH policies and programs - Improved quality of services, especially at CSComs	No quantitative indicators available

III. Main Conclusions and Recommendations

In addition to achieving the majority of its objectives, the SAN+ project made useful contributions to improved data collection, helped to effect changes in national policy and programs, prepared and tested Information, Education and Communication (IEC) materials and training manuals, and trained an impressive number of MOH personnel. But perhaps the most important contribution is that the SAN+ project demonstrated the effective, low-cost reintegration of nutrition services into health facilities at the community level. The Ministry of Health is now looking at ways to replicate this success on a national level, using lessons learned from the experience of SAN+.

Key recommendations for organizations planning similar projects include:

- Replicate the approach of working through the existing health structure rather than setting up parallel systems.
- Put in place a management team with adequate human resources to carry out all the key management functions.
- Design a Behavior Change Communication (BCC) strategy which includes long-term follow-up support to people who want to change behaviors and practices.
- Where feasible, use a multi-media approach for disseminating IEC messages. Radio, for example, can be particularly effective in rural areas.
- Include in the design strategies for motivating broad community participation.
- Ensure the same multi-faceted approach that was successful in the SAN+ project design: targeting both women and children; using a variety of cross-cutting strategies; relying on synergy to complement project interventions; and using a BCC strategy which includes both interpersonal communication and mass media.

Chapter Two: Project Overview

I. Project Goal and Objectives

The overall goal of the project was to improve the nutritional status, morbidity, and mortality of two groups in the Koulikoro Region of Mali: children 0-23 months and pregnant and breastfeeding women. The seven objectives supporting this goal were:

Objective 1	Improve nutritional status through the decrease of prevalence of underweight (W/A) children under two years.
Objective 2	Increase the proportion of children 6-23 months receiving Vitamin A supplementation.
Objective 3	Improve nutritional status through the decrease of prevalence of anemia among children 6-23 months.
Objective 4	Improve control of diarrheal diseases in infants and young children 0-23 months.
Objective 5	Improve the nutritional status of pregnant women through the decrease of anemia prevalence.
Objective 6	Improve maternal care during the postpartum period.
Objective 7	Enhance the capacity of partners to plan, monitor and sustain project interventions.

II. Project Location and Population

The SAN+ project is located in the Koulikoro Region, one of eight regions in Mali. The project covers all nine health districts in the region: Banamba, Dioïla, Fana, Kangaba, Kati, Kolokani, Koulikoro, Nara, and Ouelessebougou. Although this is a large geographic area to cover, the Ministry of Health requested that the SAN+ team implement activities in the entire region at the same time rather than a phased approach..

As in other regions of Mali, the Ministry of Health in the Koulikoro Region includes three main organizational levels: regional, district, and community. At the regional level is the Regional Health Directorate, which supervises the District Health Management Teams (DHMT) in each of the nine districts. In charge of each DHMT is a District Health Officer (DHO) who also oversees the Reference Health Center in each district. The third level includes the community health facility, the CSCom. The SAN+ project focused primarily on the 156 CSComs in the region.

The estimated population of the Koulikoro Region is 1,871,120. This includes the two target groups: approximately 69,396 children 0-23 months of age and 190,840 women of reproductive age (WRA).

III. Project Design

One of the most important design decisions for this project was the decision to work through Mali's decentralized health system, especially the CSComs. This approach proved to be the best way to strengthen the system itself and to ensure long-term sustainability. Rather than setting up parallel teams of providers and implementing activities directly, SAN+ devoted its resources to improving the nutrition knowledge and skills of health care providers in the Ministry of Health facilities, thereby ensuring the availability of quality nutrition interventions at the CSCom level.

A second important design decision was the decision to enhance the capacity of partners at all levels to plan, implement, monitor, and sustain the project interventions. The primary partners were the MOH personnel, but this strategy also included the Ministry of Social Development, community volunteers, and local authorities.

During the four years of project implementation, a number of changes were made to the original project design. The work plan table in Annex 4 highlights those changes and also presents project accomplishments.

Problems addressed: SAN+ was designed to address two major problems. The first problem was malnutrition-related childhood deaths. In Mali malnutrition contributes to more than one-third of all childhood deaths. One of the basic premises of SAN+ is that to improve the nutritional status, it is critical to prevent and treat malnutrition both during the mother's pregnancy and for the first two years of a child's life. For this reason, the project design includes nutrition interventions for women of reproductive age, especially women who are pregnant or breastfeeding, as well as children 0-23 months. Areas targeted for particular attention were poor maternal health, inadequate management of childhood illness, and sub-optimal feeding of infants and young children.

The second problem that the project addressed was the fact that many health facilities were not consistently offering the full range of nutrition interventions for preventing and treating malnutrition in young children. This was due to a combination of factors, including insufficient training in nutrition interventions for health providers, inadequate resources, and a lack of demand for these services on the part of those seeking care. For both health care providers and clients, an inadequate knowledge of the causes, treatment, and prevention of malnutrition was a factor in the underutilization of nutrition interventions.

To address this second problem, the design team included: a strong BCC component with specific messages for key groups such as health care providers, parents, grandmothers, volunteer community health agents (*relais*), and decision-makers; a comprehensive training component; and a component to encourage community mobilization and the establishment of support groups.

Advocacy and synergy: Underlying the overall project approach was a commitment to advocacy and synergy. Advocacy efforts addressed issues such as encouraging the involvement of community leaders and local authorities in nutrition activities; advocating for de-worming as a nutrition intervention; and promoting the use of zinc in the control of diarrheal disease.

As the project name implies, synergy was key to implementing activities and enhancing sustainability. To build synergy, project staff collaborated with ongoing programs and leveraged additional resources. One of the most important ongoing programs was the National Nutrition Weeks (*SIAN* or *Semaine d'Intensification des Activités de Nutrition*), which are organized every six months by the Ministry of Health and its partners. These national campaigns, a high priority for the Government of Mali, include a number of nutrition interventions aimed at women of reproductive age and young children. SAN+ was a major partner in the Koulikoro Region, helping to ensure good results in all nine health districts.

The SAN+ team was also very effective in leveraging other resources that reinforced the interventions outlined in the original project design. While the original design focused primarily on preventing malnutrition, these additional in-kind and financial resources allowed the SAN+ team to include more malnutrition screening and treatment of malnutrition in young children. The complementary resources for these activities, referred to as Community Management of Acute Malnutrition (CMAM), included: two grants from the USAID Office of Foreign Disaster Assistance; a three-year grant from the Monsanto Foundation; a grant from UNICEF; and in-kind contributions of food and supplies from UNICEF and the World Food Program.

The addition of the CMAM component allowed for a more complete approach to preventing, identifying, and treating malnutrition in young children. Although the purpose of this final evaluation is to examine the effectiveness of the interventions funded by the Child Survival and Health Grants Program, it proved difficult to focus only on those activities because the treatment component funded by other sources was fully integrated into the project. MOH personnel, partners, and beneficiaries alike made no distinction between the preventive and curative components. Annex 14 provides a summary of these and other resources leveraged to support SAN+.

IV. Technical and Cross-cutting Interventions

As described in the above section on Project Design, the SAN+ project incorporated several cross-cutting implementation strategies to ensure lasting results:

- joint design, implementation, and evaluation of approaches in order to deliver a package of nutrition services consistent with MOH and MSD standards and protocols
- capacity-building and training to improve access, availability, and quality of facility-based services
- community mobilization to improve demand for and use of key health services
- tailored BCC and advocacy initiatives to improve key household behaviors and ensure commitment of local decision makers

- synergy, including establishing effective partnerships and leveraging additional resources, to reinforce project interventions and enhance sustainability

The BCC strategy was especially critical for achieving the project objectives. The BCC strategy involved a three-pronged approach to communication: mass media, especially local radio stations; interpersonal communication and counseling; and support groups at the community level. For a detailed description of key messages for each target group, see Annex 16.

Technical components: The project team and partners used the cross-cutting strategies plus the ENA framework in implementing the four main technical components:

- **Nutrition** (70% level of effort): This major component included training at the community and health facility level, growth monitoring, and other activities to improve maternal and child nutritional status. The key messages focused on maternal nutrition and promoting complementary feeding starting at 6 months with continued breastfeeding up to 24 months.

- **Control of diarrheal disease (CDD)** (10% level of effort): To improve the management of childhood illness, this component included training community health workers and health care providers. The key messages addressed were promoting hand washing, using oral rehydration solution, and improving the dietary management of childhood illness.

- **Malaria control** (10% level of effort): As a measure to reduce anemia and improve nutritional status, this technical component promoted: the use of insecticide-treated nets (ITNs); the use of sulfadoxine-pyrimethamine (SP) as a preventive treatment for pregnant women; and the importance of seeking immediate treatment when malaria is suspected.

- **Breastfeeding** (10% level of effort): The key area of emphasis for this technical area was the promotion of exclusive breastfeeding for the first six months of a child's life. Activities included extensive training and awareness-raising at the community and health facility level and the establishment of community-level structures such as mothers' groups.

V. Partnerships

Key to the project's design was the decision to forge partnerships in order to provide more comprehensive health and nutrition coverage and to enhance the possibility of activities being sustained after the project ended. The principal partners were the MOH at the national, regional, district, and community levels; the Community Health Associations or ASACOs (*Associations de la Santé Communautaire*), which oversee the CSComs; the Ministry of Social Development; UNICEF, which provided financial and in-kind resources; the World Food Program, which provided food rations; and the USAID-funded ATN+ project (*Assistance Technique Nationale+* or National Technical Assistance). A number of nongovernmental organizations also played an important role in helping the SAN+ project team achieve results. For a more detailed discussion of these and other partnerships, see Chapter 5 and Annex 15.

The SAN+ management team and the HKI/Mali office have an effective working relationship with the USAID/Mali health team, keeping these colleagues informed of project developments and contributing

to the Mission's strategic objectives for health and nutrition. The USAID/Mali health team was actively involved in start-up activities including the preparation of the Detailed Implementation Plan (DIP) and the selection of the first SAN+ Project Coordinator.

Chapter Three: Data Quality - Strengths and Limitations

This section includes a brief description of the project monitoring and evaluation (M&E) plan. It presents observations on the quality of the data used for routine monitoring and constraints encountered in implementing the M&E plan. This section explains how M&E activities contributed to strengthening the MOH health information system. The final part summarizes the data sources used to evaluate project accomplishments and presents recommendations for future monitoring and evaluation components.

I. Brief Description of the M&E Plan

According to the DIP, the three main objectives of the M&E plan were to: reinforce the capacity for data analysis at all project levels (local, district, and regional); produce appropriate information for planning and decision-making; and disseminate monitoring results, studies, and/or operational research results.

The proposed approach for the monitoring and evaluation (M&E) plan was to use the existing MOH health information system (HIS) to the extent possible. This is consistent with the project design decision to work through the MOH for all aspects of SAN+ rather than setting up parallel structures. For routine monitoring data, the SAN+ management team relied primarily on three sources: monthly and quarterly reports prepared by the staff at the CSComs; project data forms completed by the nine district supervisors; and official reports from the NNWs.

The first source was **monthly and quarterly CSCom reports**, which were sent to the DHMTs who compiled them into consolidated quarterly reports. The consolidated reports were transmitted to the Regional Health Directorate and to HKI. These reports contained useful information regarding the project's objectives and indicators: services provided to pregnant and postpartum women and to children under five; IEC sessions; and stock status for key inputs such as Vitamin A, iron+folic acid (IFA), and SP.

The Deputy Coordinator for SAN+ was in charge of the M&E component of the project. He routinely entered the data from the MOH quarterly reports into an EPI INFO database and could access information for tracking certain project indicators such as Vitamin A coverage.

When the CMAM activities began, project staff helped the MOH develop a number of additional forms for identifying and tracking malnourished children treated at the CSCom level, including individual cards for each child in treatment and a monthly summary. Once the reports reached HKI, they were entered into a web-based system used by HKI project staff in the three countries covered by the OFDA grant (Burkina Faso, Mali, and Niger).

Data quality: There are a number of issues affecting the quality and reliability of the data collected at the CSCom level. First, there is no standard method of filling out the forms so it can be difficult to compare data sets across health facilities and across districts. Second, all reports emanating from the CSComs are prepared manually, a time-consuming process which lends itself to errors. Third, given the

work load of the CSCom teams and the number of reports they are expected to prepare for the MOH and for individual projects and initiatives, the quality sometimes suffers and reports are not always submitted in a timely fashion.

The second source of monitoring information was the **reports prepared by the nine SAN+ supervisors,** each one reporting on his or her district. The project adapted the Quality Improvement Verification Checklists developed by Food for the Hungry and translated them into French. The supervisors used a number of these checklists including:

- A checklist to monitor the quality of IEC sessions
- A feedback form to help supervisors provide appropriate comments to health agents delivering IEC sessions
- A checklist for growth monitoring and counseling sessions conducted by auxiliary midwives
- A summary data form capturing key information (e.g., number of IEC sessions and stock outs) from the CSCom reports
- A supervision form for mothers' groups

These reports complement the monthly activity report prepared by each supervisor. The supervisors also have the opportunity to provide additional observations and information at monthly staff meetings, which have been held more regularly since the midterm evaluation.

Data quality: In general, the data provided by the supervisors is accurate and reliable. It was unclear whether the project management team had time to review and analyze the information presented in the monthly reports and on the supplemental forms used to track the IEC activities.

As described in earlier sections of this report, the Government of Mali and its partners organize **National Nutrition Weeks** approximately every six months. These campaigns include activities which SAN+ also promotes as part of its project objectives such as distribution of Vitamin A capsules to postpartum women and young children, de-worming as a strategy for anemia control, and malnutrition screening and referral. The comprehensive reports from these activities constitute the third source of routine monitoring data.

Data quality: In general, the data in the NNW reports appears to be reliable. The only potential issue is that the last census was conducted ten years ago and the estimated target populations are likely under-estimated. This results in coverage percentages in the high 90s, sometimes exceeding 100%.

II. Issues and Constraints Encountered in Implementing the M&E Plan

The management team of SAN+ consists of two people, both of whom have multiple responsibilities for the project, including representational obligations; budget preparation and tracking; supervision; and financial and program report preparation. During the final evaluation, the team learned that regular analysis of the data was not routinely carried out due to time and personnel constraints; neither were results of data collection systematically shared within the project or with partners, except during key evaluation events such as the baseline, midterm, and final surveys. The evaluation team concluded that the comprehensive **monitoring plan described in the DIP may have been too ambitious** for the staff

to implement fully due to competing priorities on their time. Much of the planned analysis and dissemination of results did not take place.

Another issue was that routine monitoring was primarily quantitative, with **little qualitative information gathered** during the course of the project. Due to limited financial and human resources, the project team did not utilize qualitative methods to discern problems, assess progress, or modify strategies.

III. Contributions of SAN+ to Strengthening the MOH Health Information System

In spite of the constraints related to routine monitoring, SAN+ made a number of important contributions to the MOH health information system. For example, the project introduced forms for tracking IEC sessions at the CSCom (themes, number of participants, and number of sessions per month). This record-keeping has now been integrated into the government HIS. With the advent of the CMAM activities, SAN+ staff worked with MOH counterparts to put into place cards, forms, and registers for tracking malnourished children who are screened and treated.

SAN+ also contributed to strengthening the data collected during the National Nutrition Weeks. In collaboration with the MOH and the USAID ATN+ project, SAN+ staff helped develop forms for tracking the distribution of de-worming tablets and for tracking the number of children screened and referred for malnutrition treatment.

Another contribution by the SAN+ team was the on-the-job training provided by supervisors to CSCom staff responsible for preparing the monitoring summaries, especially those forms and reports specific to the project. The supervisors explained the forms, provided guidance on filling them out correctly, and assisted the staff with the analysis and interpretation of results.

The strong involvement of the MOH and the Ministry of Social Development in the baseline surveys, midterm evaluation, final survey, and final evaluation also contributed to enhancing the capacity of these Ministries to conduct similar evaluation exercises.

The project team's contribution to improving the HIS has been noted at high levels of the MOH. At the Regional Health Directorate, the Planning Unit chief remarked that he finds the additional data collected by SAN+ "very useful." He also indicated that he plans to incorporate the data into the "Quarterly Statements" (*Relevés Trimestriels*) which summarize health data collected for the Koulikoro Region.

IV. Reliability of the Data Sources Used for the Evaluation of Project Results

Project indicators and results were measured five times during the life of the project:

- Baseline Knowledge, Practice, and Coverage (KPC) survey measuring the 13 Rapid CATCH Indicators (led by Dr. Xavier Crespin in February 2006)
- Baseline survey measuring the 21 project indicators, nutritional status of mothers and children 0-23 months, health facilities assessment (HFA), and household behaviors (conducted by INFO-STAT in February-March 2006)
- Midterm evaluation (led by Marguerite Joseph in April-May 2008)

- Final quantitative survey to measure indicators (conducted by INFO-STAT in April 2009)
- Final evaluation (conducted by HKI, MOH, and MSD in August 2009)

These five evaluations and surveys combined an appropriate mix of qualitative and quantitative methods. The quantitative measurement of indicators pre-project and at the end of the project was conducted with standard sampling methodology and for both the baseline surveys and the final survey, INFO-STAT provided comprehensive analyses and tables in the reports. Two members of the final evaluation team met with the INFO-STAT director. It was clear from this meeting and subsequent e-mail exchanges that this firm is technically competent in survey management and data analysis.

A sixth source of data for measuring progress for four SAN+ indicators were the reports prepared on the NNW campaigns. The evaluation team used this data to provide additional information on the results for the distribution of Vitamin A capsules and de-worming tablets.

After reviewing the quality of the various quantitative surveys and qualitative evaluations, the team concluded that the methodologies used and the data collected were appropriate, effective and reliable for measuring progress from the beginning of the project to the end.

V. Recommendations for Future M&E Components

Given the issues in fully implementing the SAN+ monitoring and evaluation plan, the key recommendation is to ensure that there is both an adequate budget and adequate staff to monitor, report, and disseminate results. For routine project monitoring, those designing M&E components should also ensure that periodic qualitative data collection is conducted to help the project managers make timely corrections in strategies and interventions.

On a more positive note, the decision to work primarily through the existing HIS was an appropriate choice. However, to adequately track all of the project indicators, additional monitoring tools were needed.

Chapter Four: Presentation of Project Results

I. Presentation of Progress toward Objectives

Table 2. Summary of Quantitative Results

Objectives	Indicators	Data Source	Baseline Value	Final Value	Final Target
Objective/ Result 1: Improve nutritional status through the decrease of prevalence of underweight (W/A) children under two years	Indicator 1: % of children 0 to 23 months who are underweight (-2 SD from the median Weight-for-age, according to the WHO/NCHS reference population)	Final survey	17%	13%	10%

Objectives	Indicators	Data Source	Baseline Value	Final Value	Final Target
	Indicator 2: % of infants younger than 12 months who are put to the breast within one hour of birth	Final survey	28%	54%	55%
	Indicator 3: % of children age 0-5 months who were exclusively breastfed during the last 24 Hours	Final survey	20%	45%	40%
	Indicator 4: % of infants 6-8 months who received complementary feeding at least 2 times during the last 24 hours	Final survey	74%	81%	80%
	Indicator 5: % of infants 9-11 months who received complementary feeding at least three times during the last 24 hours	Final survey	55%	92%	75%
Objective/ Result 2: Increase the proportion of children 6-23 months receiving Vitamin A supplementation (VAS)	Indicator 6: % of children 6-23 months who received VAS during the last six months From NNW reports: % of children 6-59 months in the Koulikoro Region who received VAC - June 2008 - January 2009	Final survey, National Nutrition Week reports	31%	75% 97% 98%	80%
Objective/ Result 3: Improve nutritional status through the decrease of prevalence of anemia among children 6-23 months	Indicator 7: % of children age 0-23 months who slept under an insecticide-treated net the previous night	Final survey	48%	69%	60%
	Indicator 8: % of children 12-23 months who received de-worming tablet during the last six months From NNW reports: % of children 12-23 months in the Koulikoro	National Nutrition Week Reports	N/A	N/A	50%

Objectives	Indicators	Data Source	Baseline Value	Final Value	Final Target
	Region who received Albendazole: - June 2008 -January 2009			100% 102%	
Objective/ Result 4: Improve control of diarrheal diseases in infants and young children (0-23 months)	Indicator 9: % of sick children who received increased fluids and continued feeding during illness in the past two weeks	Final survey	3.3%	21%	30%
	Indicator 10: % of mothers with children age 0-23 months who report that they wash their hands at four key occasions	Final survey	1%	4%[1]	20%
	Indicator 11: % of infants 6-23 months who received zinc during an episode of diarrhea during the past 2 weeks in the target districts (Nara & Kolokani)	Midterm and final evaluation	0%	Data not available	30%
Objective/ Result 5: Improve the nutritional status of pregnant women through the decrease of anemia prevalence	Indicator 12: % of pregnant women who took iron/folic acid tablets during the last 24 hours	Final survey	36%	44%	50%
	Indicator 13: % of pregnant women who slept under an insecticide-treated net the previous night	Final survey	48%	67%	60%

[1] Although the composite measure was low, when the four occasions are broken out the findings are more encouraging: 38% reported washing hands before food preparation; 43% after defecation; 40% after attending to child who has defecated; and 9% before feeding children. In addition, 66% reported having washed their hands the last time they cleaned a child after it defecated.

Objectives	Indicators	Data Source	Baseline Value	Final Value	Final Target
	Indicator 14: % of women with children under 1 year who receive two doses of SP during the last pregnancy	Final survey	16%	34%	60%
	Indicator 15: % of women with children under one who received a de-worming tablet during the last pregnancy From NNW reports: % of women in the immediate postpartum period (w/i 40 days of delivery) in the Koulikoro Region who received Albendazole: - June 2008 -January 2009	Final survey, National Nutrition Week reports	8%	27% 106% 88%	20%

Objectives	Indicators	Data Sources	Baseline value	Final value	Final Target
Objective/ Result 6 Improve maternal care during the postpartum period	Indicator 16: % of postpartum women with under one children who receive VAC within 40 days of delivery From NNW reports: % of women in the immediate postpartum period (w/i 40 days of delivery) in the Koulikoro Region who received Vitamin A: - June 2008 -January 2009	Final survey, National Nutrition Week reports	61%	52% 107% 142%	80%
	Indicator 17: % of first trimester postpartum women with children under one who took an iron/folic acid tablet in the last 24 hours	Final survey	4%	29%	25%
Objective/ Result 7: Enhance capacity of partners to plan, monitor and sustain project interventions	Indicator 18: % of CSComs designated as Nutrition-friendly in years 2 and 3 maintain standard through end of project (EOP)	Project records and final evaluation	0%	*See comments following the table.*	50%
	Indicator 19: (for sustainability) % of Communes who have created a budget line for Nutrition + in their annual development plan	Monitoring data	0%	See comments following the table.	20%
	Indicator 20: (for synergy) Number of joint supervisions/District	Monitoring data	0%	*See comments following the table.*	1/trimester
	Indicator 21: (for gender) % of antenatal care (ANC) visits where the father accompanies his wife	Monitoring data	0%	*See comments following the table.*	40%

II. Metrics for Objective 7

At the beginning of the project, the SAN+ team and its partners developed four indicators to measure objective 7. As the project activities progressed, the team decided for various reasons not to track these indicators.

- *Indicator 18*: After the project started, the Ministry of Health decided to participate in the international program for "baby friendly hospitals". Although several CSComs did earn the designation of "nutrition-friendly" health facilities early on in the project, the project team made the decision not to continue with this intervention since the MOH had decided to put the emphasis on certifying hospitals rather than CSComs.

- *Indicator 19*: When project staff asked commune leaders about including money for nutrition activities in their annual budgets, the leaders replied that they already funded some health activities and that nutrition was included in those activities. Given the limited resources available at the commune level, the SAN+ team made a decision to drop this indicator.

- *Indicator 20*: Until the midterm evaluation (April-May 2008), the joint monthly supervisions at the district level were not conducted regularly, primarily due to budget constraints on the part of the MOH and the project. Following a recommendation from the midterm report, the joint supervisions were conducted regularly during the last year of the project, but they were not systematically tracked throughout the life of the project (LOP).

- *Indicator 21*: The difficulty of tracking the number of men who accompany their wives to antenatal sessions became apparent early on as it meant asking the CSCom staff to take on an additional reporting requirement. The SAN+ team also concluded that it would be a difficult target to achieve given traditional gender roles in Mali.

The Health Facility Assessment (Annex 6) presents evidence of considerable increases in the quality of health services and the capacity of providers (see also Annex 18).

III. Summary of Results for Indicators 1-17

The final target was met or exceeded for 10 of the 17 indicators if one includes data from the National Nutrition Week reports. And for indicator 2 the final result was within one percentage point of the target. A detailed discussion of the results is presented in the next chapter.

Chapter Five: Discussion of the Results

The purpose of this chapter is to provide details on how the results were obtained and, where end of project targets were not met, to explain what constraints or issues might have hindered progress. In the following section, each of the seven objectives is discussed in detail: results, key factors affecting results, conclusions, and recommendations. The remaining sections of the chapter focus on contextual factors influencing the project outcome, the role key partners and other donors played, how design factors may have contributed to achievements, lessons learned from implementation, and broad program recommendations.

I. Progress Toward Meeting Objectives

The evaluation team utilized data from the following sources to analyze project results:

- The final survey in April 2009: INFO-STAT conducted this quantitative analysis. It included a household survey of mothers with young children and a health facilities assessment in which CSCom personnel were interviewed and health records reviewed.

- The final qualitative evaluation in August 2009: The team, led by an external consultant, included representatives from the MOH, HKI, and the Ministry of Social Development. Team members conducted individual interviews in four districts with mothers of young children, CSCom staff, District Health Management Teams, women leaders, volunteer community health agents, and radio managers.

- Analysis of reports and documents from SAN+ and the MOH, including reports of the National Nutrition Week campaigns.

Objective 1: Improve nutritional status through the decrease of prevalence of underweight (W/A) children under two years.

Indicators	Baseline	Final	Target
Indicator 1: % of children 0-23 months who are underweight	*17%*	*13%*	*10%*
Indicator 2: % of infants younger than 12 months who are put to the breast within one hour of birth	*28%*	*54%*	*55%*
Indicator 3: % of children 0-5 months who were exclusively breastfed during the past 24 hours	*20%*	*45%*	*40%*
Indicator 4: % of infants 6-8 months who received complementary feeding at least 2 times during the last 24 hours	*74%*	*81%*	*80%*
Indicator 5: % of infants 9-11 months who received complementary feeding at least 3 times during the last 24 hours	*55%*	*92%*	*75%*

Results: Considering that SAN+ was active for only three years, substantial progress was made on this first objective, arguably one of the most important of the seven objectives. Given the cumulative results of the five indicators associated with this objective, it is clear that the objective has been met.

Although the 10% target for percentage of underweight children was not met, a drop of 4% (from 17% to 13%) in three years is noteworthy. The project achieved significant progress in reaching or exceeding the targets for the other four indicators, all of which measure progress in changing practices related to breastfeeding and complementary feeding. The quantitative survey showed that the project exceeded its target for indicators 3, 4, and 5 and came within one percentage point of meeting the target for indicator 2.

These encouraging results from the quantitative survey concerning breastfeeding and complementary feeding were confirmed by a number of corresponding results in the qualitative final evaluation. When the qualitative evaluation team asked the various interviewees if they had noticed any changes in how

mothers now feed infants and young children, the majority of respondents were quick to mention two things as the first and second most common improvements: an increase in exclusive breastfeeding and improvements in the area of complementary feeding:

- All five groups noted an increase in the number of mothers practicing exclusive breastfeeding for children 0-5 months: 88% of the 180 mothers interviewed; 88% of women leaders; 88% of the volunteer community health agents; 76% of the CSCom personnel; and 71% of the DHMT representatives.

- All five groups stated that feeding practices for children 6-23 months had improved. According to survey participants, more mothers were giving complementary foods more often by the end of the project. This was noted by 88% of women leaders; 88% of the DHMT respondents; 84% of the CSCom personnel; 57% of the mothers; and 48% of the volunteer community health agents.

Key factors influencing the results: In discussions with SAN+ staff and partners and through reviews of project reports, it became clear that a number of factors combined to ensure these positive results for objective 1 and the corresponding indicators. The primary factor contributing to the project's positive results were the **IEC/BCC activities**, especially those at the health facility level. These included training several key groups (health staff at the CSCom and district levels, the volunteer community health agents, grandmothers, and mothers' groups) to effectively deliver consistent messages on breastfeeding and complementary foods. To reinforce the messages regarding feeding practices for young children, the SAN+ team also devoted a fair amount of time, energy and resources to cooking demonstrations.

The interpersonal messages transmitted were reinforced on two fronts. First, the project established contracts with 29 local **radio stations** that broadcast in local languages. In addition to the nutrition training provided to radio broadcasters, SAN+ also prepared a nutrition manual for their use and furnished audio tapes for broadcasts. The results of the qualitative final evaluation demonstrated the importance of these radio messages. When mothers were asked for their primary sources for nutritional advice, 29% of them cited the radio. The two messages mothers heard most often were the importance of exclusive breastfeeding (mentioned by 46%) and complementary foods for young children (cited by 34% of the mothers). The radio managers interviewed also cited these two themes as those most appreciated by their audiences.

Second, coinciding with the time frame of SAN+, the **Government of Mali** and a number of its partners were also promoting the benefits of immediate breastfeeding after delivery, the importance of exclusive breastfeeding, and the role complementary foods play in the health of young children. The reinforcement of these messages at the national level also included frequent spots on radio and television, all of which undoubtedly played a role in achieving these results.

The project's support for the reintegration of nutrition activities, both preventive and curative, into routine services at the health facility level also contributed significantly to the positive results for objective 1. Mothers who were asked what nutrition services were available at their health facility cited one-on-one counseling about their child's nutritional needs (mentioned by 73% of mothers), growth monitoring (58%) and nutrition talks (47%).

As mentioned in Chapter 2, the leveraging of additional funds from OFDA, UNICEF, and the Monsanto Fund allowed HKI and its partners to add CMAM activities, a **therapeutic intervention** to SAN+. This

included community- and health facility-based screening for malnutrition, training health personnel to treat malnutrition, and the provision of food rations from WFP and UNICEF for severely malnourished children in certain districts. The addition of these activities also possibly contributed to reducing the prevalence of underweight children from 17% to 13%. Although the availability of supplementary food for the treatment of acute malnutrition was overall a plus for the project, periodic ruptures in food rations did have a negative effect, discouraging some mothers from bringing their children to the health facility for follow-up visits.

Although the impact may be more indirect, the activities associated with objectives 2, 3, and 4 are also important in explaining the positive progress toward achieving this first objective. Increasing children's consumption of Vitamin A, decreasing anemia, and controlling diarrhea disease have a positive influence on children's nutritional status.

Conclusion and recommendations: SAN+ made excellent progress on this first objective, the result of a concerted effort and synergies on several fronts to increase knowledge and change long-standing practices regarding infant and young child feeding. What was clearly evident during both the quantitative and qualitative parts of the final evaluation was how well the key messages had been transmitted and absorbed by all groups, especially regarding breastfeeding and complementary feeding but on other child nutrition topics as well.

The qualitative evaluation team also concluded that the CMAM activities funded by OFDA, UNICEF, and the Monsanto Fund likely contributed to the 4% reduction in the prevalence of underweight children. The additional screening at the community level, the availability of food rations, and the enhanced capacity of health personnel to treat malnutrition provided an ideal complement to the prevention activities which were the key focus of the original SAN+ proposal.

<u>Objective 2</u>: Increase the proportion of children 6-23 months receiving Vitamin A supplementation.

Indicator	Baseline	Final	Target
Indicator 6: % of children 6-23 months who received a Vitamin A capsule during the last six months.	*31%*	*75%*	*80%*

Results: Although the quantitative survey showed that the target of 80% was not realized, the qualitative evaluation team concluded that excellent progress had been made on meeting this objective. In discussions with project staff and MOH representatives on the evaluation team, one explanation for the lower-than-anticipated final percentage is that the quantitative survey relied on vaccination cards to determine if the subject child had received Vitamin A supplementation within the past six months. According to project staff, not all children have vaccination cards and not all doses of Vitamin A are recorded on these cards.

Based on the results from the National Nutrition Weeks (see table below), it is clear that coverage rates for children receiving Vitamin A are probably higher than the 75% noted in indicator 6. Although the National Nutrition Week results are given for two age ranges which don't coincide exactly with the 6-23 months range used in indicator 6, it is possible to extrapolate and conclude that the target of 80% was

likely met. (It should also be noted that the NNW results may be somewhat inflated due to an underestimation of the target population.)

Vitamin A coverage for children in the Koulikoro Region

Date of NNW	6-11 months	12-59 months	6-59 months
June 2008	*106%*	*96%*	*97%*
January 2009	*98%*	*99%*	*98%*

Key factors influencing the results: In addition to SAN+'s BCC strategy (development of Vitamin A messages and training relevant groups of providers and volunteers to deliver them), two other factors accounted for the positive outcome. First, as just noted, are the semi-annual National Nutrition Weeks. These campaigns, organized by the Government of Mali through the Ministry of Health, are designed to promote nutrition activities throughout the country, focusing especially on children 6-59 months. The distribution of Vitamin A capsules is one of the main activities of these campaigns. In the Koulikoro Region, HKI played a key role in ensuring the success of the National Nutrition Weeks, contributing staff time, materials, vehicles, and resources for mobilizing communities, including producing and funding radio spots.

Another factor contributing to the positive result for this objective was the support of the partners who help ensure the availability and distribution of Vitamin A capsules, including the Ministry of Health and UNICEF.

Conclusion and recommendations: The type of activities and level of effort for increasing Vitamin A coverage in young children were appropriate and resulted in significant progress in achieving this objective. The project's involvement in mobilizing communities and contribution of resources to the National Nutrition Weeks were instrumental in achieving this result.

<u>Objective 3</u>: Improve nutritional status through the decrease of prevalence of anemia among children 6-23 months.

Indicators	Baseline	Final	Target
Indicator 7: % of children 0-23 months who slept under an insecticide-treated net the previous night	*48%*	*69%*	*60%*
Indicator 8: % of children 12-23 months who received a de-worming tablet during the last six months *<u>From National Nutrition Week reports</u>:* *% of children 12-23 months in the Koulikoro Region who received Albendazole* *- June 2008* *-January 2009*	*NA*	 *100%* *102%*	*50%*

Results: Given the results measured by the quantitative survey and during National Nutrition Week, SAN+ achieved this objective. The number of children 0-23 months sleeping under a treated mosquito net rose more than 20 percentage points.

For the de-worming indicator, the evaluation team relied on data provided by the Ministry of Health on two recent National Nutrition Weeks to assess progress. Although the high percentages indicate that the target population was underestimated, it is reasonable to conclude that the target of 50% was exceeded by a large margin. In addition, although the level of anemia was not an explicit project indicator, INFO-STAT did measure hemoglobin levels at baseline and endline. The final result showed that the proportion of children 6-23 months with low levels (<110 g/L) fell from 93 to 75 percent.

Key factors influencing the results: The positive result for indicator 7 is due to a number of factors: a government-sponsored nationwide campaign promoting the benefits of sleeping under an insecticide-treated net; the reinforcement of this message by other partners, including SAN+; the government policy to provide free nets to pregnant women and children under five; and the availability of nets, which were provided by USAID, Population Services International (PSI), and UNICEF.

One of the results in the qualitative evaluation highlights the success of the IEC message promoting ITNs. When mothers were asked why it was important for a pregnant woman to sleep under an ITN, 96% responded "to avoid getting malaria".

As for the high percentage of children 12-23 months receiving a de-worming tablet, this is largely a result of including de-worming in the National Nutrition Week activities. SAN+ plays an important role in this semi-annual event in the Koulikoro Region and the MOH recognized HKI as a major partner along with UNICEF, USAID, the USAID/ATN+ project, and the Micronutrient Initiative (MI), all of which contribute financially or with other inputs.

Conclusion and recommendations: The selection of these two interventions – communications to promote the use of ITNs and the inclusion of de-worming in semi-annual NNWs – was effective in helping SAN+ achieve this objective. The role of other partners in providing nets, Albendazole, and resources for the National Nutrition Weeks was key to the positive results described above.

Objective 4: Improve control of diarrheal diseases in infants and young children (0-23 months).

Indicators	Baseline	Final	Target
Indicator 9: % of sick children who received increased fluids and continued feeding during illness in the past two weeks	*3.3%*	*21%*	*30%*
Indicator 10: % of mothers with children age 0-23 months who report that they wash their hands at four key occasions	*1%*	*4%*	*20%*
Indicator 11: % infants 6-23 months who received zinc during an episode of diarrhea during the past 2 weeks in the target districts (Nara & Kolokani)	*NA*	*NA*	*30%*

Results: The results for the first two indicators (9 and 10) demonstrated that this objective was not met. There was a significant increase in the number of mothers who reported improvements in the nutritional management of childhood illness. But on the indicator for hand washing at four key occasions, only 4% of mothers reported that they wash their hands at all four critical moments. However, disaggregating the hand washing results indicates that there are some encouraging signs for promoting hand washing on three of the four occasions:

- before food preparation: 38%
- before feeding children: 9%
- after defecation: 43%
- after attending to a child who has defecated: 40%

SAN+ planned to promote zinc supplementation as part of the treatment for diarrhea in children 6-23 months but project records indicate that this activity was not successful. According to the Midterm Evaluation Report, there were several problems with this activity including the availability of zinc and the shortage of Oral Rehydration Solution (ORS), key inputs for treatment of diarrheal disease in children. Although the project provided an initial stock of zinc tablets in July 2007 and the Ministry of Health officially adopted a policy to promote the administration of zinc for the treatment of acute diarrhea, zinc was not included in the list of essential medicines until just recently, and was never widely available in the project area.

Key factors influencing the results: Although SAN+ developed messages about increasing fluids and continued feeding during a child's illness and for hand washing, these messages did not appear to be as well assimilated by mothers as the messages on breastfeeding and complementary foods. There was also no clear evidence that the messages were delivered with the same frequency or reinforced consistently through other channels as the messages on child feeding were.

It is worth noting, however, that the volunteer community health agents did seem to have a fairly good understanding of the importance of hand washing. During the qualitative evaluation, 30% of them mentioned all four occasions as important times to wash one's hands. Of the 33 volunteers interviewed, 100% mentioned hand washing "after defecation" and 97% mentioned hand washing "before feeding children".

In reviewing the results for hand washing, the qualitative evaluation team also speculated that the availability of soap and the scarcity of water in some areas may have partially accounted for the relatively low percentage of women who reported washing their hands on all four occasions.

The lack of zinc was a key factor influencing the limited use of zinc in the treatment of diarrhea in young children. It is also possible that messages promoting zinc to health care providers, volunteer community health agents, and mothers were not reinforced enough to create a demand for zinc tablets. In the qualitative evaluation, for example, only 25% of mothers reported that they had heard of zinc.

Conclusion and recommendations: Although this objective for improving the control of diarrheal disease in young children was not met, the messages developed for nutritional management during illness and for hand washing are a starting point for improving performance on future projects. Recommendations include:

- Review the quality of the messages. Were they pre-tested? Could focus groups be convened to determine the obstacles to hand washing and to changing practices for managing a child's food and liquids during illness? What messages would most convince mothers to adopt new behaviors? What positive reinforcement can be offered – and by whom – for mothers who improve their practices in these two areas?

- Review who was trained to deliver the messages, how well they assimilated the messages and their importance, and how often and on what occasions the messages were delivered.

- Consider how to reinforce the messages promoted by the health facility personnel and the community volunteers. The radio, for example, seems to be a successful medium for promoting awareness of the key preventive practices.

- Advocate with the Ministry of Health to ensure a steady supply of zinc at both health center and community levels and educate all health workers in its administration for the treatment of acute diarrhea.

- Develop effective messages and transmit to all target groups. Conducting specific training for health care providers and volunteer community health agents would also strengthen this intervention.

Objective 5: Improve the nutritional status of pregnant women through the decrease of anemia prevalence.

Indicators	Baseline	Final	Target
Indicator 12: % of pregnant women who took iron/folic acid tablets during the last 24 hours	*36%*	*44%*	*50%*
Indicator 13: % of pregnant women who slept under an insecticide-treated net the previous night	*48%*	*67%*	*60%*
Indicator 14: % of women with children under 1 year who received two doses of sulfadoxine-pyrimethamine (SP) during the last pregnancy	*16%*	*34%*	*60%*
Indicator 15: % of women with children under one who received a de-worming tablet during the last pregnancy *From National Nutrition Week reports:* *% of women in the immediate postpartum period (w/i 40 days of delivery) in the Koulikoro Region who received Albendazole* *-June 2008 National Nutrition Week* *-January 2009*	*8%*	*27%* *106%* *88%*	*20%*

Results: The results from the quantitative survey showed that two of the four indicators (13 and 15) exceeded the end-of-project target. Based on data from the two most recent National Nutrition Weeks, a high proportion of women of reproductive age are receiving de-worming treatment. The percentage from the quantitative survey conducted in April-May 2009 (27%) is based on women recalling what pills they had taken during pregnancy; the National Nutrition Week reports reflect actual distribution of de-worming tablets to post-partum women, also an at-risk population. Although the end-of-project targets were not met for the other two indicators (12 and 14), there was a definite improvement in those areas.

Key factors influencing the results: There are several factors which positively and negatively affected the results. On the positive side, the high percentage of women sleeping under ITNs is a result of the same factors which led to small children sleeping under an ITN (indicator 7 above): a concerted effort by the Malian government and its partners, including SAN+, to transmit messages about the importance

of ITNs and to make nets readily available. The success of the National Nutrition Week events has helped reach more women of reproductive age with de-worming treatment.

Where EOP targets were not met (women taking iron/folic acid and SP), there are several possible explanations:

- Women may not have recalled the purpose of a pill they took during a consultation and when asked about whether they took a specific pill, may have replied in the negative.
- If women did not attend prenatal consultations, they were less likely to have received two doses of SP.
- SP and iron/folic tablets may not have been available due to stock outs.
- The cost of iron/folic acid tablets may have been a deterrent for some women.
- The BCC strategy may not have sufficiently emphasized the importance of these two measures for protecting a woman's health.

Conclusion and recommendations: The evaluation team concluded that SAN+ made significant progress in improving the nutritional status of pregnant and postpartum women by focusing on these four interventions to reduce the prevalence of anemia. However, a more effective strategy is needed to promote SP and iron/folic tablets for pregnant women. Any strategy must include measures to avoid stock outs.

Objective 6: Improve maternal care during the postpartum period.

Indicators	Baseline	Final	Target
Indicator 16: % of postpartum women with under one children who received Vitamin A capsule within 40 days of delivery *From National Nutrition Week reports:* *% of women in the immediate postpartum period (w/i 40 days of delivery) in the Koulikoro Region who received Vitamin A* *-June 2008* *-January 2009*	*61%*	*52%* *107%* *142%*	*80%*
Indicator 17: % of first trimester postpartum women with children under one who took an iron/folic acid tablet in the last 24 hours	*4%*	*29%*	*25%*

Results: The quantitative survey showed that only 52% of postpartum women reported receiving a Vitamin A capsule. This result provoked an animated discussion among the evaluation team members. Many suggested that this percentage was underreported because women did not always know what pills they were taking. The results of two recent National Nutrition Weeks would also indicate that these semi-annual campaigns are a very effective way for reaching post-partum women with Vitamin A. The figure of 52% may underestimate the percentage of women who received Vitamin A following delivery, although it should be noted that the NNW are held every six months and reach only women who delivered within the past six weeks.

Key factors influencing the results: If women do not deliver at a health facility where Vitamin A is available, they are much less likely to receive Vitamin A following delivery unless they participate in a National Nutrition Week. As noted in the discussion on objective 2 above concerning Vitamin A

supplementation for children, SAN+ plays an important role along with the Ministry of Health and UNICEF in ensuring the success of Vitamin A distribution during the Koulikoro Nutrition Weeks.

Conclusion and recommendations: Through the combination of the project's efforts and the National Nutrition Week activities, it is plausible that the target of 80% was achieved or exceeded. The ongoing effort to persuade women to deliver at health facilities continues to meet resistance in Mali as in many other countries. It is likely that the most effective way to ensure that women receive a Vitamin A capsule during the immediate postpartum period is to continue to support mass campaigns such as the National Nutrition Weeks and to continue to encourage women to seek health care post-partum. Ensuring that traditional midwives have a steady supply of Vitamin A would also help this effort.

<u>Objective 7</u>: Enhance the capacity of partners to plan, monitor and sustain project interventions.

Results: The four indicators originally proposed for this objective were not routinely monitored during the life of the project. Although there are no specific quantitative results to present, the evaluation team concluded that significant progress had been made on enhancing the capacity of partners, especially the Ministry of Health personnel at the CSCom level, to **implement and sustain interventions**. To a lesser extent, SAN+ was also instrumental in enhancing the capacity of MOH personnel at other levels; the volunteer community health agents and support groups also benefited from capacity-building activities.

Capacity-building with CSCom personnel: The finding of enhanced capacity is based on: the overall project results presented in this report; interviews carried out during the final qualitative evaluation with mothers of young children, CSCom personnel, and the District Health Management Teams who supervise them; information from the *Health Facilities Assessment*; and observations made by the SAN+ team and their partners.

Since SAN+ activities were primarily implemented by the CSCom teams, the project achievements provided evidence that these key partners enhanced their capacity to implement Nutrition+ activities. There was also promising evidence that many of these activities will be continued once the project ends. The Midterm Evaluation concluded that Nutrition+ was fully integrated into the activities of the CSComs and the final evaluation confirmed this. Testimony from the CSCom personnel and their supervisors at the district level during the final qualitative evaluation further corroborated this finding:

- When asked if they had noticed any changes in nutrition activities at their health facility, CSCom personnel across the board stated there were observable improvements. They mentioned improving their nutrition knowledge (cited by 82% of those interviewed); their capacity to treat malnourished children (75%); holding more nutrition talks (49%); and counseling mothers of young children more effectively (44%).

- When asked the same question, 100% of the respondents from the District Health Management Teams stated that there were improvements at the CSCom level and at the next level up, the Reference Health Centers. They cited the capacity of personnel to manage malnourished children (100%); increased knowledge of nutrition (76%); and improvements in the personnel's ability to counsel mothers (59%).

- The final *Health Facilities Assessment* also showed enhanced capacity at the CSCom level (See Annex 6 and Annex 18). The assessment, based on a review of health records at 30 facilities and

interviews with 44 health providers, showed an improvement in the majority of services for pregnant and lactating women and young children. The assessment did note, however, that health providers did not always use consultations as counseling opportunities and that improvement is needed in this area.

Although it is clear that implementation capacity increased, there is less evidence that the MOH personnel at all levels – CSCom, district, regional and national – increased their **capacity to plan, monitor, and supervise others.** For instance, according to the DIP, MOH personnel and the SAN+ team were to conduct regular joint supervisions: monthly visits to CSComs from the district, quarterly visits to the district facilities by the regional team, and annual supervisions from the national level. Until mid-2008, the district-level supervisions were done irregularly due to project and MOH budget constraints. Regional and national-level supervisions were almost non-existent during this period. Following the midterm evaluation, SAN+ allocated funds to ensure more regular supervisions at the district level.

On a more positive note, SAN+ provided capacity-building in data collection. As detailed in Chapter Three, the SAN+ team, especially the nine district supervisors, provided on-the-job training and support to CSCom staff responsible for preparing and analyzing monthly and quarterly reports. Other opportunities for capacity-building took place when the MOH and MSD personnel at all levels helped to prepare and implement the three key evaluation activities: baseline, midterm, and final evaluations.

As for enhancing planning capacity, the MOH and other partners were actively involved in the preparation of the DIP. During the life of the project, MOH and MSD also worked with SAN+ staff to plan and implement training events. Although the SAN+ Coordinator or Deputy Coordinator participated in the annual region-wide planning exercise at the Koulikoro Regional Health Directorate, actual project planning such as preparing the annual work plan seems to have been done largely by the SAN+ team with relatively little direct input from partners.

Capacity-building at the community-level: A second set of people who benefited from capacity-building were the volunteer community health agents, support groups such as mothers' groups, and local leaders and authorities. Principal topics for their training were Nutrition+ and behavior change communication. (See Annex 7 for details on training).

One of the more innovative capacity-building activities, held in January and February 2008, was directed at local leaders, civil servants, and authorities in all nine districts and at the regional level in Koulikoro. SAN+ and the MOH organized advocacy sessions and invited a wide variety of change agents including elected and appointed officials, members of NGOs and women's associations, religious leaders, members of the press, representatives of other government services, and members of community, district, and regional health associations. The purpose of these sessions was to promote the importance of nutrition for better health, especially for mothers and small children, and to advocate for greater involvement of those in a position to both influence behavior change and contribute financial and human resources.

Key factors influencing the results: The key factor contributing to the capacity of MOH personnel and community groups to implement the interventions was the decision to work through existing MOH structures rather than setting up a parallel structure. This ensured that significant resources were devoted to training and to refresher courses for all personnel in the CSComs, a large number of health providers

in the Reference Health Centers, and members of community groups. Training topics included the Nutrition+ themes, malaria, control of diarrheal disease, and BCC. With the additional funding from OFDA and Monsanto, health providers and volunteers in the community were also trained in preventing and treating malnutrition in young children.

Factors constraining achievements for this objective, especially in the area of capacity-building for planning and monitoring, included insufficient project and MOH budgets for routine monitoring and for planning meetings. The fact that there were only two SAN+ management staff to carry out all the proposed monitoring and joint planning activities was also a constraint.

Conclusion and recommendations: Significant progress was made in achieving this objective, especially in regards to enhancing the capacity of CSCom personnel to carry out the interventions. More effort and financial resources were needed to improve monitoring and planning capacities for the MOH partners. Recommendations for future activities include ensuring that there is an adequate budget and sufficient personnel for activities such as joint supervision, routine monitoring, and holding regular review and planning meetings.

II. Contextual Factors

In the Koulikoro Region there are a number of contextual factors that influenced the design and implementation of the project. This section highlights the most important of these.

Cultural factors and gender roles: Women and men tend to have separate social groups. For both men and women, older people command a position of respect and can heavily influence norms and behaviors. The project design team took these cultural tendencies into account and included women's groups as avenues for communication and for promoting behavior change, especially for young child feeding. The staff developed IEC messages targeted directly to grandmothers and mothers-in-law. In addition, both groups were included in the multi-generational mothers' groups, which the project team began to train in the final year of the project.
In terms of gender roles, men usually control the family's finances. If services such as delivery at a health facility or a prescription cost money, it may be the husband who determines whether a woman can access these services. A woman may also need her husband's permission to attend meetings or to go to the health center. The BCC strategy included messages tailored to men, asking them to encourage their wives to visit the health center for consultations.

Messages were also tailored to religious leaders. Religion plays an important role in Mali and religious leaders have a highly visible position in Malian society. They were routinely included in advocacy sessions that the project team organized in each district.

Geography and physical infrastructure: Implementing a project in an area as large as the Koulikoro Region presented its own challenges. Although the focus of SAN+ was on populations living within five kilometers of a CSCom, there were many villages and hamlets outside this zone. Distances posed a special obstacle for women who needed to bring malnourished children in for regular consultations.

During the rainy season a number of communities are cut off due to flooding or, in the case of the Kolokani District, a lack of roads. This leads to interruption of health services for several months at a

time each year in these areas. Also, the geography of some areas, such as Nara District, is more conducive to pastoral livelihoods. The nomadic people who live here are frequently on the move, making them harder to reach with services.

Characteristics of the MOH system: Three characteristics of the Ministry of Health structure influenced the implementation of SAN+. First, there was a relatively high turnover of MOH staff at the health facility level. This would periodically interrupt the program at CSComs until new staff could be oriented and trained. Second, motivation can be an issue for staff assigned to rural areas as they may receive less attention and have fewer opportunities for professional development and advancement. Third, the decentralization of health services resulted in a proliferation of CSComs throughout Mali. Providing adequate support and supervision to all of them equally was sometimes problematic.

Current policy environment: SAN+ began at a time when the Ministry of Health and other government services were devoting increased attention to nutrition and nutrition-related health issues. The current policy environment is quite favorable for nutrition activities and the project has attracted attention for its innovations and achievements. At the present time, for instance, only the Koulikoro Region is fully implementing the Nutrition+ activities. Much of the credit for this goes to the efforts of the SAN+ team and their colleagues in the MOH facilities. In the near future, the government is planning a series of regional nutrition forums which will feed into a national forum.

III. Role of Key Partners and Other Donors

The Ministry of Health at the national, regional, district, and community levels was the primary partner for SAN+. Another important partner was the Ministry of Social Development, which participated in all major evaluation activities and provided assistance with the establishment and support of mothers' groups. The role of numerous organizations and contributions from other donors were important factors in meeting SAN+ objectives. The following table illustrates the synergy between project activities and some of the organizations working in the Region. Annex 15 provides additional detail.

Table 3. Key Partners in the Koulikoro Region

Partner	Role in Project	Result of Collaboration
UNICEF	Provided funding, technical support and in-kind contributions, especially for CMAM activities; also provided funding, VAC and Albendazole for NNW; implemented *the Accelerated Strategy for Survival and Development of the Young Child* in Koulikoro including the community-based promotion of EPI+ (Expanded Program of Immunization Plus) where a number of SAN+ interventions were linked	SAN+ project strengthened by addition of therapeutic component and UNICEF's support for EPI outreach activities by CSCom staff; helped MOH reach targets during NNWs which in turn helped project achieve results
World Food Program	Supplied food rations and other supplies for CMAM activities	SAN+ project strengthened by addition of therapeutic component
USAID ATN+ project	Provided technical support for design of activities, training materials, and BCC strategy; assisted with advocacy efforts for zinc and de-worming; collaborated on all NNW campaigns	Improved IEC messages; nationally-accepted training manuals; and successful advocacy for zinc as part of treatment for diarrheal disease and de-worming as component of NNW
Local radio stations	Broadcast messages and held radio events promoting improved child feeding practices and better maternal nutrition	Improved levels of knowledge, especially on the part of mothers of young children
CARE	Implemented *Kènèya Ciwara* project in two districts in the Koulikoro Region	Complemented SAN+ efforts and helped project reach targets for certain indicators, especially for Vitamin A consumption and use of ITNs for children

IV. Overall Design Factors that Influenced Results

The most important design factor influencing results was the **decision to work through the existing MOH structure and staff**. This is consistent with the policy of the Malian government and was a logical strategy for ensuring sustainability. Overall, there were many more advantages than disadvantages to working within the system. This strategy promoted a more efficient use of resources; provided opportunities to enhance capacity of health care providers; ensured adherence to MOH policies and protocols; and allowed the SAN+ team to participate in monthly, quarterly, and annual planning exercises with the MOH and MSD.

However, working within the system often meant that the pace of implementation was slower than planned. New activities needed to be organized in conjunction with Ministry counterparts and there were sometimes competing priorities for people's time. The initial project design called for a phased implementation into districts over the first half of the project. However, the MOH requested that activities begin in all nine districts at the same time so that all facilities could benefit at the same time and pace.

This design decision also meant that the development of IEC materials necessitated close collaboration with several groups: the Nutrition Division of the MOH; the National Center for Health Information, Education and Communication; and other projects such as the USAID/ATN+ project. All of this required additional time for reviewing and finalizing materials. In the end, the materials developed were adopted at the national level, helping to ensure that the contributions of SAN+ remain after the project ends.

A second design decision that positively influenced project results was to **target three key underlying causes of child malnutrition**: poor maternal health, inadequate management of childhood illness, and sub-optimal breastfeeding and complementary feeding practices. The design team developed a set of objectives, strategies, and activities for each problem area. This resulted in a three-pronged attack on the underlying causes.

The **design of the BCC component** also contributed to the achievement of many of the project objectives. The SAN+ team, with assistance from the MOH and other programs, designed messages aimed at three constituencies: households, health facility personnel, and local leaders and authorities. The team used several channels of communication: mass media, principally community radios; interpersonal communication; and support groups for mothers.

V. Lessons Learned and Program Recommendations

During the final qualitative evaluation, the team asked the CSCom agents, representatives of the District Health Management Teams, and the volunteer community health agents if they had encountered any constraints in implementing the project. All three groups selected similar constraints:

- Convincing communities to participate in nutrition activities over the long term
- Persuading mothers to change their practices for their own diets and for feeding young children
- Encountering stock outs of food rations for treating malnourished children

A second lesson learned concerns the perpetual issue of how to motivate volunteer community health agents and groups. The SAN+ project relied to some extent on the volunteer community health agents that work on a number of projects, campaigns, and government-led initiatives such as the National Nutrition Weeks. They are usually not paid for their time and have multiple demands for their services. Securing their assistance for longer-term activities such as community-based screening for malnutrition has not been successful in some communities.

The final set of lessons learned relates to the composition of the SAN+ team. As noted earlier, the project design did not involve setting up a large team of people, but focused instead on working through the staff at health facilities. Having one supervisor per district was generally sufficient although the Kati District had many more CSComs and the supervisor was not always able to visit each facility on a monthly basis.

The main problem was that the team included only two management staff, the Coordinator and the Deputy Coordinator. Both are well-qualified, accomplished professionals with extensive experience. However, once HKI leveraged additional funds and in-kind contributions from other donors, the management responsibilities increased considerably. These responsibilities included: budget preparation and monitoring for several funding sources; report writing for multiple donors; representational and networking obligations, including coordination of activities with other projects and initiatives in the Koulikoro Region; program planning, especially for new activities such as CMAM; routine monitoring and periodic evaluations; supervision of the field staff; and documentation and dissemination of project results and innovations. With only two people to carry out all these tasks, it was not possible for every management area to be covered well. The three areas that received inadequate attention were regular supervision of field staff, systematic analysis of monitoring data, and the documentation and dissemination of results.

The following recommendations could alleviate some of these problems in future programs:

- Although the IEC messages and activities in SAN+ did promote behavior change, developing a more comprehensive strategy would ensure wider and more long-lasting change. This might include training health care providers and support groups in techniques for persuading mothers to try new practices, an element that was not always covered in the training sessions. Those trained in BCC also need to know how to support mothers – and others – who have adopted new behaviors.

- More systematic follow-up is needed with individual mothers in their homes to observe practices and provide guidance and support.

- Although the CSHGP-funded SAN+ activities did not include CMAM and food rations, the addition of this activity and these commodities (provided by UNICEF and the World Food Program) helped to ensure the success of the project. Since the health care providers and the communities made no distinction between the original preventive interventions and the CMAM intervention that was added later, it is important to find a reliable source of inputs to maintain the confidence of the providers and the beneficiaries.

- In future programs, there should be adequate staff to cover all the management functions. Having one person dedicated to monitoring, evaluation, documentation, and dissemination of results and

promising practices would help to ensure that constraints and obstacles are addressed early on and that accomplishments and innovations are more widely disseminated.

Chapter Six: Discussion of Potential for Sustained Outcomes, Contribution to Scale, Community Health Worker Models, and Global Learning

I. Progress Toward Sustained Outcomes

Since HKI implemented the SAN+ project through the existing health system, with an emphasis on community-level facilities, it is much more likely that the outcomes will be sustained and that many of the Nutrition+ activities will continue. The sustainability strategy described in the DIP focused on 12 criteria which would enhance the possibility of sustained outcomes. Of the 12, the final evaluation showed that the project adhered to the following criteria:

- Reliance largely on existing personnel, relationships, and structures
- Responding to needs identified by the Regional Health Directorate and other implementing partners
- Strategies and activities consistent with MOH policy or modification of policies where appropriate
- Joint assessment, planning, implementation, monitoring, and evaluation
- CSComs with increased capacity to deliver the Nutrition+ package
- District Health Officers/Reference Health Centers with increased capacity to assess, plan, monitor, and evaluate
- MOH and MSD at national level with increased capacity to adopt state-of-the-art policies, strategies and approaches
- Rural radios with increased capacity to design and disseminate effective, accurate messages for infant and young child feeding

As a result, there are a number of positive indications that many of the achievements will be sustained:

- The health system has been strengthened by widespread Nutrition+ and CMAM training for CSCom personnel, DHMTs, and volunteer community health agents.
- The project is a proven model for re-integrating nutrition interventions into the CSCom activities, including therapeutic care for malnutrition.
- There is now a heightened community awareness of the importance of nutrition, resulting in an increased demand for services at the CSComs.
- Other projects and programs can use the set of messages developed by SAN+ and partners, including radio spots, which have proven effective at changing knowledge and behaviors.
- Four manuals for ENA/BCC training at the facility and community level, developed in harmony with the MOH, are now available for widespread use.

Another positive development for enhancing the sustainability of results is the fact that HKI has prepared funding proposals for follow-on activities to reinforce the results of SAN+. If funded, these proposals will help to further consolidate gains and ensure that project outcomes are sustained.

Perhaps the biggest obstacle to the sustainability of Nutrition+ activities is the possibility that MOH supervisors at the district, regional, and national levels will not be able to provide a consistent level of support and guidance to the CSComs. During the life of the project, the nine district supervisors who were part of the SAN+ team regularly visited the CSCom personnel, encouraging them and providing on-the-job training. On many occasions district personnel also participated in these visits. However, if resources are not available post-project for this level of support, it is possible that some of the gains will be lost.

II. Contribution to Scale Up

As a result of the efforts of the SAN+ team and its partners, the Koulikoro Region has the distinction of being the only region in Mali where the Nutrition+ package is being fully implemented at the CSCom level. Based on the positive outcomes of the SAN+
project, the Ministry of Health has expressed an interest in engaging a consultant to determine how this model, with its focus on preventing malnutrition, can be successfully replicated in other regions using the innovations and lessons learned from the project. The fact that SAN+ achieved its results by working through the health system, and without major external inputs, makes this cost-effective approach appealing in a country where there is strong competition for government resources. Since the USAID ATN+ project will be active for several more years, the involvement of this project team in replicating the SAN+ model would be extremely helpful.

The SAN+ project also showed the value of adding a therapeutic component, CMAM, to the Nutrition+ activities. Although funded by other sources, the CMAM screening and treatment activities were an integral part of the program, complementing the Nutrition+ package and attracting mothers to the CSComs and to the community-based screenings. In order for this component to be replicated on a wider scale, it will be important to ensure adequate training, a strong community support structure, and a regular supply of inputs such as food rations.

Another project contribution which the MOH has adopted for scale up concerns de-worming for children and WRA. The project team and partners, especially the MOH's Nutrition Division and the USAID ATN+ project, piloted the addition of a de-worming component to the National Nutrition Week campaigns. As a result of this successful pilot, de-worming has been added to these campaigns on a national level.

The project also demonstrated during three other NNW campaigns that screening for malnutrition in children is an activity that can be carried out during the mass mobilization accompanying the National Nutrition Weeks. HKI and other partners are continuing their advocacy efforts for the MOH to replicate this activity nationally.

Another important result of advocacy on the part of HKI, the USAID ATN+ project, and other partners was the addition of zinc as an accepted element of treatment for diarrheal disease. The revised MOH protocol now includes zinc. Additional examples of project contributions which the MOH has adopted for scaling up include the four Nutrition+ training manuals and the IEC messages, complete with counseling cards and a flipchart (*boîte à images).* These materials, which project staff developed in

collaboration with the USAID ATN+ project and the Nutrition Division, are now available for use at the national level.

III. Role of Community Health Workers

The original design of the SAN+ project did not call for setting up networks of community health volunteers. Instead, the project team planned to work through grandmothers and other older women who influence community health practices. However, when additional funding was secured for CMAM, the SAN+ team and the MOH invested considerable effort in training the volunteer community health agents (*relais*). These unpaid volunteers work on a number of projects and initiatives, including the semiannual National Nutrition Weeks. In many communities these agents played an important role in helping the SAN+ staff and CSCom teams implement project activities but in other communities they were less motivated and contributed little.

Both strategies – working through grandmothers and working with volunteer community health agents – have two common drawbacks. Volunteers, whether grandmothers or *relais,* expected to be remunerated for their efforts, which is not sustainable in the long run. Second, the auxiliary midwives at the CSComs were slated to be the "supervisors" or leaders for these groups, but their work schedules did not allow sufficient time to take on this task. They also indicated that they expected additional compensation for taking on more work.

By the fourth year of the project, it was clear that working through older women or relying on the volunteer community health agents were not sustainable models for providing the much-needed long-term community-level support for BCC activities. During the final six months of project implementation, the SAN+ team, the MOH, and the Ministry of Social Development decided to establish mothers' groups to provide a community structure for BCC activities.

Each mother's group, composed of women of all ages, participated in a nutrition training workshop and was expected to provide information and support to women who want to change nutrition practices. As the establishment of these groups is a recent development that is continuing post-project with other funding, it is too early to gauge overall results. However, project staff were quite optimistic that this intervention would provide the necessary support to reinforce behavior change because the groups incorporate women from all strata.

In conclusion, a weak link during project implementation was the lack of a strong structure in many communities that could complement and support the efforts of the CSCom teams. Given the workloads and multiple responsibilities of facility-based health care providers, the CSCom staff have a limited ability to improve community members' knowledge and promote long-lasting behavior change. Although the project design did not call for investments in or reliance on community health workers, the community needs to be actively engaged in project implementation, especially in reinforcing BCC messages and in providing individual, personalized support to people who want to adopt better practices.

IV. Contribution to Global Learning

During its four years of activities and advocacy efforts, the SAN+ project had a number of successes that could contribute to global learning if properly documented and disseminated. Most of these successes

and promising practices have already been described in section II above on the project's contribution to scale, including:

- The successful, low-cost re-integration of nutrition activities into the routine activities of CSComs

- The distinct advantages of implementing a project through the MOH, with minimal external inputs, rather than setting up a parallel delivery structure

- The effectiveness of partnerships in advocacy efforts to bring about policy and programmatic change

The project also produced two models that should be considered for replication. First, HKI/Mali was successful in leveraging additional financial and in-kind resources to support the addition of a CMAM component to the original SAN+ project framework. Incorporating community-based malnutrition screening and facility-based treatment into the project raised awareness about malnutrition, increased the participation of mothers with young children in nutrition activities, and enhanced the credibility of the CSComs and the project as a whole. However, as noted above, replication will depend on adequate training, a strong community support structure, and a regular supply of therapeutic food rations.

Second, SAN+ showed that a Child Survival and Health project can be implemented on a regional scale. With a modest project staff and strong support from the MOH and other partners, including those who contributed additional funding, the team was able to supervise and guide personnel at over 150 CSComs to successfully carry out nutrition activities.

Chapter Seven - Conclusions and Recommendations

I. Successes

In terms of successes, the results of both the final quantitative survey and the final evaluation demonstrate clearly that the SAN+ project achieved the majority of its objectives, meeting or exceeding the targets for 10 of the 17 indicators. Even where targets were not reached by the end of the project, the SAN+ team and partners made substantial progress in increasing knowledge levels, changing practices, and building capacity.

The best example of increased knowledge and better practices concerns child feeding. Project results clearly showed improvements in exclusive breastfeeding for infants under six months of age and better complementary feeding practices for children in the 6-23 month age range. Substantial progress was also made in two other objectives which positively impact nutritional status for children 6-23 months. First, the proportion of children in this age group receiving Vitamin A supplementation increased from 31% to 75%. Second, there was marked improvement in the two indicators measuring a decrease in the prevalence of anemia for these children.

Another consistent finding of the final evaluation was the success of the capacity-building activities with MOH personnel, especially those at the CSComs. The majority of respondents who were interviewed noted that the CSCom teams were better informed about the Nutrition+ package and had improved their capacity to treat malnourished children. This capacity building, combined with strong support from the

MOH, resulted in a marked improvement in the quality of nutrition services offered at both the community-level and district-level facilities. The successful reintegration of the Nutrition+ package is regarded by the MOH as a model which should be replicated in other areas.

HKI/Mali and the SAN+ team were also very successful in leveraging financial and in-kind contributions that reinforced the interventions outlined in the original project design. While the original design focused primarily on preventing malnutrition, these additional resources allowed the SAN+ team to incorporate more comprehensive screening as well as treatment of malnutrition in infants and young children. The addition of this therapeutic component further strengthened a sound program design.

II. Challenges

Although the project was clearly successful, it was not without its share of challenges. Some of the challenges were not unique to this nutrition project: finding ways to reinforce behavior change so that it is lasting; convincing mothers and key decision-makers of the importance of nutrition; and putting in place community-level structures to ensure the sustainability of project results. In addition to these constraints, the SAN+ team confronted two other major challenges during project implementation.

First, the final evaluation showed that the objective aimed at improving the control of diarrheal diseases in infants and young children (objective 4) met with only limited success. Although the percentage of children who received increased fluids and continued feeding during illness did increase from 3% to 21% (indicator 9), this fell short of the target of 30%. It was also difficult to improve hand washing practices on the part of mothers of young children. The percentage of mothers reporting that they washed their hands at four key occasions only increased from 1% to 4% (indicator 10). Although there was noticeable improvement for behavior change on three of the four occasions, the overall result was still short of the end-of-project goal of 20%.

Second, the management team of SAN+, consisting of two people, was understaffed. Although both were qualified, dedicated individuals, the Coordinator and Deputy Coordinator had multiple responsibilities which increased significantly when additional funds were acquired. The most evident shortfalls were in the documentation and dissemination of results. Regular analysis of the data was not routinely carried out due to time and personnel constraints and the results of data collection were not systematically shared within the project or with partners. Promising practices and successes were not routinely documented and disseminated, again due to insufficient personnel at the management level.

III. Contributions

The SAN+ project team members made a number of contributions at the regional and national level. They improved data collection at the CSComs by introducing forms for tracking IEC sessions and by providing on-the-job training for CSCom personnel. The project team and its partners were also responsible for developing cards, forms, and registers for tracking malnourished children. A third contribution to improved data collection were the forms prepared to monitor the distribution of de-worming tablets during National Nutrition Week campaigns.

The SAN+ team and several partners were effective in advocating for two changes in health policies. First, zinc is now accepted as part of the protocol for the treatment of diarrheal disease. Second, the MOH added de-worming, an intervention piloted in the SAN+ zone, as an activity of the National

Nutrition Week campaigns. This should further reduce the prevalence of anemia, thereby improving nutritional status for both young children and WRA.

As a result of the SAN+ project, the MOH now has a set of tested IEC materials, complete with visual aids, which focuses on improving the nutrition of infants, young children and their mothers. The four training materials developed during project implementation are also ready for wider use throughout the country.

These contributions in improved data collection, changes in national policy and programs, and availability of tested materials attest to the dedication of the project staff, the excellent support from the MOH and the MSD, the generosity of donors, and the synergy with other partners. But perhaps the most important contribution is that the SAN+ project demonstrated the effective, low-cost reintegration of nutrition services into health facilities at the community level. As noted earlier in this report, the MOH is looking at ways to replicate this success on a national level, using lessons learned from the experience of SAN+.

IV. Recommendations

These recommendations are primarily addressed to organizations, including HKI, that are planning to implement projects with goals and objectives similar to the SAN+ project:

- Replicate the approach of working through the existing health structure rather than setting up parallel systems.
- Put in place a management team with adequate human resources to carry out all the key management functions.
- Design a BCC strategy which includes regular, structured follow-up support to people who want to change behaviors and practices.
- Where resources permit, include a CMAM component for nutrition interventions focusing on infants and young children.
- Include adequate resources for supervision of and support to both project field staff and health care providers implementing the project.
- Where feasible, use a multi-media approach for disseminating IEC messages. Radio, for example, can be particularly effective in rural areas.
- Include in the design strategies for motivating broad community participation.
- Ensure the same multi-faceted approach that was successful in the SAN+ project design: targeting both WRA and children; using a variety of cross-cutting strategies; relying on synergy to complement project interventions; and using a BCC strategy which includes both interpersonal communication and mass media.

Annex 1: Results Highlight – Integrating the Prevention and Treatment of Malnutrition within Local Structures

The landmark *Lancet Series on Maternal and Child Undernutrition* published in early 2008 identifies effective, targeted interventions to prevent undernutrition in women and children which, if implemented at scale during the window of opportunity (conception and up to 24 months of age), could reduce nutrition-related mortality and disease burden by 25 percent[1]. The Essential Nutrition Actions framework[2] unites most of the interventions highlighted by that series. The community-based management of acute malnutrition (CMAM) pioneered by Valid International in the early 2000s has been shown to greatly reduce the cost and expand the reach of treatment and to permit more timely identification of need[3].

In response to the surge in cases of acute malnutrition in Diffa, Niger in 2005, HKI received funds from USAID's Office of Foreign Disaster Assistance (OFDA) to integrate a CMAM component into the child survival grant begun the year before to promote the ENA framework. The **integration of the treatment of acute malnutrition into a larger preventive framework** has become the model for HKI and distinguishes our approach from that of other organizations working in the Sahel. Another distinguishing feature of HKI's approach is to **build local public sector and community capacity to manage, plan, deliver and monitor CMAM and ENA services through existing health care and community structures** rather than delivering them directly through a parallel system.

The model developed in Niger and subsequently expanded to Mali and Burkina Faso has included support for the development and ratification of a **national CMAM protocol** followed by **training programs** for managers and frontline health workers coupled with the development and dissemination of supportive **job aids and educational materials** to establish the government capacity to identify and treat acute malnutrition. Prevention capacity is reinforced in tandem through training for managers, health workers and community workers that covers, at varying levels of complexity, the technical contents of ENA together with behavior change communications methods. HKI also works with other partners to strengthen **logistics and supply networks** provide necessary screening instruments, therapeutic and supplementary foods, medications, micronutrients and other supplies. The approach includes **mobilizing and sensitizing communities** to understand the key ENA messages as well as to know the signs of malnutrition and the availability of treatment. The program includes building **health information systems** for supervising, monitoring and evaluating the quality and delivery of services. Finally, new projects provide an opportunity to build in a **research** design to advance the evidence for the effectiveness of the approach.

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[1] Bhutta ZA et. al. 2008. *What works? Interventions for maternal and child undernutrition and survival.* Lancet;371:417-40

[2] Optimal breastfeeding; optimal complementary feeding; nutritional care for the sick and malnourished child; maternal nutrition; the integrated control of anemia; and prevention of vitamin A and iodine deficiency.

[3] Valid International. Community Therapeutic Care: A Field Manual. Oxford: 2006. Available from www.validinternational.org.

Annex 2: Presentations and Publications

Micronutrient Forum 2007:

VITAMIN A SUPPLEMENTATION: CAN WE ASSUME THAT STAKEHOLDERS ONCE COMMITTED ARE ALWAYS COMMITTED? THE MALI EXPERIENCE

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Background: In Mali, vitamin A supplementation (VAS) is a strategy adopted by the Ministry of Health (MOH) to reduce vitamin A deficiency. From 1998 to 2002, vitamin A capsules (VAC) have been distributed to children 6 to 59 months once a year through NIDS. From 2003 on, VAC have been delivered bi-annually: either through National Nutrition Weeks (SIAN in French), organized twice a year, or, if National Immunization Days (NIDs) are taking place, VAS is added to the NIDs. As of 2003 post partum women (PPW) within 40 days of delivery have been receiving a VAC as well. For SIANs, a mix of delivery methodologies is used to distribute the VAC depending upon the region: fixed centers, outreach, campaign and/or routine. The first SIAN was conducted in June 2003. Up to mid 2006, 4 SIANs and 2 NIDs have been organized.

Aims: To ensure twice-yearly VA supplementation of children and PPW with a sustained coverage of at least 80%.

Framework: At the central level, the Nutrition Division of the MOH is the responsible department for the organization of VAS. The health sector is decentralized: each of the 8 regions and the capital district (Bamako) has a Regional Health Directorate (DRS) with its own operational health plan. Partners supporting VAS are: USAID and their contractors/ grantees, UNICEF, Micronutrient Initiative, and Helen Keller International. The SIANs have been institutionalized and included in the National Strategic Food and Nutrition Plan, engaging the Government of Mali to ensure partial funding.

Outcomes:

Coverage of VAS for children has been declining:

Year	Coverage (%)
2003	92.7
2004 (S1)	95
2004 (S2)	95
2005 (S1)	76.2
2005 (S2)	66.8

Implications: Logistical problems, a change in leadership in the MOH, absence of Nutrition Division head, lack and/or late availability of funding can explain the decline. It is dangerous to assume that when, institutionally, all systems are in place, successful "routine" implementation twice a year of will automatically follow. Advocacy for VAS at the national and regional level must be continued to ensure its inclusion in regional plans. Interpersonal communication with decision makers needs to be repeated in preparation of every distribution exercise and commitment to funding ensured.

THE CHALLENGE OF HAVING INTEGRATED DELIVERY PROCESSES FOR EACH OF THE ANAEMIA CONTROL STRATEGIES AVAILABLE, ACCESSIBLE AND FUNCTIONING IN MALI

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Background: DHS-2001 data show that in Mali the maternal mortality rate is very high: 528 deaths per 100,000 live births. Anemia is a public health problem: 63% of women of reproductive age (WRA), 73% of pregnant women and 82% of children under five years are anemic. The etiologies of maternal anemia include iron deficiency, malaria, Vitamin A deficiency, and intestinal parasites. A previous study (Aguayo, 2004) has shown that in rural Mali, prescription rates for anemia control are high, women's adherence acceptable, drug supply problematic, women's/provider's knowledge about anemia poor and provider's counseling to women sub-optimal or non-existent.
Aims: To obtain an estimate for integrated anemia control related indicators as a baseline prior to the implementation of a 4-year USAID-funded Child Survival Nutrition project.
Methods: A cluster sampling methodology was used to select 30 clusters (villages) in the typical rural region of Koulikoro in Southeastern Mali. The survey targeted mothers of children 0 to 23 months, their child and pregnant mothers (> 3 months gestation). Capillary blood was taken from 137 pregnant women and 243 children to assess hemoglobin (Hb) levels using Hemocue™ hemoglobinometer.
Results: 300 mothers, 288 pregnant women and 44 health staff were interviewed. 93% (confidence interval CI: 90 - 96%) of children 0 to 23 months have Hb<110 g/L; a stunning 98% of children 12 to 23 months have Hb< 110g/L (11.7% have Hb<70g/L); 54% of women (in the 3rd trimester of pregnancy) have Hb<100g/L and 77% Hb<110g/L. Although 71% (CI: 64 77%) of women with a child less than 1 year old attended at least 3 antenatal clinics, only 36% (CI: 31-42%, n=272) of pregnant women (in 2nd or 3rd trimester) took an iron/folic acid (IFA) tablet in the last 24 hours. For malaria control, 58% of 2nd and 3rd trimester pregnant women received their first dose of Sulfadoxin-pyrimethamin (SP), 16% received a second dose; 48% of children slept the previous night under an insecticide treated bed net (ITN), mostly with their mothers. Although 69% of mothers report washing their hands with soap or ash, only 1% of mothers wash their hands with soap on all 4 recommended occasions. Only 8% of pregnant women (CI 4-12%, n=187) were dewormed (100% of 30 health centers reported deworming drug stock out in the last 6 months).
Conclusions: These results call for an integrated approach to anemia control, including malaria control, iron deficiency control and anti-helminthic treatment. High coverage for all indicators in the same population at the same time is necessary to ensure reduction of anemia prevalence.

Draft publication under review:

Screening for acute childhood malnutrition during the National Nutrition Week in Mali increases treatment referrals

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Abstract

Background: Acute childhood malnutrition remains a public health problem in Mali, where the national prevalence is estimated to be 15% and a national protocol has been developed for the Community Management of Acute Malnutrition (CMAM). Semi-annual Child Nutrition Weeks (Semaines d'Intensification des Activites de Nutrition, or "SIAN") provide an opportunity to screen a large number of children for acute malnutrition, by measuring their mid-upper arm circumference.

Objective: To evaluate the effects of integrating mass screening for acute malnutrition into the SIAN carried out in June, 2008.

Methods: A cross-sectional survey was conducted in two health districts in the Koulikoro region, using a population-proportionate, multi-stage random sample of 1) health centers and 2) households with children 6-59 months of age in villages linked to each of the selected health centers. Interviews were conducted with 1741 child caregivers, 17 community-based CMAM volunteers and 45 health center staff members.

Results: 1334 of the caregivers (77%) reported that their child participated in SIAN. Of children who participated in SIAN, 1307 (98%) received vitamin A, 1040 (78%) received anti-helminth tablets, and 669 (50%) were screened for acute malnutrition, of whom 186 (28%) were reportedly identified as acutely malnourished. SIAN screening covered a significantly greater proportion of children (39% of all children) than either village-based screening (21.6%) or health center-based screening (5% of all children) during the 4-5 months after the SIAN ($P<0.0001$).

Conclusion: The integration of screening for acute malnutrition in SIAN events provides an opportunity to assess and refer a large number of malnourished children, and should be continued.

Annex 3: Project Management Evaluation

The main body of the report covers the most important aspects of project management including information management, personnel supervision, and the quality of joint planning activities. The purpose of this annex is to provide additional information and recommendations on how the project was managed.

I. Planning Process and DIP Preparation

The planning process prior to the preparation of the DIP was very participatory. HKI took several steps to ensure that MOH and Ministry of Social Development (MSD) personnel at the national and regional levels were fully involved in developing the project. These steps, which included orientation sessions and strategic planning meetings, were instrumental in ensuring that MOH policies and protocols were followed and that key Ministry personnel, especially in the Nutrition Division and the Regional Health Directorate, were an integral part of the start-up process.

The HKI/Mali office also ensured that other key stakeholders knew about the proposed project early in the planning process. An all-day meeting in Koulikoro included representatives from NGOs working in the Koulikoro Region; personnel from the Regional Health Directorate, the nine health districts, and the Regional Social Development Directorate; elected officials; the local UNICEF officer; and members of the Community Health Committees (*ASACOs*). A second information-sharing activity involved visits to selected villages in the project zone to confer with community leaders.

In addition to the preliminary orientation meetings and workshops, MOH and MSD partners and other stakeholders were very involved in two important activities: the KPC survey led by Dr. Xavier Crespin and the preparation of the DIP. Their involvement in the KPC survey included: helping to organize the KPC information workshop in Koulikoro; recruiting survey supervisors and interviewers; developing the logistics plan; finalizing the questionnaire and sampling strategy; and data collection and analysis.

As with the KPC survey, HKI/Mali ensured that major stakeholders and partners were involved in preparing the DIP. A two-day workshop brought together 65 representatives from the government, NGOs, international organizations, USAID, and HKI staff for extensive discussions and presentations of other programs and projects in the Koulikoro Region. The participants divided into four working groups to prepare preliminary outlines for key sections of the DIP. A writing team, which included a representative from the Nutrition Division of the MOH, finalized the document.

Adequacy of the DIP Work Plan: Overall, the four-year work plan was practical and realistic. Two areas which would have benefitted from more in-depth planning and research are the use of zinc for CDD and the BCC strategy. Promoting zinc for the treatment of diarrheal disease did have some success in that the MOH has adopted this as standard protocol. However, implementation of this activity suffered due to several factors beyond the control of the project including inadequate training for health care providers and an unreliable supply of zinc at the

CSCom level. HKI had proposed learning from Save the Children's model of making zinc available at the village level in Mali but didn't appear to have followed up on this idea.

As for the BCC strategy, the focus seemed to be mainly on developing the messages and visual aids and training various groups, including radio managers, in their delivery. The strategy was successful in terms of disseminating messages, especially where infant and young child feeding practices are concerned. What was lacking in the strategy was an emphasis on how to effectively promote, reinforce and sustain changes in behavior for the long term. Little attention was given to training health care providers, volunteers and support groups in this methodology. This shortcoming is, however, being addressed in follow-on projects in the same project zone.

II. Supervision of Project Staff

For the purposes of this discussion on supervision of project staff, project staff here includes the MOH staff implementing the project, especially at the CSCom level, and the nine district supervisors who were HKI employees.

The DIP called for joint **monthly supervision of the CSCom teams** by the District Health Management Teams (DHMT) and the HKI supervisors. Although the HKI supervisors were usually able to maintain a monthly visit to most CSComs in their respective districts, these visits were not routinely done with representatives of the DHMT during the first half of the project. This joint supervision gap was due primarily to budget constraints.

As a result of a strong recommendation by the midterm evaluation team, project funds were made available midway through the project and joint supervision of the CSCom teams became the norm. Tools developed during the life of the SAN+ project helped to ensure that DHMT and HKI supervisors looked at all aspects of nutrition activities, including the quality of IEC sessions. Whether the MOH will be able to continue regular supervisions using these tools will depend largely on the availability of resources, either from the MOH itself or from partners.

As for **supervision of the HKI field staff** (the nine district supervisors), this was done intermittently. As noted elsewhere in the report, there were only two management staff (Project Coordinator and Deputy Coordinator) and their multiple responsibilities made it difficult for them to find the time to conduct regular visits to monitor and support the HKI field staff. Although by all accounts the HKI field staff were dedicated, competent members of the SAN+ team who carried out their responsibilities with little direct oversight, it is always useful and good for team morale to have periodic visits from supervisors. On a more positive note, the field staff did have an opportunity to share accomplishments and concerns during project staff meetings which were held more regularly during the final two years of project implementation.

III. Human Resources and Staff Management

One of the strengths of the SAN+ project is that there was very little turnover among the HKI employees assigned to the project. During the four years of activity, the first Project Coordinator resigned in the first year and was replaced by a very competent administrator who came from the MOH. The fact that she had been a District Health Officer (*médecin chef de district*), spoke English, and had a solid background in public health helped to ensure a smooth transition. An

added asset was the fact that her skill set was highly complementary to that of the Deputy Project Coordinator who had extensive experience implementing projects in Mali.

The only other turnover occurred when a district supervisor was replaced, also during the first year of project implementation. Having the same staff on board throughout helped to ensure a cohesive team and greatly facilitated project implementation.

As noted in Section II. above, the main problem with the composition of the SAN+ project team was the dearth of management staff. The project was ambitious in scope and management responsibilities increased significantly when additional funding was secured to implement new activities. Having only two staff to carry out the multiple management responsibilities meant that certain areas such as staff supervision, documentation of achievements and innovations, and dissemination of results received inadequate attention.

As for staff transition at the end of the project, HKI/Mali was not able immediately to ensure ongoing employment for all SAN+ staff but was actively pursuing funding for a continuation and strengthening of the SAN+ strategy. If additional funding becomes available to continue activities, HKI will ensure that project staff are aware of opportunities.

IV. Information Management

In general, the monitoring and evaluation (M&E) system was adequate for monitoring progress, especially at the CSCom level. The project staff used the existing MOH health information system (HIS) to the extent possible, an approach that was consistent with the project design decision to work through the MOH for all aspects of SAN+ rather than setting up parallel structures.

Sources and quality of data: For routine monitoring data, the SAN+ management team relied primarily on three sources: monthly and quarterly reports prepared by the staff at the CSComs; project data forms completed by the nine district supervisors; and official reports from the National Nutrition Weeks (NNWs):

The monthly and quarterly reports prepared by CSCom staff contained useful information regarding the project's objectives and indicators: services provided to pregnant and postpartum women and to children under five; IEC sessions; and stock status for key inputs such as Vitamin A, iron+folic acid (IFA), and SP. However, there were some issues with the quality of the data. First, there is no standard method of filling out the forms, so it can be difficult to compare data sets across health facilities and across districts. Second, all reports emanating from the CSComs are prepared manually, a time-consuming process which lends itself to errors. Third, given the work load of the CSCom teams and the number of reports they are expected to prepare for the MOH and for individual projects and initiatives, the quality sometimes suffers and reports are not always submitted in a timely fashion.

The second source of monitoring information was the reports prepared by the nine SAN+ supervisors**,** each one reporting on his or her district. The supervisors used a number of tools developed for SAN+ including:

- A checklist to monitor the quality of IEC sessions
- A feedback form to help supervisors provide appropriate comments to health agents delivering IEC sessions
- A checklist for growth monitoring and counseling sessions conducted by auxiliary midwives
- A summary data form capturing key information (e.g., number of IEC sessions and stock outs) from the CSCom reports
- A supervision form for mothers' groups

These reports complemented the monthly activity report prepared by each supervisor. In general, the data provided by the supervisors was accurate and reliable.

Reports on the results of the National Nutrition Weeks constituted the third source of monitoring information, especially for Vitamin A and de-worming targets. The data in the NNW reports appeared to be reliable. The only potential issue is that the last census was conducted ten years ago and the estimated target populations were likely under-estimated. This resulted in coverage percentages in the high 90s, sometimes exceeding 100%.

Issues: The management team of SAN+ consisted of two people, both of whom had multiple responsibilities for the project, including representational obligations; budget preparation and tracking; supervision; and financial and program report preparation. For one year, additional technical and managerial support was provided by a Mickey Leland Hunger Fellow, who also undertook a study of the feasibility and benefits of including mass screening for acute malnutrition in the NNW. During the final evaluation, the evaluation team learned that regular analysis of the data was not routinely carried out due to time and personnel constraints; neither were results of data collection systematically shared within the project or with partners, except during key evaluation events such as the baseline, midterm, and final surveys.

The evaluation team concluded that the comprehensive monitoring plan described in the DIP may have been too ambitious for the staff to implement fully due to competing priorities on their time. Much of the planned analysis and dissemination of results did not take place.

A second issue was that routine monitoring was primarily quantitative, with little qualitative information gathered during the course of the project. Due to limited financial and human resources, the project team did not utilize qualitative methods to discern problems, assess progress, or modify strategies.

Strengthening the MOH health information system: In spite of these two issues, the SAN+ project made a number of important contributions to the MOH health information system. For example, the project introduced forms for tracking IEC sessions at the CSCom (themes, number of participants, and number of sessions per month). This record-keeping has now been integrated into the government HIS. With the advent of the CMAM activities, SAN+ staff worked with MOH counterparts to put into place cards, forms, and registers for tracking malnourished children who are screened and treated.

SAN+ also contributed to strengthening the data collected during the National Nutrition Weeks. In collaboration with the MOH and the USAID ATN+ project, SAN+ staff helped develop forms for tracking the distribution of de-worming tablets and for tracking the number of children screened and referred for malnutrition treatment.

Another contribution by the SAN+ team was the on-the-job training provided by supervisors to CSCom staff responsible for preparing the monitoring summaries, especially those forms and reports specific to the project. The supervisors explained the forms, provided guidance on filling them out correctly, and assisted the staff with the analysis and interpretation of results.

The strong involvement of the MOH and the Ministry of Social Development in the baseline surveys, midterm evaluation, final survey, and final evaluation also contributed to enhancing the capacity of these Ministries to conduct similar evaluation exercises. The project team's contribution to improving the HIS has been noted at high levels of the MOH.

(For additional details on information management, see Chapter Three: Data Quality – Strengths and Limitations.)

V. Technical and Administrative Support

At the headquarters level, there were two backstops during the course of the project. The principal person who provided technical and administrative oversight during the second half of the project was the Senior Program Manager for Nutrition and Health. She maintained frequent contact with the HKI/Mali office, participated in the mid-term and final evaluations, and ensured a high level of quality support. In addition to ensuring that the SAN+ project met technical standards for nutrition projects, she also provided ongoing administrative backstopping. A Mickey Leland Hunger Fellow provided technical and management support from September 2007 through August 2008, and a short-term BCC consultant provided additional technical assistance

It should be noted here that the project team relied on its partners in country for many of its technical assistance needs. The MOH and the Ministry of Social Development provided much of this support as did the USAID ATN+ project. UNICEF was also a major technical resource. HKI's headquarters team helped arrange for the project coordinator, ATN staff and government partners to participate in West Africa regional training in the technical state of the art of ENA and in BCC techniques for ENA; this training was funded by USAID's Africa 2010 project. A by-product of these trainings was the adaptation of training modules for health and community agents in ENA/BCC for Mali, which were subsequently adopted by the MOH.

The headquarters backstop devoted at least 20 percent of her time to providing support to the project, assisting with the review and editing of annual reports, providing technical guidance and sharing updates from peer-review literature, international conferences and CORE Group meetings and its relevant tools.

VI. Management Lessons Learned

Planning the project: HKI made a concerted effort to inform and involve key Ministries and other partners early on in the planning process. This included widespread participation of a number of parties in the preparation of the DIP including USAID/Mali, key Ministries, NGOs working in the Koulikoro Region, and other projects such as the USAID ATN project. This participatory strategy ensured that the key partners were on board early on and fully engaged in project implementation. It also ensured that the technical aspects of the project were in line with MOH policies and protocols.

Supervision: An adequate budget to provide for MOH participation in supervision is essential. It is also important that project management staff have the time and resources to regularly supervise field staff.

Human resources and staff management: The limited turnover in project staff helped to ensure the development of a cohesive team, thereby facilitating project implementation. A lesson learned is that it is important to have a management team that is sufficiently staffed to adequately cover all management responsibilities including documentation of successes and innovations, supervision of staff, and regular dissemination of results to partners.

Information management: Using the MOH health information system as the basis for the project's monitoring and evaluation plan was a good use of resources and further validated the approach to implement the project through the MOH. Having sufficient project staff with expertise in information management would help to ensure that results are consistently documented and shared with all stakeholders on a regular basis.

Synergy: An important lesson learned from this project is the value of synergy. Much of the success of the SAN+ project is a result of creating synergy with other organizations working in the Koulikoro Region and at the national level. This was a well-defined strategy of SAN+ and the benefits of working closely with other organizations are documented in the main report.

Sharing lessons learned: HKI plans to prepare a synthesis of the findings from this final evaluation and the final evaluation of the Niger Child Survival project which was conducted in July 2009. The accomplishments, lessons learned, and key recommendations will be widely shared with all HKI offices, especially the Nepal office which has an ongoing CSHGP-funded project. HKI also plans to use the findings of these two evaluations when designing new projects with similar interventions.

Annex 4: Work Plan Table

Objectives / Activities	Objective Met	Activity Status
Objective 1: Improve nutritional status through decrease in prevalence of underweight (W/A) in children under two years		
Training auxiliary midwives (*matrones*) & chief of CSComs about Nutrition +	**Yes**	• 148 auxiliary midwives trained: May 07 • 140 CSCom chiefs trained: May 07 • 118 other health workers (HWs) (doctors, nurses, nurse aides, and midwives trained: May 07
Integrate Nutrition + activities into CSCom services	**Yes**	• Nutrition activities now part of minimum package at all levels of health facilities
Community health education sessions	**Yes**	• 371 sessions conducted in 07 • 32, 867 pregnant and lactating mothers received individual counseling on infant and young child feeding during the period Oct 07-Sept 08 • 15, 571 adults reached through group discussion and interpersonal communication during the period Oct 08-Sept 09 • Cooking demonstrations reached 2,140 women Oct 08-Sept 09

Develop IEC messages on Nutrition+	**Yes**	• BEHAVE workshop for staff : May 07
		• BEHAVE workshop for MOH partners: May 07
		• Distribution of Vitamin A counseling cards June 07
		• All counseling cards completed by July 2009; distribution in September 2009 (in flip chart form)
		• Themes:
		  • Immediate initiation of breastfeeding
		  • Exclusive breastfeeding

Objectives / Activities	Objective Met	Activity Status
		• Correct breastfeeding positioning • Feeding of the child from 6-11 months • Feeding of the child from 12-24 months • Feeding of the child from 12-24 months (2) from his own bowl • Malnutrition: Kwashiorkor • Malnutrition: Marasmus • Feeding the sick child • Importance of the prenatal consultation • Nutrition of the pregnant woman • Nutrition of the breastfeeding woman • Vitamin A supplementation for children aged 6-59 months • Iron-folic acid supplementation for the pregnant woman • The fight against iodine deficiency • Maternal post-partum Vitamin A supplementation • Foods to give your child to prevent malnutrition • How to prevent malaria
Broadcast messages on rural radio	**Yes**	• 2-day training for radio agents from 29 stations (June 07) • Contractual agreements with 29 stations (June 07) • Tapes developed with key messages in 3 languages (French, Bambara, and Soninke) distributed to 29 stations (June 07) • New contracts for two more rounds with radio (08, 09) • Estimated 651, 320 adults over the age of 15 receiving information via radio on Nutrition+ and acute malnutrition
Contribute to improved preventive behaviors on the part of the mothers	**Yes**	• Important contribution to increased knowledge and behavior change in the target population in the area of breastfeeding, complementary feeding with foods rich in micronutrients, hygiene and care-seeking during illness
Participate in Nutrition Group meetings	**Yes**	• SAN+ Coordinator participated in meetings

Objectives / Activities	Objective Met	Activity Status
Implementation of CMAM	**Yes**	• Sept 06: awarded OFDA grant to begin CMAM activities in 2 districts, Nara and Kolokani • National Protocol approved • Sept 08: OFDA grant expanded to cover entire Koulikoro region • 170 facilities equipped and functional • 38,832 children received treatment of acute malnutrition in year 3 of the grant
Community mobilization during de-worming campaigns in Koulikoro	**Yes**	• Radio campaigns during Dec. 07 • Radio campaigns again in June 07
Community mobilization during National Nutrition Weeks (NNW or *SIAN* in French) in Koulikoro Region	**Yes**	• Albendazole added in Dec 06; now incorporated nationally • In 2008 insecticide treated bed nets distributed during NNW nationwide • Mass screening for acute malnutrition piloted in one district in June 2008; expanded since
Increased micronutrient coverage for target population	**Yes**	• Increased availability and coverage in micronutrient supplementation for the target population: Vitamin A for postpartum women and children over 6 months of age and iron for pre and postpartum women
Small scale and "in-home" food fortification (Sprinkles)	**No**	• Micronutrient powders were not available
Cooking oil fortification with Vitamin A	**Yes**	• Nationwide with GAIN funds
Biological fortification of millet and sorghum with iron and zinc	**Yes**	• Being advanced through An Be Jigi Project funded by the McKnight Foundation (started in 2007). New varieties being tested and promoted.
Promote nutrient-rich foods	**Yes**	• Nutrient rich foods are promoted daily by auxiliary midwives at growth monitoring sessions, by radio and by cooking demonstrations held regularly at the health centers.

Objectives / Activities	Objective Met	Activity Status
Workshop for the identification of standards of quality assurance (QA) in nutrition	**Yes**	• Workshop held in March 07; 3 agents from each of the 9 districts participated. • A set of simple QA principles to be incorporated into new supervision grid and monthly staff meeting under the new UNICEF/ OFDA project of 2009-2010.
Quality assurance monitoring	**No**	• Not carried out for SAN+; QA will be monitored through routine supervision of CMAM under new proposals to UNICEF and OFDA 2009-2010.
Research on anemia & intestinal parasites in children	**No**	• Insufficient funds allotted for pursuing potential operations research opportunities
Objective 2: Improve nutritional status of women		
Promote prenatal care	**Yes**	• Ongoing – reinforced through BCC/IEC sessions and radio
Promote postnatal care	**Yes**	• Ongoing – reinforced through BCC/IEC sessions and radio
Integrate Nutrition+ activities in CSComs	**Yes**	• Nutrition activities now part of minimum package at all levels of health facilities
Develop IEC messages	**Yes**	• BEHAVE workshop for staff: May 07 • BEHAVE workshop for MOH partners: May 07 • Distribution of counseling cards: May 07 for Vitamin A only; remainder of cards completed and distributed in September 2009 (see page 1 of this table for list of themes)
Broadcast messages on rural radio	**Yes**	• 2-day training for radio agents from 29 stations (June 07) • Contractual agreements with 29 stations (June 07) • Tapes developed with key messages in 3 languages (French, Bambara, and Soninke) distributed to 29 stations (June 07) • New contracts for two more rounds with radio (08, 09)

Objectives / Activities	Objective Met	Activity Status
Community mobilization during de-worming campaigns in Koulikoro	**Yes**	• Radio campaigns during Dec. 07 • Radio campaigns again in June 07
Community mobilization during National Nutrition Weeks (NNW or *SIAN* in French) in Koulikoro Region	**Yes**	• Albendazole added in Dec 06; now incorporated nationally • In 2008 insecticide treated bed nets distributed during NNW nationwide • Mass screening for acute malnutrition piloted in one district in June 2008; expanded since
Promote nutrient-rich foods	**Yes**	• Nutrient rich foods are promoted daily by auxiliary midwives at growth monitoring sessions, by radio and by cooking demonstrations held regularly at the health centers.
BCC/IEC sessions in communities	**Yes**	• 371 sessions conducted in 07 • 32, 867 pregnant and lactating mothers received individual counseling on infant and young child feeding during the period Oct 07-Sept 08 • 15, 571 adults reached through group discussion and interpersonal communication during the period Oct 08-Sept 09 • Cooking demonstrations reached 2,140 women Oct 08-Sept 09
Objective 3: Improve nutritional status through breastfeeding		
Community health education sessions on breastfeeding	**Yes**	• 371 sessions conducted in 07 • 32, 867 pregnant and lactating mothers received individual counseling on infant and young child feeding during the period Oct 07-Sept 08 • 15, 571 adults reached through group discussion and interpersonal communication during the period Oct 08-Sept 09 • Cooking demonstrations reached 2,140 women (Oct 08-Sept 09)

Objectives / Activities	Objective Met	Activity Status
Develop IEC messages	**Yes**	• BEHAVE workshop for staff: May 07 • BEHAVE workshop for MOH partners: May 07 • Distribution of Vit A counseling cards: May 07
Broadcasting messages on rural radio	**Yes**	• 2-day training for radio agents from 29 stations (June 07) • Contractual agreements with 29 stations (June 07) • Tapes developed with key messages in 3 languages (French, Bambara, and Soninke) distributed to 29 stations (June 07) • New contracts for two more rounds with radio (08, 09)
BCC/IEC sessions in communities		• 371 sessions conducted in 07 • 32, 867 pregnant and lactating mothers received individual counseling on infant and young child feeding during the period Oct 07-Sept 08 • 15, 571 adults reached through group discussion and interpersonal communication during the period Oct 08-Sept 09 • Cooking demonstrations reached 2,140 women (Oct 08-Sept 09)
Community mobilization during World Breastfeeding Week in Koulikoro (August 1-7, 2007)	**Yes**	• 3 CSComs identified as Baby Friendly • Radio Q & A sessions on Breastfeeding • Football (soccer games) competition between women in all nine districts
Participate in Baby-Friendly hospital initiative in Koulikoro	**Yes**	• 3 CSComs were selected to be Baby Friendly health centers in the Koulikoro Region. • Funded activities in 3 Baby Friendly CSComs
Strengthen women's associations to promote breastfeeding practices in Koulikoro	**Yes**	• Ongoing: Grandmother groups were trained, radio campaigns were conducted, and more recently, mothers' groups organized and trained

Objectives / Activities	Objective Met	Activity Status
Objective 4: Reduce mortality from malaria		
Community mobilization during National Nutrition Weeks in Koulikoro Region	**Yes**	• Albendazole added since Dec 06 • In 2008 insecticide treated bed nets distributed during NNW nationwide
Promote prenatal care	**Yes**	• Reinforced through radio spots and BCC/IEC sessions
Develop BCC messages on malaria prevention for pregnant women and children	**Yes**	• BEHAVE workshop for staff: May 07 • BEHAVE workshop for MOH partners: May 07 • Completion and distribution of cards on malaria prevention in September 2009
Broadcast messages on rural radio	**Yes**	• 2-day training for radio agents from 29 stations (June 07) • Contractual agreements with 29 stations (June 07) • Tapes developed with key messages in 3 languages (French, Bambara, and Soninke) distributed to 29 stations (June 07) • New contracts for two more rounds with radio (08, 09)
Participate in malaria group meetings with partners	**Yes**	• SAN + Coordinator attended
Objective 5: Reduce mortality from diarrheal diseases	**Objective Met**	**Activity Status**
Community health education sessions on diarrheal diseases	**Yes**	• 371 sessions held in 2007; reinforced through radio and health worker individual counseling.
Develop BCC/IEC messages on food hygiene, nutrition during illness	**Yes**	• BEHAVE workshop for staff: May 07 • BEHAVE workshop for MOH partners: May 07 • Distribution of Vitamin A for women and children counseling cards: June 07 • All cards, including CDD messages, completed and distributed in September 2009.

Objectives / Activities	Objective Met	Activity Status
Broadcast messages on rural radio	**Yes**	• 2-day training for radio agents from 29 stations (June 07) • Contractual agreements with 29 stations (June 07) • Tapes developed with key messages in 3 languages (French, Bambara, and Soninke) distributed to 29 stations (June 07) • New contracts for two more rounds with radio (08, 09) • 651, 320 adults over the age of 15 receiving information via radio on Nutrition+ and acute malnutrition • With funding from OFDA II and SAN+ stations will continue to play tapes
Provide zinc for diarrhea treatment	**Yes**	• Provision of 100,900 Zinc Tabs to project CSComs in July 07, for treatment of acute diarrhea in children aged 0-23 months.
Monitoring, Evaluation, and Dissemination		
Baseline studies	**Yes**	• Baseline Knowledge, Practice, and Coverage (KPC) survey measuring the 13 Rapid CATCH Indicators (led by Dr. Xavier Crespin in February 2006) • Baseline survey measuring the 21 project indicators, nutritional status of mothers and children 0-23 months, health facilities assessment (HFA), and household behaviors (conducted by INFO-STAT in February-March 2006)
Project M&E system developed	**Yes**	• Monitoring and evaluation tools developed (2006-2007)
Ongoing M&E	**Yes**	• Monthly monitoring of: IEC talks, growth monitoring sessions, and the work of the auxiliary midwives. Topics are documented, including key messages; interaction and effectiveness also monitored. The existing checklists are quite detailed and useful for BCC. • Ongoing monitoring information is collected every three months from the CSComs and district-level Reference Centers. • For more detail, see Annual Report for Year 2 (Pages 21, 22, 31)

Objectives / Activities	Objective Met	Activity Status
Supervision of activities	**Yes**	• During first half of project neither the MOH nor HKI had sufficient funds to cover regular joint supervision. During the second half of the project, more regular supervision was conducted using OFDA funds.
Participate in quarterly review meetings with Regional Health Directorate	**No**	• Although regular quarterly meetings were not organized due to budget constraints, planning took place at several points: - Coordinator, Deputy Coordinator participated in the annual regional planning exercise of the Health Directorate - HKI District Supervisors actively participated in monthly, quarterly and annual planning in their districts. - New activities planned as needed with the Regional Health Directorate.
Semi-annual technical update for partners	**No**	• Although regular semi-annual meetings with all partners were not held, project management participated in annual planning meetings organized by the MOH and presented project progress when USAID/Mali organized partners' meetings.
Annual review for progress on DIP	**Yes**	• Monitoring workshops were held to review progress.
Midterm Evaluation	**Yes**	• Midterm Evaluation Report (led by Marguerite Joseph)
Endline studies	**Yes**	• *Child Survival 21 au Mali : Enquête d'Evaluation Finale Rapport d'Analyse* (conducted by INFO-STAT, June 2009
Final Evaluation	**Yes**	• Led by Kathleen Tilford, August 2009

Objectives / Activities	Objective Met	Activity Status
Partner Relationships		
SAN+ Launch	**Yes**	• **2006**
Sign MOU	**Yes**	**National level** MOUs signed with partners: • USAID/ATN project • WFP • ADRA • National Onchocerciasis Program • National Program for the Elimination of Filariasis • National Health Directorate through the Nutrition Division **Regional Level:** • Koulikoro Governorate • Federation of Koulikoro Community Health Associations • Koulikoro Regional Health Directorate • Health Districts (Koulikoro, Banamba, Kangaba, Kati, Ouélessebougou, Kolokani, Dioïla, Nara, and Fana)
MOH & partners validated National Child Survival Strategy	**Yes**	• Document : *Stratégie Nationale pour la Survie de l'Enfant - 2007*
Support for integration of de-worming into routine health services.	**Yes**	• Integrated into NNW (Dec 06) • NNW June 07: HKI provided support for development of data collection tools and integration of ITNs into NNW • De-worming now fully integrated into all NNW activities country wide.
Changing health workers' (HW) perception of nutrition	**Yes**	• Achieved: Capacity building of health providers in essential nutrition actions and successful 'repositioning' of the importance of breastfeeding and nutrition in health providers' perceptions and practices. (from Midterm Evaluation Report)

Objectives / Activities	Objective Met	Activity Status
Institutionalization of educational talks	**Yes**	• Routine service provision in the form of IEC and counseling which is recorded in health registers
Nutrition planning integrated into MOH planning	**Yes**	• Annual planning and budgeting for semi-annual NNWs
Integration of nutrition and micronutrients into primary health care services	**Yes**	• Successful re-integration of nutrition and micronutrients into the minimum package of primary health services
Strengthening MOH partners in policy and technical areas	**Yes**	• Considerable strengthening of technical and policy capacity of MOH partners at the district, regional and national levels
Meeting with Regional CSCom Certification Committee	**No**	• This had to do with certification of a center as "Nutrition Friendly", a concept which never materialized because the MOH started a similar program
Integration with OFDA CMAM project	**Yes**	• Started in September 2006 in Nara and Kolokani Districts and scaled up in 7 districts by Oct 07. Expanded in 2008 to the remaining districts (Fana and Dioila) with support from the Monsanto Foundation
Expand into new districts	**NA**	• SAN + covers all 9 districts in the region. As new CSComs were inaugurated, they were equipped and included in the project.
Works closely with the USAID ATN project	**Yes**	• The USAID ATN project and the follow-on ATN+ provided technical assistance to SAN+ staff in training and in development of BCC materials
Provide technical and financial support to MOH to integrate Albendazole into VAC district campaign, nationwide	**Yes**	• See Annual Report for Year 2

Objectives / Activities	Objective Met	Activity Status
Malian Government continues to complement UNICEF's and HKI's (MI) funds	**Yes**	• MOH purchases Vitamin A used in the NNWs
UNICEF collaboration increases reach and impact	**Yes**	• Good collaboration with UNICEF in the region reinforces project reach and impact
HKI Technical Assistance		
HQ Backstop		• Jennifer Nielsen
Director for Training /Community Education		• Chad MacArthur
West Africa Regional Nutrition Advisor backstopping		• Ken Brown • Svenja Jungjohann is the Regional CMAM Coordinator and also provides support
Logistics/Administration		
Hire Coordinator & Deputy Director	**Yes**	• Staff hired in a timely fashion
Hire District Supervisors	**Yes**	• Hired in 2006 • Trained end of 06, beginning of 07 • Workshop held in every district to introduce the HKI Supervisor, discuss role vis-à-vis the district health activities
Equipment purchase (vehicles, motorcycles, computers)	**Yes**	• As budgeted, four computers, one photocopier (on USAID funds) and nine motorcycles (on HKI funds) for the supervisors were purchased in 2006

Objectives / Activities	Objective Met	Activity Status
Monthly reports to HQ	**NA**	• Annual reports were sent as specified in the DIP
Quarterly donor reports (program and finance)	**Yes**	• Quarterly finance reports were submitted to all donors
Annual program reports submitted	**Yes**	• Annual reports submitted for Year 1 and Year 2; MTE Year 3
Annual audit	**Yes**	• HKI-Mali wide financial audit 2006, 2007, 2008
Preparation of annual work plan with partners	**NA**	• The partners participated in the development of the DIP which provides for a four-year work plan.
Capacity Building		
Training of Project Coordinator in Nutrition in Benin	**Yes**	• First Project Coordinator, Dr. Sidi, was trained.
Training of Project Deputy Coordinator in Dakar on Monitoring and Evaluation	**Yes**	• 2007
Trainer of Trainers in CMAM	**Yes**	• 2008
Training of health workers in CMAM	**Yes**	• September 2008 : total of 748 people trained at various levels in CMAM, initial and refresher training numbers combined • Oct 08-Sept 09: -HW trained in initial training: 57 -Health staff trained in refresher training: 6 -Community level people initial training: 3,719 -Community level people refresher training: 2,914

Objectives / Activities	Objective Met	Activity Status
Training at district level in monitoring and evaluation	**No**	• M&E is included to some extent in training manuals provided; also, district supervisors provided on-the-job training in M&E for health workers
Training in Nutrition+, BCC approach, and Monitoring and Evaluation	**Yes**	• 148 auxiliary midwives trained in May 07 (Minimum of one auxiliary midwife per health center) • 216 members of Women's Groups trained in Nutrition and BCC between Oct 08-Sept 09 • 534 HWs trained in 2009
Supervisors trained in Nutrition+, BCC, Monitoring and Evaluation	**Yes**	• 9 supervisors trained at end of 06, going into 07
Training in site during supervision (micronutrients, nets, drug management)	**Yes**	• Part of coaching and feedback during supervision
Communities educated on nutrition	**Yes**	• 371 sessions conducted in 07 • 32, 867 pregnant and lactating mothers received individual counseling on infant and young child feeding from Oct 07-Sept 08 • 15, 571 adults reached through group discussion and interpersonal communication during the period from Oct 08-Sept 09 • Cooking demonstrations reached 2,140 women Oct 08 – Sept. 09
BEHAVE workshop for HKI staff	**Yes**	• March 07: HKI director, SAN+ Coordinator and Deputy Coordinator participated; organized by the CORE group.
BEHAVE training for government partners and the rest of SAN+ staff.	**Yes**	• March 07: held in Nara District; developed BCC strategy and messages for project.
Quality Assurance training	**Yes**	• January 07: 3 people from each district participated; content focus was the 4 principles of QA plus need to adhere to norms and standards.

Objectives / Activities	Objective Met	Activity Status
Training in CMAM for health workers	**Yes**	• 118 HWs: 2007 • 777 community volunteers: 2007 • 31 CSComs and 2 district Reference Centers set up and equipped: 2007 • 534 HWs trained in 2009
Nutrition/micronutrient has been fully integrated into existing services	**Yes**	• Health providers and clients report that integration is now routine. • Advocacy for the integration of nutrition with the regional and district levels of the MOH has been successful. • Semi-annual National Nutrition Week included in MOH annual plans. • Micronutrient supplementation is included in respective annual plans. • The partnership and capacity-building focus of the project makes sustainability of the above more feasible. • Planning at the district and regional levels integrated
Refresher training for community workers in how to use MUAC tool	**Yes**	• 2,914 trained 2007

SAN+ Final Evaluation Annex 5: Rapid Catch Indicators

Indicator	Baseline Estimate	Final Estimate
Percentage of children age 0-23 months who are underweight (-2 SD from the median weight-for-age, according to the WHO/NCHS reference population)	17%	13%
Percentage of children age 0-23 months who were born at least 24 months after the previous surviving child	39.6%	76% *
Percentage of children age 0-23 months whose births were attended by skilled health personnel[1]	16%	20%
Percentage of mothers with children age 0-23 months who received at least two tetanus toxoid injections before the birth of their youngest child	78.3%	62%
Percentage of children age 0-5 months who were exclusively breastfed during the last 24 Hours	20.1%	45% *
Percentage of children age 6-9 months who received breast milk and complementary foods during the last 24 hours	96.9%	99%
Percentage of children age 12-23 months who are fully vaccinated (against the five vaccine-preventable diseases) before the first birthday	38.9%	43%
Percentage of children age 12-23 months who received a measles vaccine	77.7%	87%[2]
Percentage of children age 0-23 months who slept under an insecticide-treated net the previous night	48%	69% *
Percentage of mothers of children age 0-23 months who know at least two signs of childhood illness that indicate the need for treatment	76%	49%[3]
Percentage of sick children age 0-23 months who received increased fluids and continued feeding during an illness in the past two weeks	3.3%	10% *
Percentage of mothers with children age 0-23 months who cite at least two known ways of reducing the risk of HIV infection	45.6%	45%
Percentage of mothers with children age 0-23 months who report that they wash their hands with soap/ash before food preparation, before feeding children, after defecation, and after attending to a child who has defecated	69.3%[4]	4%[3]

*Statistically significantly different from baseline estimates

[1] Doctor, nurse or midwife

[2] 87% according to mothers' report; vaccination cards provided evidence for only 43%

[3] Significant but moving in the unexpected direction

[4] The baseline KPC report suggested this figure was elevated and did not reflect the true proportion of women washing hands with soap or ash.

Annex 6: Final KPC-HFA Report

SAN+ Child Survival Project - Mali

Final Evaluation Survey
Data analysis report

INFO-STAT
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Table of Contents

Acronyms and Abbreviations

AIDS : Acquired Immune Deficiency Syndromes

ARI : Acute Respiratory Infections

ANC : Antenatal Care

CSCom : Centre de Santé Communautaire (Community Health Center)

CSRef : Centre de Santé de Référence (Referral Health Center-District level)

DHS : Demographic and Health Survey

DIP : Detailed Implementation Plan

HIV : Human Immunodeficiency Virus

INRSP : Institut National de Recherche en Santé Publique (National Institut for Public Health Research)

ITN : Insecticide-Treated Mosquito Net

KPC : Knowledge, Practice and Coverage

ORS : Oral Rehydration Salts

SP : Sulfadoxine-Pyriméthamine

TTI : Tetanus Toxoid Injection

List of Tables

Pages

Pages

Introduction

Mali faces exceptionally high levels of infant and child mortality. According to DHS, of 1,000 live births occurring between 2001-2006, 96 babies died before reaching their first birthday. An in-depth analysis of DHS data suggests that half of these children deaths are attributable to the malnutrition. Nutritional deficiency, in its chronic form (low height for age), affects 38 % of Malian children under 5 years, while 81 % of children 6 to 59 months suffer from anemia, primarily due to iron deficiency.

In 1997, the Government of Mali launched a ten-year socioeconomic and health development program (PRODESS), with a major objective of reducing infant morbidity and mortality. In September 2005 with funding from USAID, HKI-Mali began implementing a child survival project to support the PRODESS strategy. The project, "Synergy and Action for Nutrition+ ("SAN+"), covered the 9 health districts of the administrative region of Koulikoro. The interventions are based on the promotion of the Essential Nutrition Actions (ENA) framework. In 2006 this preventive strategy was reinforced with funding from USAID's Office of Foreign Disaster Assistance (OFDA) to strengthen treatment capacity through the community-based management of acute malnutrition (CMAM).

A baseline survey was conducted in February/March 2006. As part of the final evaluation activities the survey was repeated at endline in February/March 2009. Specifically, the survey was expected to assess changes in:

- the nutritional status of mothers and children age 0-23 months
- the availability and accessibility of nutrition and health services
- the situation of nutritional practices including breastfeeding, complementary feeding, care for children with diarrhea and the integrated control of anemia
- the quality of services in health centers (Health Facility Assessment) of the Koulikoro region
- the capacity of the project's partner (local radios, CSCom/ASACO, Communal Councils) to sustain support for the interventions.

This report presents the findings from the final survey in three parts. The first part describes the survey methodology. Survey findings are presented in second part; and the last chapter is presents the comparison between the situation in 2009 and that of the baseline survey.

I – Survey Methodology

This final evaluation survey was conducted using the same methodology as the baseline survey to assure the comparability of findings. We provide here a description of the data collection and analysis procedures.

Data collection was conducted at two levels: household and health center.

The objective of data collection at the level of households was to evaluate:

- The nutritional status of the mothers and children age 0 to 23 months
- The availability and accessibility of nutrition and health services
- Practices regarding nutritional care of children

At the level of health facilities, the survey was intended to assess service quality.

Data collection in households was conducted according to the methodology of KPC 2000 (Knowledge Practice and Coverage). The target population included mothers and children ages 0-23 months, as well as women pregnant for 3 months or more. A sample of these individuals was selected according to a process described below.

Per the project's approved Detailed Implementation Plan, the sampling frame was limited to localities within a 5 km radius of a functional CSCom. From the list of those localities, 30 clusters were selected with probability proportional to size. In each cluster, the survey covered a random sample of 10 mothers of children age 0-23 months (total sample size n=300). A second random sample was drawn of women pregnant for 3 months or more. For the sample of pregnant women, given that the population size is limited, we did not define in advance the number of respondents per cluster.

In each selected cluster, two stages of drawing were implemented to identify respondents: first households, and then women within households.

For drawing of households, in each locality all public locations (markets, mosques, water supplies, etc.) were identified and one was randomly selected. Starting from that location, another random selection procedure was conducted to assign a street/direction to the interviewers. Then the surveyors walked in that direction, inviting the participation of the first household encountered and skipping the next two households. This process was continued until 10 households were obtained (agreed to be interviewed).

In each selected household, only one mother of children age 0-23 months was surveyed. In households with more than one mother, only the youngest was interviewed. For the survey of pregnant women, all eligible and willing women in the selected household were included in the survey. In addition to information obtained through interviewers, data collection involved anthropometric measures (weight and height of children age 0-23 months; height, weight and brachial perimeter of pregnant women) and capillary blood collection for the determination of the hemoglobin concentration (pregnant women and children 0-23 months) using the Hemocue© system. In calculating women's weight, 400 g was subtracted to account for clothing.

The health facility survey was conducted in localities selected for the household data collection. In health facilities, data collection consisted of a review of health information available at the health center and interviews with health care providers.

A data collection team of 15 of field workers was formed. The team included 12 interviewers or supervisors engaged by Info-Stat and 3 laboratory technicians hired by HKI-Mali, through the National Institut for Public Health Research (INRSP). Before going to the field, interviewers and supervisors received training in the administration of the questionnaires, the techniques of taking anthropometric measures, and the procedure for selecting households and respondents for the sample within the clusters.

Data collection was conducted from April 20-30, 2009. The field workers were divided into 3 groups, each including 1 supervisor, 2 female surveyors and 1 laboratory technician. Each group executed data collection in 10 clusters.

1.2 Data entry and analysis

Data entry was conducted using Epi Info.

Three nutritional indicators were created for children, using the EPI NUT module: WHZ (Weight-for-Height Z-Score), HAZ (Height-for-Age Z-Score) and WAZ (Weight-for-Age Z-Score). To be consistent with the baseline data, the reference standard used was the 1977 U.S. National Center for Health Statistics (NCHS) data. Wasting was defined as <-2SD of the NCHS reference weight for height; stunting was defined as <-2SD of the NCHS reference height for age; and underweight was defined as <-2SD of the NCHS reference weight for age. The other nutritional indicators regarding children and adults (hemoglobin concentration, brachial perimeter and body mass index below given threshold) were obtained through direct calculation. Anemia for both children and pregnant women was defined as hemoglobin concentration levels <110 g/L per the World Health Organization definition.

The analysis is mostly based on close examinations of the data presented in statistical tables. For some major indicators, we also determined the corresponding confidence interval (at 95%).

1.3 Background characteristics of mothers, children age 0-23 months and pregnant women

As planned, the household survey sample involved 300 mothers of children age 0 -23 months. The sample of pregnant women included n=302. Table 1 provides the distribution, per health district, of those samples.

Table 1: Sample distribution of mothers with children age 0-23 months and pregnant women, by health district.

Health District	Mothers of children age 0 – 23 months	Women pregnant for 3 months or more
Banamba	40	41
Dioïla	20	21
Fana	30	30
Kangaba	50	51
Kati	70	69
Koulikoro	20	20
Ouéléssébougou	30	30
Nara	40	40
Total	**300**	**302**

The drawing of clusters led to a sample largely dominated by the health district of Kati, compared with other districts, reflecting the demographic importance of Kati in Koulikoro region. The random sampling did not result in the selection of any village of the Kolokani district.

Table 2 provides details on socio-demographic characteristics of women interviewed.

Table 2: Distribution of women surveyed according to some socio-demographic characteristics.

	Mothers of children 0-23 months		Women pregnant for 3 months or more	
	n	%	n	%
Age groups				
12 – 24 years	138	46%	153	51%
35 - 34 years	117	39%	111	37%
35 years and more	46	15%	38	13%
Total	300	100%	302	100%
Marital status				
Single (Never married)	23	8%	8	3%
Currently married	275	92%	292	97%
Divorced/widow/separated	2	1%	2	1%
Total	300	100%	302	100%
Number of children				
0 - 1 child	79	26%	138	46%
2 – 3	94	31%	77	25%
4 - 5	80	27%	53	18%
6 and more	47	16%	34	11%
Total	300	100%	302	100%
Currently pregnant				
Yes	11	4%		
No	289	96%		
Total	300	100%		
Duration of current pregnancy				
3 months			12	4%
4			37	12%
5			40	13%
6 and more			213	71%
Total			302	100%
Attended school or literacy course				
Yes	144	48%	93	31%
No	156	52%	209	69%
Total	300	100%	302	100%
Main source of drinking water in the household				
Water from faucet	86	29%	82	27%
Covered well/Drilling	99	33%	106	35%
Uncovered well	115	38%	114	38%
Total	300	100%	302	100%

Mothers of children age 0–23 months were relatively young: 46% were 12 to 24 years old and only 15% are ≥ 35 years. The sample of pregnant women was even younger, with 51% of respondents age 12– 24 years. In both groups (mothers and pregnant women), the great majority were married (92% and 97%).

Although relatively young, an important proportion of women had at least 4 children. Amongst mothers of children aged 0–23 months, 27% had 4 or 5 children and 16% had more than 5 children. Among the pregnant women, 18% had 4 or 5 children, and 11% had 6 or more.

Nearly half of mothers with children less than two years old (48%) had not attended school or literacy courses. The lack of education was more prevalent amongst pregnant women (69%). Slightly more than one third of the households had no access to clean water, relying on uncovered wells as their main source of drinking water.

Eleven of the mothers of children <2 years were pregnant at the time of the survey; or 4%. The sample of pregnant women was dominated by pregnancies of 6 months or more (71%). Each mother provided information regarding her youngest child. The distribution of that sample, by sex and age, is presented in table 3.

Table 3: Distribution of children age 0–23 months according to age group and sex.

	Number of children	Percentage of children
Age group		
0 - 5 months	110	37%
6 – 11 months	88	29%
12 – 23 months	102	34%
Total	300	100%
Sex		
Boys	161	54%
Girls	139	46%
Total	300	100%

The survey in households has resulted in sample of children dominated by boys, with 54%, compared to 46% girls. The sample includes almost the same proportion of children age 0-5 months (37%) and those 12 -23 months (34%).

1.4 Background characteristics of health centers and health care providers

The Health Facilities Assessment component involved a total of 26 centers, including 23 community health centers (called CSCom) and 3 district referral centers (CSRef). In those health facilities, 79 health care providers was interviewed (table 4). Amongst the staff interviewed, 19% were auxiliary health professionals, 32% were nurses and 13% doctors.

Table 4: Distribution of health professionals surveyed according to background education.

Position	Number	%
Auxiliary health professional	15	19%
Nurse	25	32%
Mid-wife	4	5%
Doctor	10	13%
Auxiliary mid-wife(1)	25	32%
TOTAL	**79**	**100%**

(1) Matrone in French

II - Survey Findings

2.1 Findings of household survey

2.1.1 Nutritional status of mothers and children ages 0 to 23 months

Table 5a : Nutritional status of mothers and children age 0-23 months.

	INDICATOR	Level of the indicator (%)	Confidence interval	N
1.1	% of infants age 6 to 23 months suffering from chronic malnutrition (HA<-2 SD NCHS reference or stunting)	18%	[12%-24%]	187
1.2	% of infants age 6 to 23 months suffering acute malnutrition (WH<-2SD NCHS reference or wasting)	16%	[11%-21%]	186
1.3a	% of children 0 to 23 months who are underweight (WA<-2 NCHS reference)	13%	[9%-17%]	297
1.3b	% of children 6 to 23 months who are underweight	19%	[13%-25%]	189
1.4a	% of women in the third term of pregnancy with a brachial perimeter < 23.5 cm	23%	[16%-30%]	158
1.4b	% of breastfeeding women with a BMI < 18.5	10%	[6%-14%]	280
1.5	% of infants age 6 to 23 month with an hemoglobin concentration < 110 g/l	86%	[81%-91%]	183
1.6a	% of women in the third term of pregnancy with an hemoglobin concentration < 100 g/l	39%	[32%-46%]	169

Eighteen percent of children aged 6–23 months suffer from chronic malnutrition or stunting (height-for age inferior to -2 SD the NCHS reference). Thirteen percent of children 6 to 23 months of age suffer from wasting, or acute malnutrition (weight-for-height inferior to -2SD NCHS reference). Underweight (weight-for-age lower than -2 SD the NCHS reference), which reflects both chronic and acute malnutrition, affects 19% of infants age 6 to 23 months and 13% of children 0 to 23 months.

Amongst women in the 3rd trimester of pregnancy, 23% are underweight (have a brachial perimeter below the standard cut-off of 23.5 cm). About one third of these women suffer from anemia (hemoglobin concentration lower than 110g/l). One in ten breastfeeding women is underweight (body mass index [BMI: calculated as weight in kg/height in m^2] lower than 18.5).

A large majority of children age 6–23 months (86%) have a hemoglobin concentration lower than 110g/l. The incidence of anemia or malnutrition somehow varies according to child's sex, even more according to its age (table 5b).

Table 5b: Nutritional indicators of children stratified by age and sex.

	Hemoglobin concentration < 110g/l		**Acute malnutrition** (weight-for-height < - 2 SD)		**Chronic malnutrition** (Height-for-age < -2 SD)	
	%	N	%	N	%	N
Age group						
0 - 5 months	55%	109	0%	105	2%	108
6 – 11 months	81%	84	13%	88	7%	88
12 – 23 months	91%	99	18%	98	28%	99
Sex						
Boys	75%	157	11%	158	13%	159
Girls	75%	135	8%	133	12%	136
ALL	**75%**	**292**	**10%**	**291**	**12%**	**295**

The proportion of children with a hemoglobin concentration lower than 110g/l is significantly higher in the age group of 12-23 months (91%), compared with 0 – 5 months (55%). No children less than 6 months have a low weight for height (acute malnutrition), compared to 15% of infants aged 6 to 11 months, and 18% of those aged 12–23 months. The incidence of chronic malnutrition also varies significantly according to age, in particular with a proportion of 28% amongst children of 12 to 23 months, compared with 8% for those less than 6 months.

Low weight-for-height is a most prevelent among the youngest women (table 5c). The proportion of mothers aged 12-24 years with a low BMI is 14% compared with 7% for those 25 years and older. In contrast, anemia, defined as hemoglobin concentration

Table 5c: Anemia and underweight among women stratified by some background characteristics.

	Hemoglobin concentration < 110g/l(*)		Body Mass Index < 18.5 (**)	
	%	N	%	N
Age group				
12 – 24 years	38%	80	14%	128
25 – 34 years	38%	66	7%	109
35 years and+	48%	23	7%	43
Attended schooling or literacy course?				
Yes	41%	54	9%	78
No	38%	115	11%	202
Number of children				
0 - 1 child	34%	71	17%	71
2 – 3	37%	46	9%	86
4 – 5	47%	32	8%	78
6 and+	50%	20	7%	45
All	**39%**	**169**	**10%**	**280**

(*) Women pregnant for 7 months or more

(**) Mother with children age 0 – 23 month currently breastfeeding

<110 g/l, seems slightly more frequent amongst elder pregnant women, with 48% for respondents age 35 years or more, compared with 38% for those less than 35 years old.

The proportion of mothers with a low BMI is considerably higher amongst women with no children (17%) compared to those who have 6 or more (7%). Conversely, the incidence of anemia increases with number of children ever born. For example, amongst women currently pregnant, anemia affects 34% of respondents with less than 2 children, compared with 50% for those 6 children or more. This similarity in the trends of malnutrition levels according to the age and the number and children ever born is presumably the result of the correlation between both variables.

These nutritional status indicators do not vary importantly by level of education (table 5c). Amongst mothers with no education, 11% have low BMI, compared with 9% for those who attended school or literacy courses, while the proportion of pregnant women with a low hemoglobin concentration is practically the same for women with some education (41 %) and those without (38 %).

2.1.2 Availability and accessibility of nutrition and health services

Table 6a presents data from the household survey on availability and accessibility of health services.

A large majority of mothers with children of less than 2 years old (77%) attended at least 3 antenatal care consultations during their last pregnancy. Initiating ANC in the first trimester of pregnancy, however, is a less widespread practice. Amongst women who delivered during the 12 months preceding the survey (mothers of children less than 1 year old), only 40% started ANC in the first trimester of the pregnancy. Fifty-two percent of these women reported receiving vitamin A supplementation within 40 days of their last delivery. Children age 6 – 59 months were much more likely (75%) to have received vitamin A in the 6 months preceding the survey.

In the 24 hour period preceding the interview, 44% of pregnant women reported having received iron/folic acid tablets. This measure for controlling anemia was less frequent amongst post-partum women (29%).

A large majority (75%) of the currently pregnant women reported receiving iron/folic acid during their pregnancy. De-worming treatment was significantly less common, at only 27%. Regarding the prevention of malaria, about three quarters of pregnant women (77%) received the first dose of SP while 34% had received the second dose. About one third (35%) reported they had been counseled by their health care provider about appropriate breastfeeding practices.

Table 6a : Availability and access to nutrition and health services

	Indicator	Level of the indicator (%)	Confidence Interval	N
2.1a	% of women with 3 or more antenatal care visits during the last pregnancy	77%	|72%-82%]	281
2.1b	% of mothers of children less than one year who started antenatal care during the first trimester of the previous pregnancy	40%	|33%-47%]	187
2.2	% of women with children less than one year who received VAC within 40 days of delivery	52%	|45%-59%]	198
2.3	% of children 6-59 months who received VAC during the last six months	75%	|74%-76%]	6908
2.4	% of pregnant women who took iron/folic acid during the previous 24 hours	44%	|38%-50%]	290
2.5	% of women who received iron/folic acid in the last post-partum period (within 3 months of delivery)	29%	[14%-44%]	34
2.6a	% of pregnant women who received the **first dose of SP**	77%	[18%-28%]	247
2.6b	% of pregnant women who received the **second dose of SP**	34%	[60%-72%]	247
2.6c	% of pregnant women received **iron/folic acid** for the prevention of anemia	75%	[20%-30%]	248
2.6d	% of pregnant women who received de-worming treatment for the prevention of anemia	27%	[21%-33%]	238
2.6e	% of pregnant women who were **counseled or prepared for breastfeeding**	35%	[29%-41%]	248
2.7	% of mothers of children age 0 – 23 months who received at least 2 TT injections during the last pregnancy	62%	[56%-68%]	286
2.8	% of mothers of children age 0-23 months whose delivery was attended by skilled health personnel (1)	20%	[15%-25%]	300
2.9	% of children age 12-23 months who were fully vaccinated (BCG and 3 doses of the DPT and polio vaccines) before the first birthday	43%	[33%-53%]	102
2.10	% of children age 12-23 months who received measles vaccine	87%	[80%-94%]	102

(1) Doctor, Midwife or Nurse

The majority of mothers with children age 0–23 months (62%) had received at least 2 tetanus toxoid (TT) injections during their last pregnancy. Only 20% of those births were attended by skilled personnel.

According to mothers' report, a strong majority of children age 12 – 23 months (87%) was vaccinated against measles. But evidence from immunization cards was available to confirm only that 43% of the children were fully vaccinated before their first birthday.

Antenatal care, Vitamin A and iron/folic acid supplementation were examined stratified by certain socioeconomic characteristics and are presented in Table 6b.

Table 6b : Antenatal care, Vitamin A supplementation and Iron/folic acid supplementation stratified by selected socio-demographic characteristics.

	3 ANC or + during the last pregnancy (*)		Vitamin A within 40 days (*)		Iron/Folic acid in last 24 hours (**)	
	%	N	%	N	%	N
Age group						
12 – 24 years	67%	127	49%	89	47%	143
25 – 34 years	86%	113	54%	79	41%	109
35 years and+	80%	41	53%	30	45%	38
Attended school or literacy course						
Yes	79%	80	60%	52	50%	88
No	76%	201	49%	146	42%	202
Number of children						
0 - 1	67%	73	49%	47	50%	130
2 – 3	74%	88	57%	56	36%	75
4 – 5	84%	77	45%	60	47%	51
6 +	84%	43	60%	35	38%	34
Duration of pregnancy						
4 months					32%	37
5					45%	40
6 +					46%	213

(*) Mothers with children of less than 12 months
(**) Pregnant women

Young women ages 12–24 years are somewhat less likely than older women (67% vs. ≥80%, respectively) to have attended ANC care at least 3 times. A similar pattern emerges regarding vitamin A supplementation, although with only slight differences; the proportion being 49% for young women of 12–24 years compared with 53% to 54% in older age groups. The supplementation of iron/folic acid by contrast, is slightly more important amongst young women, although differences still remain minor.

Lower parity women (0–1 children) seem less likely to attend ANC. The proportion of respondents with at least 3 ANC in their previous pregnancy is 67% for these women compared to 74% among mothers with 2 or 3 children and 84% among mothers with 4 children or more. In contrast, women of low parity seem more likely to take iron/folic: 50% compared with 36% for respondents with 6 children or more.

Women with some literacy course are slightly more likely to have received Vitamin A postpartum; the proportions being 60% versus 49%. The same pattern emerges regarding iron/folic acid supplementation, as well antenatal care, although in ANC the difference between the categories is quite small.

In 24 hours preceding the survey, 32% of pregnant women took iron/folic acid. The proportion rises to 45%-46% for women at the fifth month of pregnancy. This result suggest a higher tendency of women to take iron/folic acid at an advanced stage of pregnancy.

2.1.3 Infant and Young Child Feeding

Table 7a : Infant and Young Child Feeding

N°	Indicator	Level of the indicator (%)	Confidence interval	N
3.1	% of children 0 – 5 months who were exclusively breastfed during the last 24 hours	45%	|36%-54%]	110
3.2	% of mothers of children age 0-23 months who initiated breastfeeding within 1 hour of delivery	54%	[48%-60%]	297
3.3	% of infants 6-23 months who received breast milk and complementary feeding (solid or semi-solid) during the last 24 hours	99%	[98%-100%]	176
3.4a	% of infants **6-8 months** who received complementary feeding at least 2 times during the last 24 hours	81%	[68%-94%]	36
3.4b	% of infants **9-11 months** who received complementary feeding at least 3 times during the last 24 hours	92%	[83%-100%]	37
3.4c	% of infants **12-23 months** who received complementary feeding at least 4 times during the last 24 hours	81%	|73%-89%]	88
3.6	% of mothers with children age 6 to 23 months who reported they feed their child with patience and love in the previous 24 hours	72%	[65%-79%]	153

Table 7a (continuation): Infant and Young Child Feeding

N°	Indicator	Level of the indicator (%)	Confidence interval	N
3.7a	% of mothers of children age 0-23 months who continued feeding and increased fluids consumption during the child's illness in past two weeks	21%	[14%-28%]	148
3.7b	% of mothers of children 0- 6 months with diarrhea in last 2 weeks who increased breastfeeding frequency during the illness	38%	[12%-64%]	13
3.8	% of mothers of infants 6-23 months with diarrhea in the past 2 weeks who reported they increased complementary feeding frequency during the diarrhea episode	14%	[5%-23%]	59
3.9	% of mothers of infant 6-23 months with diarrhea in past 2 weeks who reported having used ORS/home fluids during the diarrhea episode	38%	[26%-50%]	60
3.10	% of households were iodized salt is available	97%	[95%-99%]	280
3.11	% of mothers of children age 0 to 23 months who know at least one advantage of iodized salt	9%	|6%-12%]	300

Table 7a (continuation): Infant and Young Child Feeding

N°	Indicator	Level of the indicator (%)	Confidence interval	N
3.12a	% of mothers of children 0 – 23 months who report that they wash their hand at four key occasions (1)	4%	[2%-6%]	300
3.12b	% of mothers with children age 0-23 months who reported that they washed their hands with soap after the last time they attended a child who has defecated	66%	[61%-71%]	299
3.13	% of households where insecticide-treated net is available	82%	[78%-86%]	300
3.14	% of children age 0-23 months who slept under an insecticide-treated net the previous night	69%	[64%-74%]	300
3.15	% of women of reproductive age who reported they slept under an insecticide-treated net the previous night	67%	[62%-72%]	300
3.16	% of mothers of children age 0-23 months who know at least two signs of childhood illness that indicate the need for treatment	49%	[43%-55%]	300
3.17	% of mothers with children age 0-23 months who listed at least two ways of reducing the risk of HIV infection	45%	[39%-51%]	300
3.18	% children age 0 – 23 months who were born at least 24 months after the previous surviving child	76%	[70%-82%]	216

(1) The key occasions are: Before food preparation, before feeding children, after defecation, and after attending to a child who has defecated

In the project intervention area, almost half of mothers (45%) of children less than 6 months reported to have given the infant only breast milk in the previous 24 hour period. Fifty-four percent of mothers with children age 0 – 23 months reported that they initiated breastfeeding within 1 hour after delivery.

Regarding the complementary feeding, the practice is nearly universal, with 99% of breastfed-infants age 6–23 months receiving other foods in the 24 hours preceding the interview. For the indicators of optimal practices, 81% of infants 6-8 months old received a complementary food at least 2 times in the last 24 hours; 92% of infants 9 -11 months received complementary food at least 3 times; and 81% of children 12-23 months at least 4 times in the previous 24 hours. About three quarters of mothers (72%) replied that they fed the child with patience and affection (the wording made this a leading question).

Feeding practices for sick children were less ideal. Amongst children age 0–23 months who were sick during the 2 weeks preceding the survey, only 21% of the mothers continued feeding and increased their consumption of fluids during the illness. Among mothers of infants 0-5 months, 38% reported increased breastfeeding during an episode of illness. Thirty-eight percent of children age 6– 23 months received ORS or the equivalent home made solution, during the episode of diarrhea.

For the prevention of malaria, insecticide-treated nets are available in the majority of the households (82%). And during the night preceding interviews, about two thirds of children age 0-23 months (69%) and women of reproductive age (67%) slept under an insectice-treated net.

In the project's intervention area, nearly all households (97%) consume iodized salt. Yet women don't seem to have a good knowledge of its importance, since only 9% of respondents listed at least one advantage of the product. Two other indicators assessed by the survey did reveal a high level of knowledge amongst women: 49% of mothers of children age 0–23 months know 2 or more signs child illness indicating the need of treatment; and 45% could cite at least 2 ways to reduce the risk of HIV infection.

Regarding sanitation, hand-washing does not seem to be a common practice. Only 4% of mothers reported washing their hands with soap/ash on all four key occasions (before food preparation, before feeding children, after defecation, and after attending to a child who has defecated). However, when the four occasions are examined separately data reveal that 38% report washing their hands before preparing food; 9% before feeding children; 43% after defection; and 40% after cleaning their child's defecation.

Two feeding practices (feeding with patience and affection and complementary feeding of children 12-23 months of age) were examined stratified by socioeconomic characteristics. The findings are presented in Table 7b.

Table 7b: Children feeding practices stratified by some background characteristics of mothers

	Mothers of infants age 6-23 months who encouraged with patience and affection their child to eat		Infants age 12- 23 months who received complementary feeding at least 4 times in the last 24 hours	
	%	N	%	N
Age group				
12 – 24 years	80%	69	81%	48
25 – 34 years	72%	60	89%	28
35 years and+	67%	24	58%	12
Attended schooling or is literate?				
Yes	68%	50	80%	30
No	74%	103	81%	58
Number of children				
0 - 1 child	73%	45	83%	30
2 – 3	79%	48	80%	33
4 – 5	61%	38	80%	15
6 and more	73%	22	80%	10

Youngest women (12 to 34 years old), compared with elder women (35 years or more), seem to have better knowledge regarding children feeding. Eighty percent of women 12-24 years reported feeding with patience and affection compared to 67% of mothers ages 35 years or more. The oldest mothers also had the lowest proportion (58%) who provided at least 4 servings of complementary foods to infants age 12-23 months. Education level and parity do not seem to influence differences in feeding practices.

2.2. Findings at the level of health centers

2.2.1 Quality of key services

In health facilities, the surveyors examined records of services delivered. The resulting assessments of service quality are presented in Table 8.

Table 8: Quality of key services in Koulikoro region

N°	Indicator	Level of the indicator	N
4.1	% of mothers who were given iron/folic acid at the first antenatal care visit in previous 30 days	92%	859
4.2	% of mothers at the beginning of ANC who received Intermittent Presumptive Treatment for malaria with SP	46%	2832
4.3	% of mothers who received de-worming treatment at the last ANC visit	30%	509
4.4	% of mothers beginning ANC who were weighted and counseled on the importance of immediate and exclusive breastfeeding	90%	913
4.5	% of mothers delivering at health center the previous month who initiated breastfeeding within one hour of delivery	98%	1144
4.6	% of mothers received at health center last months who received Vitamin A immediately after delivery	94%	738
4.7	% of children with measles, diarrhea or ARI, reporting to health centers in the previous month, who received the recommended dose of Vitamin A	63%	1692
4.8	% of children age 0-23 months reporting to CSComs with diarrhea in the previous month who received care in accordance with IMCI algorithms	88%	185
4.9	% of mothers of children reporting to health centers who received the complete package of counseling in nutrition	71%	560
4.10a	% of health centers with no stock-outs of **Vitamin A** in the past 6 months	88%	26
4.10b	% of health centers with no stock-outs of **iron/folic acid** in the past 6 months	92%	26
4.10c	% of health centers with no stock-outs of **SP** in the past 6 months	92%	25
4.10d	% of health centers with no stock-outs of **ORS** in the past 6 months	92%	25
4.10e	% of health centers with no stock-outs of **Anti-helminthics** in the past 6 months	92%	24
4.10f	% of health centers with no stock-outs of **Zinc** in the past 6 months	52%	23

Based on information extracted from health center records, in the month before the survey nearly all women reporting for antenatal care were weighted and counseled on the importance of immediate and exclusive breastfeeding (92%). And amongst those attending ANC care for the first time, a similar proportion (92%) received iron/folic acid tablets. Regarding the Intermittent Presumptive Treatment for malaria with SP, the proportion was 46%. De-worming was even less frequent, provided to only 30% of women.

As far as deliveries at the health center in the previous 30 day period, data suggest that virtually all new-borns (98%) were immediately breastfed (within 1 hour) and almost all mothers (94%) received Vitamin A immediately after delivery.

The supplementation of children with indicated doses of vitamin A is also fairly high. Amongst children suffering from common childhood illnesses (diarrhea, measles, ARI and malnutrition) and reporting to health centers in the 30 days before the survey, 63% received Vitamin A. As previously noted (see availability and accessibility of health/nutrition services), among all children 6-59 months (75%) received VAS. Statistics from health center records indicatel that a very large majority (88%) of children with diarrhea received care in accordance with IMCI algorithms. Finally, more than two thirds (71%) of mothers of children age 0–23 months benefited from the complete package of counseling in nutrition.

Regarding the availability of drugs, interviews conducted in health centers revealed that stockouts occurred for vitamin A in only 12% of facilities and in oly 8% of facilities for IFA, SP, ORS and anti-helminthics. For zinc the proportion was considerably higher at 48%.

2.2.2 Behaviors and attitudes of health care provider

As noted in the introduction, this component of the survey consisted of interviews conducted with 79 health care providers in 26 health centers visited.

A large majority of health professionals interviewed (81%) reported that they had a regular supervisor, and about 3 quarters (78%) that they had received training in nutrition during the past year.

The series of Tables 9 present the results of these interviews. The following summarizes the main findings:

- ✓ During antenatal care, virtually all health care providers check palms and eyelids for pallor (signs of anemia) and screen for edema. In addition, they almost always take the blood pressure and listen for the fetal heart beat. Care providers systematically measure the woman's height and perform breast exams. A large majority conduct a verbal assessment of the women's experience of night blindness. By contrast, health professionals are less likely to perform laboratory analysis of women's blood and urine.

- ✓ Also during ANC early all health professionals discuss the importance of malaria prophylaxis (including the use of insectice-treated bed net), iron/folic acid supplementation, gaining the adequate weight during pregnancy, and the use of iodized salt.

- ✓ During postpartum consultations, nearly all health care providers take the woman's blood pressure and screen for edema. Blood and urine laboratory analyses are much less frequently performed. Interviews about night blindess are less frequent.

- ✓ During postpartum consultations, exclusive breastfeeding, the use of insecticide-treat bed net, iron/folic acid supplementation and LAM as a method of birth spacing are the issues most often addressed.

- ✓ When they receive an ill or malnourished child, most health professionals perform physical or verbal assessments related to weight, height, the child's appetite and breastfeeding status (especially for children of less than 6 months), and episodes of diarrhea and fever. Sight disorders (night blindness), by contrast, are amongst the least frequently formed verbal assessments.

- ✓ Mothers of ill/malnourished children most often receive counseling on exclusive breastfeeding and the hygienic preparation and storage of food at home. Counseling on complementary feeding, although performed by a majority of health professionals, is less frequent.

- ✓ During well baby visits, a very large majority of health care providers assess weight and height, as well as vaccination status. They regularly examine palms and eyelids for pallor (anemia), and check the date of Vitamin A supplementation. However as for ill/malnourished children, health care providers are relatively less likely to pay attention to sight disorders.

- ✓ Counseling during consultations of well babies most often relates to exclusive breastfeeding, complementary feeding and supplementation of Vitamin A and foods of animal origin. Health professionals are relatively less likely to counsel on the use of iodized salt or the supplementation of iron/folic acid syrup/tablets.

Table 9.1a: Types of physical assessments regularly performed for prenatal consultations

Question	%	N
11. Measure the woman's height (first visit)	93%	71
12. Measure woman's weight	96%	71
13. Take the woman's temperature	71%	70
14. Measure the woman's uterine height	92%	71
15. Perform breast exam	92%	71
16. Listen for the fetal heart beat	94%	69
17. Take the woman's blood pressure	94%	71
18. Check for pallor of palms and eyelids	97%	71
19. Check for edema	96%	71
20. Lab analysis the woman's blood	45%	71
21. Lab analysis the woman's urine	48%	71
22. Check the woman's vaccination card for her tetanus toxoid status	89%	71

N = Number of health care providers who responded to the question

Table 9.1b : Types of verbal assessments regularly performed for prenatal consultations

Question	%	N
23. Ask the woman her age (first visit)	96%	71
24. Ask the woman how many birth she has had in the past (first visit)	96%	71
25. Ask the woman when her last birth was (first visit)	92%	71
26. Ask the woman the outcome of her last birth (first visit)	93%	71
27. Ask the woman about her appetite	77%	71
28. Ask the woman about her eating habits	74%	70
29. Ask the woman if she has trouble seeing during day	70%	70
30. Ask the woman if she has trouble seeing during night	79%	70
31. Ask the woman about her daily workload	77%	70
32. Ask the woman about her sleeping and resting habits	77%	70
33. Ask the woman if she plans to exclusively breastfeed	94%	71
34. Ask the woman if she consumes iodized salt	87%	71
35. Ask the woman if she takes iron/folic acid supplements	97%	70
36. Ask the woman about possible side effects of iron/folic acid supplements	82%	71
37. Ask the woman if she is taking malaria prophylaxis	93%	71
38. Ask the woman if she sleeps under a bed net	86%	69
39. Ask the woman if she sleeps under an insectice-treated bed net	96%	70
40. Ask the woman if she is taking parasite prophylaxis or treatment	77%	71
41. Ask the woman the date of her TT injection	93%	71
42. Ask the woman if she ever been tested for HIV	59%	71
43. Ask the woman if she knows her HIV status	56%	71

N = Number of health care providers who responded to the question

Table 9.1c : Types of counseling regularly given at prenatal consultations.

Question	%	N
44. General dietary advice	90%	68
45. Suggest specific foods	79%	70
46. Suggest avoiding alcohol during pregnancy	83%	71
47. Suggest avoiding tobacco during pregnancy	83%	71
48. Suggest reducing coffee/tea intake during pregnancy	92%	71
49. Talk about the importance of gaining the adequate weight during pregnancy	94%	71
50. Suggest the woman reduce her workload	97%	71
51. Suggest the woman increase her sleeping/resting hours	92%	71
52. Importance of regular malaria prophylaxis	99%	71
53. Importance of sleeping under a bed net	86%	70
54. Importance of sleeping under insectice-treated bed net	99%	71
55. Importance of the parasite prophylaxis or treatment	86%	70
56. Importance of using iodized salt for cooking	94%	71
57. Importance of regular supplementation of iron/folic acid	99%	70
58. Possible side effect of iron/folic acid supplementation	87%	71
59. Counsel the woman on excusive breastfeeding	97%	71
60. Discuss using LAM as a method of birth spacing	92%	71
61. Suggest the woman be tested for HIV	77%	71
62. Counsel the woman on fever and other danger signs	96%	71
63. Set a follow-up appointment	81%	69

N = Number of health care providers who responded to the question

Table 9.2a: Types of physical assessments regularly performed at postpartum consultations

Question	%	N
66. Take the woman's temperature	80%	69
67. Take the woman's blood pressure	97%	69
68. Perform breast exam	94%	69
69. Check for pale palms or inner eyelids	94%	69
70. Check for edema	97%	69
71. Check for abnormal discharge	90%	69
72. Lab analysis the woman's blood	39%	69
73. Lab analysis the woman's urine	41%	69
74. Check the woman's vaccination card for her Vitamin A status	90%	69

N = Number of health care providers who responded to the question

Table 9.2b: Types of verbal assessments regularly performed at postpartum consultations

Question	%	N
75. Ask the woman her appetite	76%	68
76. Ask the woman her eating habits	78%	68
77. Ask the woman if she has trouble seeing during the day	64%	69
78. Ask the woman if she has trouble seeing during the night	75%	69
79. Ask the woman about her daily workload	77%	69
80. Ask the woman about her sleeping and resting habits	75%	68
81. Ask the woman if she is exclusively breastfeeding	93%	68
82. Ask the woman if anyone gives to child water, fruit juices traditional medicines, etc. in addition of breast milk	86%	69
83. Ask the woman if she has difficulties in breastfeeding	93%	69
84. Ask the woman if she breastfeeds by set schedule or not	72%	67
85. Ask the woman if she breastfeeds at night	91%	68
86. Ask the woman if she sleeps with her baby	86%	69
87. Ask the woman if she consumes iodized salt	84%	68
88. Ask the woman if she is taking iron/folic acid supplements	94%	68
89. Ask the woman if she is experiencing any side effects from iron/folic acid supplements	90%	67
90. Ask the woman if she is taking malaria prophylaxis	84%	69
91. Ask the woman if she sleeps under a bed net	81%	69
92. Ask the woman if she sleeps under an insecticide-treated bed net	93%	69
93. Ask the woman if she is taking parasite prophylaxis or treatment	78%	68
94. Ask the woman if her menses has returned	93%	69
95 Ask the woman when her menses has returned	93%	69
96. Ask the woman if she has fever of other signs of infection	94%	68
97. Ask the woman if she ever been tested for HIV	65%	69
98. Ask the woman if she knows her HIV status	68%	69

N = Number of health care providers who responded to the question

Table 9.2c: Types of counseling given at postpartum consultations

Question	%	N
99. General dietary advice	90%	69
100. Suggest specific foods	80%	69
101. Discuss the importance of exclusive breastfeeding	94%	69
102. Discuss any problems the new mother may have with breastfeeding	91%	69
103. Suggest the woman reduce her workload	85%	68
104. Suggest the woman increase her sleeping/resting hours	81%	69
105. Importance of continued malaria prophylaxis	83%	69
106. Importance of sleeping under a bed net	84%	67
107. Importance of sleeping under insectice-treated bed net	94%	69
108. Importance of using iodized salt for cooking	87%	67
109. Importance of regular supplementation of iron/folic acid	93%	69
110. Possible side effect of iron/folic acid supplementation	87%	69
111. Importance of the Vitamin A supplementation during the first 8 weeks after delivery	91%	69
112. Discuss the LAM as a method of birth spacing	94%	69
113. Identifier 3 conditions for necessary for LAM	81%	69
114. Identify the adequate birth spacing method for when the child reaches 6 months of age or if the mother's menses return before the child is 6 months old	88%	69

N = Number of health care providers who responded to the question

Table 9.3a: Types of physical assessments regularly performed for sick/malnourished child consultations

Question	%	N
117. Measure the child's height	92%	78
118. Weigh the child	92%	78
119. Pinch the skin of child's abdomen	91%	78
120. Count the child's breaths per minute	75%	77
121. Take the child's temperature	78%	78
122. Look or feel for stiff neck	78%	76
123. Look for rash	90%	78
124. Look for runny nose or red eyes	87%	78
125. Look for wasting	91%	78
126. Look for pale palms or eyelids	91%	78
127. Look for edema	91%	78

N = Number of health care providers who responded to the question

Table 9.3b: Types of verbal assessments regularly performed for sick/malnourished child consultations

Question	%	N
128. Ask about the child's appetite	92%	78
129. Ask if the child is vomiting	90%	78
130. Ask if the child has diarrhea	92%	78
131. Ask if there is blood or puss in the child's stool	85%	78
132. Ask if the child has cough or difficulty breathing	90%	78
133. Ask if the child has fever	92%	78
134. Ask if about exclusive breastfeeding if the child is less than 6 months	92%	78
135. Ask if the child is receiving complementary foods in addition to breast milk, if the child is 6 months or older	91%	78
136. Ask if about the number of meals the child is receiving per day	85%	78
137. Ask about the consistency of the food given to the child	86%	77
138. Ask about the food preparation and storage in the household	87%	78
139. Ask about active feeding of the child	86%	78
140. Ask if child has trouble seeing during the day	64%	77
141. Ask if the child has trouble seeing during the night	72%	78
142. Ask if the child has ever been tested for HIV	45%	77
143. Ask if the child's HIV status is known	49%	77
144. Ask about length of the currents state of child's health	78%	78

N = Number of health care providers who responded to the question

Table 9.3c: Types of counseling regularly given for sick/malnourished child consultations

Question	%	N
145. Counsel for exclusive breastfeeding for children under 6 months	92%	78
146. Counsel on complementary foods in addition to breast milk, for children of more than 6 months	64%	78
147. Discuss the number of meals the child should receive per day	87%	78
148. Discuss the consistency of the child's food	87%	77
149. Address the hygienic preparation and storage of food	90%	78
150. Suggest active feed methods to the caregiver	89%	75
151. Suggest food of animal origin	83%	78
152. Suggest Vitamin A rich foods	83%	78
153. Suggest Iron rich foods	86%	77
154. Suggest other specific foods	67%	78
155. Talk about the use of iodized salt in the feeding	82%	78
156. Administer a dose of Vitamin A	87%	78
157. Prescribe iron/folic acid syrup or tablets	86%	78
158. Prescribe ORS solution	78%	77
159. Explain the use of ORS at home	81%	78
160. Prescribe other medications	83%	78
161. Refer the child to a nutrition care center	81%	78
162. Suggest the child be tested for HIV	60%	78
163. Suggest a follow-up visit	84%	77

N = Number of health care providers who responded to the question

Table 9.4a: Types of physical assessments regularly performed at well child consultations.

Question	%	N
166. Weigh the child	87%	76
167. Measure the child's height	86%	76
168. Plot the child's weight on growth chart	84%	75
169. Check the child's vaccination status on his/her health card	88%	76
170. Look for pale palms or eyelids	87%	76
171. Check the date of the child's last Vitamin A supplementation on his/her health card	88%	76

N = Number of health care providers who responded to the question

Table 9.4b: Types of verbal assessments regularly performed for well child consultations.

Question	%	N
172. Ask about the child's appetite	83%	75
173. Ask about exclusive breastfeeding for children of less than 6 months	89%	76
175. Ask if about the number of meals the child is receiving per day	78%	76
176. Ask about the consistency of the food given to the child	80%	76
177. Ask about the food preparation and storage in the household	76%	76
178. Ask about active feeding of the child	76%	76
179. Ask if child has trouble seeing during the day	60%	75
180. Ask if the child has trouble seeing during the night	66%	76
181. Ask about the Vitamin A supplementation status of the child	80%	76
182. Ask about the vaccination status of the child	78%	76
183. Ask if the child has been tested for HIV	39%	76
184. Ask if the child's HIV status is known	41%	76

N = Number of health care providers who responded to the question

Table 9.4c: Types of counseling regularly given at well child consultations.

Question	%	N
185. Explain the child's growth trend to caregiver	79%	76
186. Recommend exclusive breastfeeding of the child of less than 6 months	88%	76
187. Counsel complementary foods in addition to breastfeeding for children age 6-23 months	86%	76
188. Discuss the number of meals the child should receive per day	82%	76
189. Discuss the consistency of the child's food	81%	74
190. Address the hygienic preparation and storage of food	84%	76
191. Suggest active feed methods to the caregiver	80%	75
192. Suggest food of animal origin	85%	75
193. Suggest Vitamin A rich foods	82%	76
194. Suggest Iron rich foods	80%	75
195. Suggest other specific foods	62%	74
196. Talk about the use of iodized salt in the feeding	75%	76
197. Administer a dose of Vitamin A	86%	76
198. Prescribe iron/folic acid syrup or tablets	72%	76
199. Suggest the child be tested for HIV	50%	76
200. Suggest a follow-up visit	83%	75

N = Number of health care providers who responded to the question

III – Conclusions

The preceding chapter has presented the findings of the survey at project endline. This section presents a comparison of key indicators at baseline and endline.

Table 10: Evolution in the selected indicators, between baseline (2006) and endline (2009).

Indicator	Year 2006		Year 2009		Sig. (1)
	%	N	%	N	
Nutritional status of mothers and children					
% of children age 0 to 23 months who are underweight (WA<-2SD NCHS reference)	17%	300	13%	297	ns
% of infants age 6 to 23 months suffering from chronic malnutrition (HA<-2SD NCHS reference)	16%	237	18%	187	ns
% of infants age 6 to 23 months suffering acute malnutrition (WH<-2SD NCHS reference)	18%	236	16%	186	ns
% of infants age 6 to 23 months with hemoglobin concentration <110 g/l	93%	243	86%	183	*
% of pregnant women with hemoglobin concentration <110 g/l	54%	137	39%	169	**
Availability and accessibility of health services					
% of mothers of children less than one who started antenatal care during the first trimester of the last pregnancy	34%	158	40%	187	ns
% of women with children less than one who received VAC within 40 days of last delivery	61%	163	52%	198	ns
% of infants age 6-59 months who received vitamin A capsule during the last six months	7%	2925	75%	6908	***
% of pregnant women pregnant who took iron/folic acid during the last 24 hours	36%	272	44%	290	ns
% of postpartum women (within 3 months of delivery) who received iron/folic acid tablets	4%	26	29%	34	*
% of pregnant women who received the **second dose of SP**	16%	201	34%	247	***
% of pregnant women who received **iron/folic acid** for the prevention of anemia	66%	202	75%	248	*
% of pregnant women who were de-wormed for the prevention of anemia	8%	187	27%	238	***
% of children age 12-23 months who were fully vaccinated (BCG and 3 doses of the DPT and polio vaccines) before the first birthday	39%	90	43%	102	ns
% of children age 12-23 months who received measles vaccine	78%	90	87%	102	ns

(1) Result of the Chi square test on the difference between years 2006 and 2009:
ns = Non Significant * = $p < 0.5$ ** = $p < 0.01$ *** = $p < 0.001$

Table 10 (continuation): Evolutions of the levels of selected indicators , between years 2006 and 2009

Indicator	Year 2006		Year 2009		Sig. (1)
	%	N	%	N	
Infant and Young Child Feeding Practices					
% of mothers with children age 0-23 months who initiated breastfeeding within 1 hour of delivery	28%	300	54%	297	***
% of children 0 – 5 months who were exclusively breastfed during the last 24 hours	20%	134	54%	110	***
% of infants **6-8 months** who received complementary feeding at least 2 times during the last 24 hours	74%	50	81%	36	ns
% of infants **9-11 months** who received complementary feeding at least 3 times during the last 24 hours	55%	40	92%	37	***
% of mothers of children age 0-23 months who continued feeding and increased fluid consumption during the child's illness in past two weeks	3%	214	21%	148	***
% of mothers of children 0 – 23 months who report that they wash their hand at four key occasions (1)	1%	300	4%	300	*
% of children age 0-23 months who slept under an insecticide-treated net the previous night	48%	300	69%	300	***
% of mothers of children age 0-23 months who reported they slept under an insecticide-treated net the previous night	48%	300	67%	300	***
Quality of services (based from data from records of health centers)					
% of mothers who received de-worming treatment at the beginning of ANC	0%	459	30%	509	***
% of mothers at beginning of ANC who were weighted and counseled on the importance of immediate and exclusive breastfeeding	37%	921	90%	913	***
% of mothers delivering in a health center last month who initiated breastfeeding within hour	95%	430	98%	1114	***
% of children with measles, diarrhea or ARI, reporting to health centers last month, who received the required dose of Vitamin A	3%	332	63%	1692	***
% of children age 0-23 months reporting to CSComs with diarrhea in the previous month who received care in accordance with IMCI algorithms	58%	122	88%	185	***
% of health centers with no stock-outs of **Vitamin A** in the past 6 months	92%	13	88%	26	ns
% of health centers with no stock-outs of **iron/folic acid** in the past 6 months	87%	15	92%	26	ns
% of health centers with no stock-outs of **SP** in the past 6 months	87%	15	92%	25	ns
% of health centers with no stock-outs of **ORS** in the past 6 months	71%	14	92%	25	ns
% of health centers with no stock-outs of **Anti-helminthics** in the past 6 months	0%	15	92%	24	***

(1) Result of the Chi Square test on the difference between years 2006 and 2009:
ns = Non Significant * = $p < 0.5$ ** = $p < 0.01$ *** = $p < 0.001$

1. The prevalence of underweight in children age 0–23 months did not register a statistically significant reduction during the project life or reach the target set of 10%; however, an important reduction was achieved. The reductions in acute and chronic malnutrition were also not statistically significant. In contrast, the incidence of anemia, based on the proportion of children with hemoglobin concentration lower than 110 g/l, did decrease significantly in the period, from 93% to 86%. The decline of anemia prevalence is even more important for pregnant women: from 54% to 39% ($p<0.01$).

2. At the beginning of the intervention in 2006, 34% of the mothers of children less than one year started ANC during the first trimester of pregnancy. The situation in 2009 (40%) seems slightly better, although it does not suggest a significant evolution. Similar non-significant improvement is seen with reports of taking iron-folic acid in the previous 24 hour period. Other aspects of antenatal care, including treatment with SP and de-worming, however, show rather significant progress. The proportion of pregnant women who received the 2nd dose of SP more than doubled, from 16% to 34%, while de-worming increased from 8% to 27%. The use of insecticide treated bed nets increased from 48% to 68% among both children and their mothers.

3. In 2009, 29% of post-partum mothers (compared with 4% in 2006) reported taking iron/folic acid during the 24 hours before the survey, suggesting improved compliance with this recommendation.

4. With respect to Vitamin A supplementation, the proportion of mothers reporting having received VAC within 40 days of delivery appeared to fall during the period (61% in 2006 vs. 52% in 2009). Among children age 6 to 59 months however, 75% of mothers in 2009 reported that their children received VAC, compared with only 7% in 2006.

5. The proportion of children age 12-23 months who received a measles vaccine increased from 78% in 2006, to 87% in 2009, and those fully vaccinated were 39% at baseline compared with 43% at endline. Improvements were non-significant and not an important focus of the project strategy.

6. Data suggest considerable improvement in breastfeeding practices during the last 3 years. The reports of initiation of breastfeeding within one hour of birth increased highly significantly, from 28% in 2006 to 54% in 2009. And the proportion of mother reporting feeding only breastmilk to their infants under 6 months of age during the previous 24 hour period increased from 20% in 2006 to 45% in 2009 (for both $p<0.001$).

7. In addition to breastfeeding, other indicators suggest significant improvement of infant and young child feeding. Reports of feeding complementary foods to children 9-11 months at least three times during the previous 24 hours increased from 55% to 92%. Children suffering from an illness in the two week period preceding the survey reportedly received continued feeding and increased fluids increased from 3% to 21%. Again both changes were highly statistically significant ($p<0.001$).

8. Some indicators of services quality in health centers suggest positive evolutions which are also consistent with the results of interviews conducted at households' level. For example, while no pregnant women received de-worming treatment at ANC at baseline the proportion increased to 30% in 2009. Counseling during ANC on immediate and exclusive breastfeeding also increased sharply between 2006 (37%) and 2009 (90%).

9. Significant progress in other measures of service quality in health centers also appear to have been achieved. In 2006, amongst children suffering from measles, diarrhea, ARI or malnutrition, only 3% received the recommended dose of Vitamin A compared with 63% in 2009. In addition, the proportion of children with diarrhea who received care in accordance with IMCI algorithms rose from 58% to 88.

The above comparisons suggest that important progress was made in the project's intervention area over the last 3 years. Table 11 (see appendix) presents the progress on the full list of the project indicators and Table 10 presents the statistical significance of the changes in selected indicators. Many key targets were met, and in many cases where they were not statistically significant gains were nonetheless achieved. While the adequacy design does not allow the causal attribution of these improvements to the project, it does allow us to conclude most of the objectives were achieved.

Significant progress was made in reducing anemia in both pregnant women and children under two. Progress was also seen in the interventions promoting the integrated control of anemia (IFA supplementation among pregnant and postpartum women; presumptive treatment for malaria and intestinal helmiths during pregnancy; use of ITNs; deworming of children).

Substantial improvements were also seen in infant and young child feeding. All targets were met for all but one indicator (feeding of the sick child) and in that case statistically significant improvements were recorded. While increased reports of appropriate complementary feeding of infants 6-8 months were not statistically significant, in this case the target was met.

According to SIAN records, coverage of >80% of target children as been achieved for the distribution of vitamin A supplementation and de-worming; these levels surpass project targets.

Disappointing results were shown for hand washing at all four key occasions, although disaggregation of the data suggest that for three of the four indicators around 40% of respondants indicated desired hand washing. The baseline KPC report suggested that the apparently higher levels may not have accurately reflected actual washing *with soap*. The use of ITNs also did not reach targets but significant progress was made. And for the use of zinc for the treatment of acute diarrhea did not increase as much as intended, due to the inadequate supplies of zinc at the CSComs.

A P P E N D I C E S

Table 11: SAN+ Project Indicators and Targets

Indicators (by technical intervention or cross-cutting)	Baseline value	Endline value	Target
Indicator 1 % of children 0 to 23 months who are underweight (-2 SD Weight for Age according to the WHO/NCHS reference population)	17%	13%	10%
Indicator 2 % of infant younger than 12 months who are put to breast within 1 hour of birth	28%	54%	55%
Indicator 3 % of children age 0 – 5 months who were exclusively breastfed during the last 24 hours	20%	45%	40%
Indicator 4 % of infants 6-8 months who received complementary feeding at least 2 times during the last 24 hours	74%	81%	80%
Indicator 5: % of infants 9-11 months who received complementary feeding at least three times during the last 24 hours	55%	92%	75%
Indicator 6 % of children 6-23 months who received VAC during the last six months*	31%	75%	80%
Indicator 7 % of children age 0-23 months who slept under an insecticide-treated net the previous night	48%	69%	80%
Indicator 8 % of children 12 – 23 months who received de-worming tablet during the last six months**	–	--	50%
Indicator 9 % of sick children who received increased fluids and continued feeding during illness in past two weeks	3,3%	21%	30%
Indicator 10 % of mothers of children 0 – 23 months who report that they wash their hand at four key occasions	1%	4%	20%
Indicator 11 % of children 6 – 23 months who received zinc supplementation during their last diarrheal episode in past two weeks in underprivileged districts (Nara /Kolokani)	0%	-	30%

*Data from the National Nutrition Weeks suggest coverage reached >90% of children 6-59 months
**Data from NNW suggest coverage reached >90% of children 12-59 months

Indicators (by technical intervention or cross-cutting)	Baseline value	Endline value	Target
Indicator 12 % of pregnant women who took Iron/folic tablets acid during the last 24 hours	16%	44%	50%
Indicator 13 % of children pregnant women who slept under an insecticide-treated net the previous night	48%	67%	80%
Indicator 14 % of women with children under 1 year who receive two doses of SP during the last pregnancy	16%	34%	70%
Indicator 15 % of women with children under one who received a deworming tablet during the last pregnancy	8%	27%	50%
Indicator 16: % of postpartum women with under one children who receive VAC within 40 days of delivery	61%	52%	80%
Indicator 17 % of mothers of children less than one year who received iron/folic acid during the three months following their last delivery	4%	29%	25%
The following indicators were deemed no longer relevant at the mid-term evaluation			
Indicator 18 % of CSCom designated as Nutrition-Friendly in year 2 and 3 maintaining standard through EOP	0%		75%
Indicator 19 (for sustainability) % of Communes who created a budget line for nutrition + in their annual development plan	0%		20%
Indicator 20 (for synergy) Number of joint supervisions/district	0		1/Q
Indicator 21 (for gender) % of ANC visits where the father accompanies his wife	0		40%

List of villages and number of women surveyed

	Health Area	Village	# mothers of children 0-23 mos.	# women ≥3 months pregnant
1	Banamba	DAMPHA	10	10
2	Banamba	KERWANE	10	10
3	Banamba	MADINA SAKO	10	10
4	Banamba	TOUBA	10	11
5	Dioila	BOLE	10	11
6	Dioila	MASSIGUI	10	10
7	Fana	FALAKO	10	10
8	Fana	FANA	10	10
9	Fana	TINGOLEN	10	10
10	Kangaba	BALLAN MASSALA	10	10
11	Kangaba	FIGUIRATOMO	10	11
12	Kangaba	KARAN	10	10
13	Kangaba	KOREMALE	10	10
14	Kangaba	SELEFOUGOU	10	10
15	Kati	BANCOUMANA	10	10
16	Kati	DIALAKORODJI	10	10
17	Kati	KALABAN KORO	30	30
18	Kati	KATI SANANFARA	10	10
19	Kati	SIRAKORO-MEGUETAN	10	9
20	Koulikoro	KOULA	20	20
21	Nara	DILLY	10	10
22	Nara	MOUDIAH	10	10
23	Nara	WAOUROU	10	10
24	Ouelessebougou	DIALKOROBA	10	10
25	Ouelessebougou	NIAGADINA	10	10
26	Ouelessebougou	Ouelessebougou	10	10
27	Ouelessebougou	SANANKORODJITOUMOU	10	10
		TOTAL	**300**	**302**

HKI/Mali, Projet CS 21

Questionnaire de l'enquête d'évaluation

(**mères d'enfants de 0 – 23 mois**)

Version Finale du 17/04/2009

****

Bonjour! Mon nom est _____. Je travaille pour l'ONG HKI dans le cadre d'un projet concernant la mère et l'enfant. Je voudrais vous poser quelques questions sur la santé et l'alimentation. Ces questions concernent vous-même, ainsi que vos enfants de moins de 2 ans. Ensuite, avec votre permission, nous prendrons votre poids et votre taille, ainsi que ceux de votre plus jeune enfant et nous lui ferons une petite piqûre au doigt pour prélever une petite quantité de sang. Ces mesures de poids et taille et ce prélèvement de sang seront très utiles pour connaître votre état nutritionnel et celui l'enfant.

Ce travail prendra environ 1 heure. Les informations que vous me donneriez seront confidentielles. **La participation à l'enquête est volontaire et vous pouvez refuser de répondre aux questions, de ne pas accepter les mesures ou le prélèvement**. Mais je vous serais très reconnaissante de bien vouloir accepter de participer entièrement et en toute sincérité.

Pouvons nous commencer? 1. Oui 2. Non

SECTION 0 : Identification

N°	Questions	CODES
A	Numéro du questionnaire	/___/
B	Nom de l'enquêtrice _____	/___/___/
C	District sanitaire : _____	/___/
D	Aire de santé : _____	/___/___/
E	Village/Ville : _____	/___/___/
F	Adresse géographique _____	

G	VISITE 1	VISITE 2	VISITE 3
	Résultat* /___/	Résultat /___/	Résultat /___/
	Date /___/___/2009	Date /___/___/2009	Date /___/___/2009
H	Heure début interview _____ : _____		

* 1 = Interview achevée 2 = Absent 3 = Interview inachevée 4 = Interview reportée
5 = Refus 6 = Chef de ménage absent pendant la durée de l'enquête
9 = Autres, préciser _____

SECTION 1 : Caractéristiques de base

N°	Questions et filtres	CODES	Passer à
101	Quel âge aviez-vous à votre dernier anniversaire ?	Age en années révolues |_____|_____|	
102	Quel est votre état matrimonial actuel?	Célibataire……... 1 Mariée…….. 2 Divorcée, veuve ou séparée…. 3	
103	Avez-vous jamais fréquenté l'école ou suivi des cours d'alphabétisation?	Oui, école formelle…..…1 Oui, alphabétisation ….. 2 Non…….9	**2 →Q105** **9 →Q105**
104	Quel est le niveau le plus élevé que vous avez atteint ?	Premier cycle ……..1 Second cycle …….……..2 Secondaire ……..……3 Supérieur…….….. 4	
105	D'où provient principalement l'eau que boivent les membres de votre ménage ?	Eau de robinet …… 1 Puits ouvert 2 Puits couvert ou forage…...3 Eau de surface……..…4 Eau de pluie……..5 Autres, _____ 8	
106a	Quand (**enquêtée elle-même**) lavez-vous vos mains avec du savon/détergent ? ***Plusieurs réponses possibles. Ne pas lire la liste. Encercler une lettre pour chaque réponse fournie***	Avant de préparer le repas……..A Avant de nourrir les enfants……B Après avoir été aux toilettes…...C Après avoir nettoyé un enfant après les selles……. ….D Autre _____X Jamais…….Y	
106b	La dernière fois que vous avez nettoyé l'enfant après les selles, avez-vous lavé vos mains avec du savon/détergent ?	Oui…….1 Non…….2	
107a	Pourrais-je avoir un échantillon du sel que vous consommez habituellement dans votre ménage ? Je voudrais faire un test pour savoir si ce sel est iodé ou pas. **Enquêtrice : En fonction du résultat du test, entourer le 1 ou 2 dans la colonne CODES**	Oui, sel iodé. ……1. Non, pas iodé….……2.	
107b	Selon vous, quels sont les avantages du sel iodé? ***Plusieurs réponses possibles. Ne pas lire la liste. Encercler une lettre pour chaque réponse fournie***	Empêche le goitre……..…A Eviter retard de croissance…….B Eviter troubles mentaux…….….C Autres,_____ X Ne sait ……...Y	

108	Êtes-vous actuellement enceinte ?	Oui ……..... 1 Non ……. .. 2 Ne sait pas/pas sûre…….9	**2→Q110** **9→Q110**
109	De combien de mois ?	Nombre de mois |____|____| 99 = Ne sait pas	
110	Au total, combien d'enfants avez-vous actuellement ?	Nombre d'enfants |____|____|	
111	Combien d'enfants de moins de 2 ans avez-vous?	Nombre d'enfants |____|____|	
112	Parlons à présent de vos deux plus jeunes enfants (vos enfants biologiques) : Quel sont leurs noms, sexes, dates de naissance et âges ? **Enquêtrice : remplir le tableau ci-dessous en commençant par le plus jeune enfant**		

	NOM	**A) SEXE**	**B) DATE DE NAISSANCE**	**C) AGE (EN MOIS REVOLU)**
1		1. MASCULIN 2. FEMININ	__ __ / __ __ / __ ____ __ JJ MM A A A A	
2		3. MASCULIN 4. FEMININ	__ __ / __ __ / __ __ __ __ JJ MM A A A A	

99 = Ne sait pas

SECTION II: Soins pendant la grossesse et après l'accouchement

N°	**Questions et filtres**	**CODES**	**Passer à**
201	Quand vous étiez enceinte de (NOM ENFANT) , avez vous fait une consultation prénatale?	Oui. ……1. Non….……2.	**2→Q204**
202	A quel moment de la grossesse avez-vous effectué la première consultation?	**1er trimestre……...1** **2ème trimestre……2** **3ème trimestre……3** **Ne se souvient pas…….9**	
203	Au total, combien de consultations avez-vous effectuées?	Nombre de consultations |___|___| 88 = 3 ou plus 99 = Ne se souvient pas	

204	A partir du 3ème mois de la grossesse, avez-vous ……..	Oui Non NSP a) Pris de la SP 1.……..…1 2 9 b).Pris de la SP 2.……..…1 2 9 c) Pris fer ou acide folique.……...1 2 9 d) Eté soumise à un déparasitage .1 2 9 e) Reçu des conseils ou fait des….1 2 9 préparatifs pour l'allaitement maternel exclusif NSP = Ne se souvient pas	
205	Quant vous étiez enceinte de (NOM ENFANT), avez-vous reçu une injection dans le bras pour protéger le bébé contre le tétanos, c'est à dire, des convulsions après la naissance?	Oui. ……..……1 Non… ……..…2 Ne se souvient pas……9	**2→Q207** **9→Q207**
206	**Combien de fois avez-vous reçu cette injection ?**	1 fois ……..……1 2 fois ……..…2 Plus de 2 fois…….3 Ne se souvient pas…..…9	
207	**A la naissance de (NOM ENFANT), qui vous a assisté ?** ***Plusieurs réponses possibles. Ne pas lire la liste. Encercler une lettre pour chaque réponse fournie***	Médecin/infirmier…….A Sage femme……..…..B Infirmière obstétricienne……..…..C Matrone……...D AT _____E Membre de la famille, préciser le lien de parente, _____G Autre _____X Personne……Y	
208	Au cours des 40 premiers jours après l'accouchement, avez-vous reçu une capsule de vitamine A? Enquêtrice: montrer la capsule et flacon doseur	Oui. ……..……1 . Non……2.. Ne se souvient pas……9..	
209	Depuis votre dernier accouchement, avez-vous reçu des comprimés de fer/acide folique? Enquêtrice : montrer les comprimés	Oui. ……..……1 . Non……2.. Ne se souvient pas……9..	**2→Q301** **9→Q301**
210	La dernière fois que vous avez reçu le fer/acide folique, il y a combien de temps de cela ?	24 heures ou moins……...……1 . 25 h - 1 semaine……. .....…2.. Plus d'une semaine……. .....…3.. Ne se souvient pas……9..	

SECTION III: Prévention du paludisme, maladies de l'enfants

N°	Questions et filtres	CODES	Passer à
301	Avez-vous une moustiquaire?	Oui. ……..……1 Non……2	**2→Q304**
302	Au cours de la nuit dernière, qui a dormi sous moustiquaire? ***Plusieurs réponses possibles. Ne pas lire la liste. Encercler une lettre pour chaque réponse fournie***	Plus jeune enfant ……..A L'enquêtée elle-même.……..…B Autre personne, _____X _____ Personne……Y	
303	Est-ce que cette moustiquaire a déjà été trempée ou plongée dans un liquide qui repousse les moustiques ou insectes ?	Oui. ……1 Non……2 Ne sait pas…….9	
304	Parfois les enfants sont malades et ont besoin de soin ou de traitement. Quels sont les signes de maladie qui vous indiquera que votre enfant a besoin de traitement ? ***Plusieurs réponses possibles. Ne pas lire la liste. Encercler une lettre pour chaque réponse fournie***	Ne semble pas bien ou ne joue pas normalement……A Ne mange pas ou ne boit pas……..B Somnolence ou difficulté à se reveiller..C Forte fièvre……..…D Respiration difficile et rapide……..…E Vomit tout……...F Convulsions……G Autre _____X Ne sait pas……...Y	
305	Au cours des 2 dernières semaines, (NOM ENFANT) a-t-il eu un signes suivant (**lire la liste?**	**Oui Non** a) Diarrhée……..….1 0 b) Sang dans les selles.…1 0 c) Toux……..1 0 d) Difficulté a respirer….1 0 e) Respiration rapide/ essoufflement…….1 0 f) Fièvre……1 0 g) Paludisme……..…1 0 h) Convulsions……...…1 0 x) Autre _____1 0 y) Rien de tout ceci…... .1 0	**0→Q401**
306	Quand (NOM ENFANT) avait ces signes de maladie, lui a-t-on donné **à manger** moins que d'habitude, la même quantité ou plus que d'habitude ?	Moins que d'habitude. ……1 La même quantité ……...2 Plus que d'habitude. ……..…3	
307	Quand (NOM ENFANT) avait ces signes de maladie, lui a-t-on donné **à boire** moins que d'habitude, la même quantité ou plus que d'habitude ?	Moins que d'habitude. ……1 La même quantité ……...2 Plus que d'habitude. ……..…3	

308	**Enquêtrice : Vérifier Q305 A)**	A eu diarrhée. ……1. N'a pas eu diarrhée.……2.	**2→Q401**
309	Pendant cet épisode de diarrhée, avez-vous donné Kènènya djî (SRO/SSS) à (NOM ENFANT)?	Oui. ……1. Non….……2.	
310	Pendant cet épisode de diarrhée, avez-vous allaité (NOM ENFANT) moins que d'habitude, à la même fréquence ou plus que d'habitude ?	Moins que d'habitude. ……1 La même fréquence…….....2 Plus que d'habitude. ……..…3 Enfant n'est pas au sein……..9	

SECTION IV: Vaccination des enfants

N°	Questions et filtres	CODES	Passer à
401	Avez-vous un carnet de vaccinations où sont inscrits les vaccins de (NOM ENFANT) ? **Si oui** : Puis-je le voir, s'il vous plait?	Oui, document vu. …..……1 Oui, doc. pas disponible……...2 Jamais eu de document……..…3 Ne sait pas.……...9	**2→ Q403** **3→ Q403** **9→ Q403**
402	**Enquêtrice : consulter le document et reporter exactement les informations comme elles sont inscrites sur le carnet de vaccination de (NOM ENFANT).**		

	JOUR		MOIS		ANNEE			
BCG								
POLIO 0								
POLIO 1								
POLIO 2								
POLIO 3								
DTC 1								
DTC 2								
DTC 3								
ROUGEOLE								
VITAMINE A								

403	**Enquêtrice, si ROUGEOLE n'est pas dans le document, demander :** Est-ce que (NOM ENFANT) a déjà reçu une injection pour prévenir la rougeole ?	Oui. …..……1 Non …….……....2 Ne sait pas.……...9	

SECTION V: Alimentation et soins accordés à l'enfant

N°	Questions et filtres	CODES	Passer à
501	Avez-vous jamais allaité (NOM ENFANT)?	Oui. ……1. Non…..……2.	**2→Q505**
502	Combien de temps après la naissance avez-vous mis (NOM ENFANT) au sein pour la première fois?	Immédiatement (moins d'une heure)……..1 Une heure ou plus…….…....2	
503	(NOM ENFANT) est-il actuellement au sein ?	Oui. ……1. Non…..……2.	**2→Q505**
504	Au cours des 24 dernières heures, a-t-il été allaité ?	Oui. ……1. Non…..……2.	
505	Au cours des 24 dernières heures, a-t-il reçu d'autres aliments (liquides ou solides y compris de l'eau) en dehors du lait maternel?	Oui. ……1. Non…..……2.	**2→Q509**
506	*Combien de fois, au cours des 24 dernières heures, (NOM ENFANT) a-t-il reçu des aliments autres que le lait maternel ?*	Nombre de fois |____| **5 = 5 ou plus** **9 = Ne se souvient pas**	
507	Au cours des 24 dernières heures, avez-vous encouragé avec **patience et affection** (NOM ENFANT à manger?	Oui. ……..……1. Non…..……..……2. N'a pas commencé l'alimentation complémentaire ...9	

Je voudrais à présent des détails sur les aliments que l'enfant a reçus au cours des **24 dernières heures et des 7 derniers jours**. Pour chaque aliment que je vais vous citer, je vous prie de m'indiquer la fréquence de consommation (nombre de fois).

Enquêtrice : reporter-vous au tableau de la page suivante

Enquêtrice : Écrire dans chaque case le nombre correspondant à la fréquence de consommation. Prendre « 0 » si l'aliment n'a pas été consommé, « 5 » s'il a été consommé 5 fois ou plus et « 9 » si la mère de se souvient pas.

	NOM DE L'ALIMENT	**508** Nombre de fois (24 heures)	**509** Nombre de fois (7 jours)
a1	Mil, maïs		
b1	Piment rouge entier		
c1	Feuilles vertes foncées (en tant que groupe d'aliments)		
d1	Lait		
e1	Carottes		
f1	Mangue mûre		
g1	Courge ou orange jaune foncée (y compris la citronnelle)		
h1	Feuille d'oseille		
i1	Papaye mûre		
a2	Niébé/haricot		
b2	Œuf entier (avec jaune)		
c2	Petit poisson (foie intact)		
d2	Viande (bœuf, chèvre, mouton, porc)		
e2	Patate douce à chair orange		
f2	Poulet ou autre volaille		
g2	Feuilles amarante		
h2	Foie (tout type)		
i2	Feuilles de niébé		
j2	Riz		
a3	Beurre (naré, sirimè, beurre de table)		
b3	Orange, citron, tamarin		
c3	Huile de palme rouge		
d3	Aliment frit dans de l'huile ou matière grasse		
e3	Néré (parkia biglobosa)		
f3	Beurre de karité, huile d'arachide, huile de coton		
a4	Patate (à chair blanche)		
b4	Margarine (enrichie en vitamine A)		
c4	Thé/café		
d4	Arachide		
e4	Poisson		
f4	Feuille de baobab		

SECTION VI: VIH/SIDA

N°	Questions et filtres	CODES	Passer à
601	Avez-vous déjà entendu parler d'une maladie appelée SIDA ?	Oui. ……1. Non….……2.	**2→Q701**
602	Que peut faire une personne pour éviter d'avoir le SIDA ou le virus qui cause le SIDA ? ***Plusieurs réponses possibles. Ne pas lire la liste. Encercler une lettre pour chaque réponse fournie***	Abstinence sexuelle……..……..…..…A Utilisation de condom……..…….B Limiter les relations sexuelles a un partenaire/rester fidèle a un partenaire…..C Limiter le nombre de partenaires sexuels.....D Eviter les relations sexuelles avec les prostituées……..E Eviter d'avoir des relations sexuelles avec une personne qui plusieurs partenaires…..F Eviter des rapports sexuels avec des personnes du même sexe……...G Eviter les relations sexuelles avec des personnes qui se font des injections intraveineuses de drogues……..…H Eviter les transfusions sanguines……..….I Eviter les injections……....J Eviter de s'embrasser……....K Eviter les piqûres de moustiques……..….L Rechercher une protection auprès d'un guérisseur traditionnel……..…M Eviter de partager rasoirs/lames……....N Autre_____X Ne sait pas……Y Rien……..…Z	

SECTION VII: Mesures de poids et tailles, prélèvement sanguin

Pour finir, avec votre permission, je voudrais faire les mesures de poids et taille (vous même et votre NOM ENFANT) et procéder à un prélèvement sanguin qui ne concerne que l'enfant. Comme je vous l'avais annoncé au départ, ces mesures et ce prélèvement seront très utiles pour connaître votre situation nutritionnelle, ainsi que celle de l'enfant. Pouvons-nous commencer?

701 Poids de la mère :	**|____|____|____| , |___| Kgs**
702 Taille de la mère :	**|____|____|____|, |____| cm**
703 Poids de l'enfant :	**|____|____| , |___| Kgs**
704 Taille l'enfant :	**|____|____|, |____| cm**
705 Taux d'hémoglobine chez l'enfant :	**|____|____|, |____| grs/dl**

Observations

	Heure fin interview _____ : _____	

*********** *FIN DE L'INTERVIEW* **********

Enquêtrice : vérifier le questionnaire avant de remercier la répondante

********** *Merci pour votre attention* **********

HKI/Mali, Projet CS 21

Questionnaire d'évaluation

(**Femmes enceintes de 3 mois ou plus**)

Version finale 17/04/2009

****

Bonjour! Mon nom est _____ . Je travaille pour l'ONG HKI dans le cadre d'un projet concernant la mère et l'enfant. Je voudrais vous poser quelques questions sur la santé et l'alimentation. Ces questions concernent vous-même, ainsi que vos enfants de moins de 2 ans. Ensuite, avec votre permission, nous prendrons votre poids et votre taille, ainsi que ceux de votre plus jeune enfant et nous lui ferons une petite piqûre au doigt pour prélever une petite quantité de sang. Ces mesures de poids et taille et ce prélèvement de sang seront très utiles pour connaître votre état nutritionnel et celui l'enfant.

Ce travail prendra environ 20 heure. Les informations que vous me donneriez seront confidentielles. **La participation à l'enquête est volontaire et vous pouvez refuser de répondre aux questions, de ne pas accepter les mesures ou le prélèvement**. Mais je vous serais très reconnaissante de bien vouloir accepter de participer entièrement et en toute sincérité.

Pouvons nous commencer? 1. Oui 2. Non

SECTION 0 : Identification

N°	Questions	CODES
A	Numéro du questionnaire	/___/
B	Nom de l'enquêtrice _____	/___/___/
C	District sanitaire : _____	/___/
D	Aire de santé : _____	/___/___/
E	Village/Ville : _____	/___/___/
F	Adresse géographique _____	

G	VISITE 1	VISITE 2	VISITE 3
	Résultat* /___/	Résultat /___/	Résultat /___/
	Date /___/___/2009	Date /___/___/2009	Date /___/___/2009
H	Heure début interview _____ : _____		

* 1 = Interview achevée 2 = Absent 3 = Interview inachevée 4 = Interview reportée
5 = Refus 6 = Chef de ménage absent pendant la durée de l'enquête
9 = Autres, préciser _____

SECTION 1 : Caractéristiques de base

N°	Questions et filtres	CODES	Passer à
101	Quel âge aviez-vous à votre dernier anniversaire ?	Age en années révolues |_____|_____|	
102	Quel est votre état matrimonial actuel?	**Célibataire……..... 1** Mariée…….. 2 Divorcée, veuve ou séparée…. 3	
103	Avez-vous jamais fréquenté l'école ou suivi des cours d'alphabétisation?	Oui, école formelle…..…1 Oui, alphabétisation ….. 2 Non…….9	**2 →Q105** **9 →Q105**
104	Quel est le niveau le plus élevé que vous avez atteint ?	Premier cycle ……..1 Second cycle …….……..2 Secondaire ……..……3 Supérieur…….….. 4	
105	D'où provient principalement l'eau que boivent les membres de votre ménage ?	Eau de robinet …… 1 Puits ouvert 2 Puits couvert ou forage…...3 Eau de surface……..…4 Eau de pluie……..5 Autres, _____ 8	
106	De combien de mois êtes-vous enceinte?	Nombre de mois |____|____|	
107	Au total, combien d'enfants avez-vous actuellement ?	Nombre d'enfants |____|____|	

SECTION II: Soins pendant la grossesse et après l'accouchement

N°	Questions et filtres	CODES	Passer à
201	Au cours de la grossesse actuelle , avez-vous fait une consultation prénatale?	Oui. ……1. Non….……2.	**2→Q204**
202	A quel moment de la grossesse avez-vous effectué la première consultation?	1er trimestre……...1 2ème trimestre…….2 3ème trimestre…….3 Ne se souvient pas…….9	
203	A partir du 3ème mois de cette grossesse, avez-vous …….	Oui Non NSP a) Pris de la SP 1.……..…1 2 9 b).Pris de la SP 2.……..…1 2 9 c) Pris fer ou acide folique.……...1 2 9 d) Eté soumise à un déparasitage .1 2 9 e) Reçu des conseils ou fait des….1 2 9 préparatifs pour l'allaitement maternel exclusif NSP = Ne se souvient pas	
204	**Au cours des 24 dernières heures, avez-vous pris du fer/acide folique ?**	Oui. ……..……1 . Non……2..	

SECTION III: Mesure de taille et prélèvement sanguin de la femme enceinte

Pour finir, avec votre permission, je voudrais mesurer votre taille et procéder au prélèvement sanguin. Comme je vous l'avais annoncé au départ, cette mesure et ce prélèvement seront très utiles pour connaître votre état nutritionnel. Pouvons-nous commencer?

301 Taille de la femme :	**|____|____|____|, |____| cm**
302 Taux d'hémoglobine:	**|____|____|, |____| grs/dl**
Observations	

	Heure fin interview _____ : _____	

**************** ***FIN DE L'INTERVIEW*** ****************

Enquêtrice : vérifier le questionnaire avant de remercier la répondante

*************** ***Merci pour votre attention*** ***************

HKI/Mali, Projet CS 21

Questionnaire
Qualité des services de santé

Version du 17/04/2009
****

N°	Questions	CODES
A	Numéro du questionnaire	/___/___/
B	Nom de l'enquêteur _____	/___/___/
C	District sanitaire : _____	/___/
D	Aire de santé : _____	/___/___/
E	Village/Ville : _____	/___/___/
F	Nom de la structure :_____	/___/___/
G	Type de structure : 1. CSCOM 2. CSRef	

NB : Dans le tableau qui suit, les périodes couvertes sont définies ci-après :

30 derniers jours: 01 mars - 31 mars 2009

3 derniers mois : 01 janvier 2009 - 31 mars 2009

6 derniers mois : 01 octobre 2008 - 31 mars 2009

12 derniers mois : 01 avril 2008 - 31 mars 2009

Si les renseignements disponibles correspondent à une période différente, prière de bien vouloir l'indiquer en haut de la colonne correspondante.

	30 derniers jours	3 derniers mois	6 derniers mois	12 derniers mois
1°) Nombre total de femmes vues en CPN				
2°) Nombre total de femmes vues en 1ère CPN				
3°) Nombre de femmes qui ont reçu le Fer/Acide folique lors de la 1ère CPN				
4°) Nombre de femmes qui ont reçu le Traitement Présomptif Intermittent à la SP lors de la CPN				
5°) Nombre de femmes qui ont été déparasitées lors de la 1ère CPN				
6°) Nombre de femmes qui ont été conseillées, **lors de la 1ère CPN,** sur le gain de poids, l'hygiène alimentaire et le danger des travaux pénibles au cours de la grossesse				
7°) Nombre de femmes qui ont été pesées et conseillées, lors de la CPN, sur l'allaitement immédiat et exclusif				
8°) Nombre total d'accouchements dans le centre de santé				
9°) Nombre de mères qui ont immédiatement initié l'allaitement au cours de l'heure qui a suivi l'accouchement				
10°) Nombre de mères qui ont reçu une capsule de vitamine A immédiatement après l'accouchement				
11°) Nombre total d'enfants reçus dans le centre de santé				
12°) Nombre total d'enfants reçus dans le centre de santé, qui souffraient de Rougeole, de Diarrhée, d'IRA ou de la malnutrition				
13°) Nombre d'enfants qui souffraient de Rougeole, de Diarrhée, d'IRA ou de la malnutrition et qui ont reçu de la dose requise de vitamine A				
14°) Nombre total d'enfants de 6 à 23 mois reçus dans le centre de santé				
15°) Nombre d'enfants de 6 à 23 mois pour lesquels la recherche d'anémie a été effectuée				
16°) Nombre d'enfants de 6 à 23 mois qui ont bénéficié du suivi d'enfants sains au cours duquel on a vérifié le statut de vitamine A ou donné de la vitamine A				

	30 derniers Jours	3 derniers mois	6 derniers mois	12 derniers Mois
17°) Nombre total d'enfants de 0 à 23 mois reçus dans le centre de santé				
18°) Nombre de mère d'enfants de 0 à 23 mois qui ont bénéficié du paquet complet de nutrition (allaitement exclusif, administration du fer acide folique, déparasitage et prévention du palu)				
19°) Nombre d'enfants de 0 à 23 mois reçus dans le centre de santé, qui souffraient de diarrhée				
20°) Nombre d'enfants de 0 à 23 mois, souffrant de diarrhée et dont la prise en charge a été faite selon l'algorithme PCIME				
21°) Nombre total d'enfants de 6 à 59 mois reçus dans le centre de santé				
22°) Nombre d'enfants de 6 à 59 mois, qui ont reçu une capsule de vitamine A				

		Oui	Non
23°) Au cours des 6 derniers mois, le centre de santé a-t-il connu une rupture de stock concernant les produits suivants ?	a) Vitamine A……. b) Fer/acide folique……. c) SP…… d) SRO…… e) Antihelminthiques……. f) Zinc.....…….	….1…. ....1…. …1…. …1…. …1…. …1….	….2…. ....2…. …2…. …2…. …2…. …2….

24°) Question réservée aux CSREF : Au cours de 6 derniers mois (préciser la période _____, combien de supervisions aviez-vous prévues ? Et Combien ont été réalisées ?	**Nombre de supervisions prévues**	**Nombre de supervisions réalisées**

**************** ***FIN DE L'INTERVIEW*** ****************

Enquêteur : vérifier le questionnaire avant de remercier les répondants

*************** ***Merci pour votre collaboration*** ***************

HKI/Mali - Projet CS 21
QUESTIONNAIRE DU PERSONNEL
DE SOINS DE SANTE

Numéro du questionnaire _____

Cercle_____	Date_____
Centre Santé _____	Enquêteur_____

Formation et expérience en soins de santé	
1. Quelle est votre formation ?	- Auxiliaire de santé
	- Infirmière
	- Sage-femme diplômée
	- Médecin
	- Matrone
2. Depuis combien de temps êtes-vous agent de santé ?	Années
	(Si la réponse est moins d'un an,
	Marquer « 95 »)
	- Ne sait pas
	- Refuse de répondre
3. Avez-vous un superviseur régulier ?	- Oui
	- Non **(passer à la qu. 7)**
	- Ne sait pas **(passer à la qu.7)**
4. De quand date la dernière visite de votre superviseur (cocher une seule réponse	- moins de deux semaines
	- de 2 semaines à 2 mois
	- de 3 à 6 mois
	- de 7 mois à 1 an
	- de plus d'un an
5. votre superviseur vous a-t-il fait un compte-rendu ou Un feedback lors de son dernier passage ? (Si la réponse n'est pas « oui » passer à la qu.7)	- Oui
	- Non
	- Ne sait pas/plus
	- Refuse de répondre
6. Ce compte-rendu ou feedback était-il constructif ?	- Oui
	- Non
	- Ne sait pas
	- Refuse de répondre
7. Quels sont les aspects les plus difficiles de votre travail ? (en citer jusqu'à 3)	a._____
	b._____
	c._____

8. Avez-vous participé à des sessions de formation en nutrition au cours de la dernière année ? (Si la réponse n'est pas « oui » passer à la qu.11)	- Oui - Non - Ne sait pas/plus - Refuse de répondre
9. Combien de sessions ?	_____ Sessions
10. Quels étaient les thèmes de ces sessions ?	- apports en vitamine A uniquement - apports en fer uniquement - carence en micro-nutriments - allaitement - compléments alimentaires appropriés pour les enfants par age - alimentation maternelle pendant l'allaitement - Soins aux enfants sévèrement malnutris - autres (préciser) _____

Consultations prénatales

Quels **examens** faites-vous REGULIEREMENT lors des consultations prénatales ?

11. Taille de la femme (première visite) ?	Oui	Non
12. Prise du poids de la femme ?	Oui	Non
13. Prise de la température de la femme ?	Oui	Non
14. Mesure de la taille de l'utérus de la femme ?	Oui	Non
15. Examen des seins ?	Oui	Non
16. Prise du bruits du cœur du fœtus ?	Oui	Non
17. Prise de la tension artérielle de la femme ?	Oui	Non
18. Examen des paumes ou des conjonctives de la femme ?	Oui	Non
19. Recherche d'œdème ?	Oui	Non
20. Analyse de sang de la femme ?	Oui	Non
21. Analyse d'urine de la femme ?	Oui	Non
22. Vérification du statut tétanique sur le carnet mère enfant ?	Oui	Non
Quels contrôles oraux faites-vous REGULIEREMENT lors des consultations Prénatales ?		
23. Age de la femme ? (première visite)	Oui	Non
24. Nombre de naissances précédentes ? (première visite)	Oui	Non
25. Date de sa dernière naissance ? (première visite)	Oui	Non
26. Résultat de son dernier accouchement ? (première visite)	Oui	Non
27. Son appétit ?	Oui	Non
28. Ses habitudes alimentaires ?	Oui	Non
29. Troubles de la vision le jour ?	Oui	Non

30. Troubles de la vision la nuit ?	Oui	Non
31. Niveau de travail quotidien ?	Oui	Non
32. Habitudes de sommeil et de repos ?	Oui	Non
33. Projet d'allaitement exclusif ?	Oui	Non
34. Utilisation de sel iodé dans l'alimentation ?	Oui	Non
35. Prise de compléments de fer + acide folique ?	Oui	Non
36. Effets secondaires possibles des compléments de fer + acide folique ?	Oui	Non
37. Prise d'une prophylaxie anti-paludéenne ?	Oui	Non
38. Utilisation d'une moustiquaire pour dormir ?	Oui	Non
39. Utilisation d'une moustiquaire imprégnée pour dormir ?	Oui	Non
40. Prise d'une prophylaxie ou d'un traitement anti-parasitaire ?	Oui	Non
41. Date de sa dernière injection anti-tétanique ?	Oui	Non
42. Test VIH effectue par le passe ?	Oui	Non
43. Connaissance de son statut VIH ?	Oui	Non
Quels **conseils** donnez-vous REGULIEREMENT lors des consultations prénatales ?		
44. Conseils généraux d'alimentation ?	Oui	Non
45. Suggestions d'aliments particuliers ? (Si oui, en citer jusqu'à 5) A._____ B._____ C._____ D._____ E._____	Oui	Non
46. Suggestion d'éviter l'alcool pendant la grossesse ?	Oui	Non
47. Suggestion d'éviter le tabac pendant la grossesse ?	Oui	Non
48. Suggérer de réduire sa consommation de café/thé pendant la grossesse ?	Oui	Non
49. Parler de l'importance de prendre le poids requis pendant la grossesse ?	Oui	Non
50. Suggestion de réduire sa charge de travail ?	Oui	Non
51. Suggestion d'augmenter son temps de sommeil/repos ?	Oui	Non
52. Importance d'une prophylaxie anti-paludéenne régulière ?	Oui	Non
53. Importance de dormir sous une moustiquaire ?	Oui	Non
54. Importance de dormir sous une moustiquaire imprégnée ?	Oui	Non
55. Importance d'une prophylaxie ou d'un traitement anti-parasitaire ?	Oui	Non
56. Importance d'utiliser du sel iodé pour cuisiner ?	Oui	Non
57. Importance de compléments réguliers en fer + acide folique ?	Oui	Non
58. Possibles effets secondaires des compléments de fer + acide folique ?	Oui	Non
59. Conseils concernant l'allaitement exclusif ?	Oui	Non
60. Discussion sur l'aménorrhée lactaire comme méthode d'espacement des naissances ?	Oui	Non
61. Proposition d'effectuer un test VIH ?	Oui	Non
62. Conseils sur la fièvre et autres symptômes dangereux ?	Oui	Non
63. Mise en place d'un planning d'examens ?	Oui	Non
64. Quel est selon vous le conseil le MOINS souvent suivi par les femmes venant en consultation prénatale ? _____		

65. D'après vous pourquoi n'est-il pas suivi ? _____		
Consultations post-partum		
Quels **examens** faites-vous REGULIEREMENT lors des consultations post-partum ?		
66. Température de la femme ?	Oui	Non
67. Tension artérielle de la femme ?	Oui	Non
68. Examen des seins ?	Oui	Non
69. Pâleur de la paume ou des conjonctives ?	Oui	Non
70. Recherche d'œdème ?	Oui	Non
71. Pertes de liquide anormales ?	Oui	Non
72. Analyse de sang de la femme ?	Oui	Non
73. Analyse d'urine de la femme ?	Oui	Non
74. Vérification de la prise de vitamine A sur le carnet mère enfant ?	Oui	Non
Quels **contrôles oraux** faites-vous REGULIEREMENT lors des consultations post-partum ?		
75. Niveau de son appétit ?	Oui	Non
76. Ses habitudes alimentaires ?	Oui	Non
77. Troubles de la vision le jour ?	Oui	Non
78. Troubles de la vision la nuit ?	Oui	Non
79. Niveau de travail quotidien ?	Oui	Non
80. Habitudes de sommeil et de repos ?	Oui	Non
81. Allaitement exclusif ?	Oui	Non
82. Demander à la femme si quelqu'un donne de l'eau, des jus de fruits, des médicaments traditionnels, etc. a l'enfant en plus du lait maternel ?	Oui	Non
83. Demander à la femme si elle a des difficultés à allaiter ?	Oui	Non
84. Allaitement aléatoire ?	Oui	Non
85. Demander à la femme si elle allaite la nuit ?	Oui	Non
86. Demander à la femme si elle dort avec son bébé ?	Oui	Non
87. Demander à la femme si elle utilise du sel iodé dans l'alimentation	Oui	Non
88. Demander à la femme si elle prend des compléments de fer + acide folique ?	Oui	Non
89. Effets secondaires de ses prises de compléments de fer + acide folique ?	Oui	Non
90. Demander à la femme si elle prend une prophylaxie anti-paludéenne ?	Oui	Non
91. Demander à la femme si elle dort sous un moustiquaire ?	Oui	Non
92. Demander à la femme si elle dort sous une moustiquaire imprégnée ?	Oui	Non
93. Demander à la femme si elle prend une prophylaxie ou un traitement anti-parasitaire ?	Oui	Non
94. Demander à la femme si ses règles sont revenues ?	Oui	Non
95Demander à la femme quand ses règles sont revenues ?	Oui	Non
96. demander à la femme si elle a de la fièvre ou d'autres signes d'infection ?	Oui	Non
97. Demander à la femme si elle a déjà effectue le test VIH ?	Oui	Non
98. demander à la femme si elle connaît son statut VIH ?	Oui	Non

Quels **conseils** donnez-vous REGULIEREMENT lors des consultations post-partum ?		
99. Conseils généraux d'alimentation à la mère ?	Oui	Non
100. Suggestion d'aliments particuliers à la mère ? (Si oui, en citer jusqu'à 5)	Oui	Non
a._____ b._____ c._____ d._____ e._____		
101. Parler de l'importance de l'allaitement exclusif ?	Oui	Non
102. Parler des problèmes d'allaitement que la nouvelle mère peut rencontrer ?	Oui	Non
103. Suggérer à la femme de diminuer sa charge de travail ?	Oui	Non
104. Suggérer à la femme d'augmenter son temps de sommeil et de repos ?	Oui	Non
105. Importance d'une prophylaxie anti-paludéenne continue ?	Oui	Non
106. Importance de dormir sous une moustiquaire ?	Oui	Non
107. Importance de dormir sous une moustiquaire imprégnée ?	Oui	Non
108. Importance d'utiliser du sel iodé dans l'alimentation ?	Oui	Non
109. Importance de prendre des compléments réguliers en fer + acide folique ?	Oui	Non
110. Possibles effets secondaires des compléments de fer + acide folique ?	Oui	Non
111. Importance de la complément en vitamine A pendant les 8 semaines suivent l'accouchement ?	Oui	Non
112. Discussion de l'aménorrhée de lactation comme méthode d'espacement des naissances ?	Oui	Non
113. Identifier les 3 conditions nécessaires pour la méthode d'aménorrhée lactation ? (si oui, merci de les citer) a._____ b._____ c._____	Oui	Non
114. Identifier la méthode appropriée d'espacement des naissances au moment ou l'enfant aura six mois ou si les règles de la mère reviennent avant qu'il ait 6 mois ?	Oui	Non
115. Quel est selon vous le conseil le MOINS souvent suivi par les femmes qui viennent en consultation post-partum ?	Oui	Non
116. A votre avis pourquoi ce conseil n'est pas suivi ? _____ _____ _____		

Consultations des enfants de 0 à 5 ans malades/malnutris		
Quels **examens physiques** pratiquez-vous REGULIEREMENT lors des consultations des enfants malades/malnutris ?		
117. Taille d'enfant ?	Oui	Non
118. Poids d'enfant ?	Oui	Non
119. Pincer la peau de l'abdomen de l'enfant ?	Oui	Non
120. Compter le nombre de respirations par minute ?	Oui	Non
121. Prendre la température de l'enfant ?	Oui	Non
122. regarder si l'enfant a une torticolis ?	Oui	Non
123. Regarder s'il a des éruptions ?	Oui	Non
124. Regarder s'il a le nez qui coule ou les yeux rouges ?	Oui	Non
125. Regarder s'il a beaucoup maigri ?	Oui	Non
126. Regarder s'il a les paumes ou les conjonctives pales ?	Oui	Non
127. Regarder s'il fait d'oedèmes ?	oui	Non
Quels **contrôles oraux** pratiquez-vous REGULIEREMENT lors des consultations pour les enfants malades/malnutris ?		
128. Appétit de l'enfant ?	Oui	Non
129. Constat de vomissements	Oui	Non
130. Constat de diarrhées ?	Oui	Non
131. Présence de sang ou de pus dans les selles ?	Oui	Non
132. Toux ou difficulté a respiré ?	Oui	Non
133. Constat de fièvre ?	Oui	Non
134. Allaitement exclusif si l'enfant a moins de 6 mois ?	Oui	Non
135. Compléments alimentaires au lait maternel si l'enfant a 6 mois ou plus ? (si oui, merci d'indiquer lesquels) - eau - jus de fruits - nourriture semi solide - nourriture solide - médicaments traditionnels - autre (préciser)		
136. Nombre de repas par jour donnes à l'enfant ?	Oui	Non
137. consistance de la nourriture donnée à l'enfant ?	Oui	Non
138. Préparation et conservation de la nourriture à la maison ?	Oui	Non
139. Alimentation active de l'enfant ?	Oui	Non
140. Troubles de la vision le jour ?	Oui	Non
141. Troubles de la vision la nuit ?	Oui	Non
142. Test VIH déjà effectue ?	Oui	Non
143. Statut VIH de l'enfant connu ?	Oui	Non
144. Durée de l'état santé actuel de l'enfant ?	Oui	Non
Quels **conseils** donnez-vous REGULIEREMENT lors des consultations des enfants malades/malnutris ?		
145. Allaitement exclusif pour les enfants de moins de 6 mois ?	Oui	Non
146. Conseils sur les compléments alimentaires en plus du lait maternel si l'enfant à moins de 6 mois ?	Oui	Non
147. Discuter du nombre de repas que l'enfant doit prendre par jour ?	Oui	Non

148. Discuter de la consistance des repas de l'enfant ?	Oui	Non
149. Donner des méthodes de préparation et de conservation hygiéniques de la nourriture ?	Oui	Non
150. Suggérer des méthodes d'alimentation active à l'accompagnant ?	Oui	Non
151. Suggérer des aliments d'origine animale ? (si oui, merci d'en indiquer 3) a._____ b._____ c._____	Oui	Non
152. Suggérer des aliments riches en vitamine A ?	Oui	Non
(si oui, d'en indiquer 3) a._____ b._____ c._____		
153. Suggérer des aliments riches en fer ? (Si oui, merci d'en indiquer 3) a._____ b._____ c._____	Oui	Non
154. Suggérer d'autres aliments particuliers ? (Si oui, merci d'en indiquer 3) a._____ b. _____ c._____	Oui	Non
155. Parler de l'utilisation du sel iodé dans l'alimentation ?	Oui	Non
156. Administrer une dose de vitamine A ?	Oui	Non
157. Prescrire un sirop ou des comprimés de fer + acide folique ?	Oui	Non
158. Prescrire des solutions de réhydratation orale (SRO) ?	Oui	Non
159. Expliquer la pratique de solution de réhydratation orale chez soi ?	Oui	Non
160. Prescrire d'autres médicaments ?	Oui	Non
161. Envoyer l'enfant dans un centre de soins nutritionnels ?	Oui	Non
162. Suggérer que l'enfant fasse le test VIH ?	Oui	Non
163. Suggérer une visite de suivi ?	Oui	Non
164. Quel est selon vous le conseil le MOINS souvent suivi par les accompagnateurs qui s'occupent des enfants malades/malnutris ? _____		
165. A votre avis pourquoi ce conseil n'est pas suivi ? _____ _____		

Consultations d'enfants bien portants de 0 à 5 ans		
Quels **examens physiques** pratiquez-vous REGULIEREMENT lors de consultations d'enfants bien portants ?		
166. poids de l'enfant ?	Oui	Non
167. Taille de l'enfant ?	Oui	Non
168. Faire la courbe de poids de l'enfant sur sa courbe de croissance ?	Oui	Non
169. Vérifier les vaccins sur le carnet de l'enfant ?	Oui	Non
170. Regarder si les paumes et les paupières conjonctifs sont pales ?	OUI	Non
171. Regarder la date de supplémentaire de vitamine A sur le carnet de l'enfant ?	Oui	Non
Quels contrôles oraux pratiquez-vous REGULIEREMENT lors des consultations des enfants bien portants ?		
172. Vérifier l'appétit de l'enfant ?	Oui	Non
173. Allaitement exclusif si l'enfant à moins de 6 mois ?	Oui	Non
174. Compléments alimentaires possibles du lait maternel si l'enfant à moins de 6 mois ? (si oui, merci d'indiquer lesquels) - eau - jus de fruits - nourriture semi solide - nourriture solide - médicaments traditionnels - autre (préciser)	Oui	Non
175. Nombre de repas par jour de l'enfant ?	Oui	Non
176. Consistance de la nourriture donnée à l'enfant	Oui	Non
177. Préparation et conservation de la nourriture à la maison ?	Oui	Non
178. Alimentation active de l'enfant ?	Oui	Non
179. Troubles de la vision le jour ?	oui	Non
180. Troubles de la vision la nuit ?	Oui	Non
181. Supplémentaire en vitamine A ?	Oui	Non
182. tat des vaccins de l'enfant ?	Oui	Non
183. Test VIH effectue sur l'enfant ?	Oui	Non
184. Statut VIH de l'enfant connu ?	Oui	Non
Quels **conseils** donnez-vous REGULIEREMENT lors des consultations des enfants bien portants ?		
185. Expliquer la courbe de croissance de l'enfant ?	Oui	Non
186. Conseiller l'allaitement exclusif de l'enfant de moins de 6 mois ?	Oui	Non
187. Conseiller des compléments alimentaires en plus de l'allaitement pour les enfants entre 6 mois et 2 ans ?	Oui	Non
188 Discuter du nombre de repas de l'enfant par jour ?	Oui	Non
189. Discuter de la consistance des repas de l'enfant ?	oui	Non
190. Donner des méthodes de préparation et de conservation hygiéniques de la nourriture ?	Oui	Non
191. Suggérer des méthodes d'alimentation active à l'accompagnateur ?	Oui	Non

192. Suggérer des aliments d'origine animale ? (si oui, merci d'en indiquer 3) a._____ b._____ c._____	Oui	Non
193. Suggérer des aliments riches en vitamine A ? (si oui merci d'en indiquer 3) a._____ b._____ c._____	Oui	Non
194. Suggérer des aliments riches en fer ? (si oui, merci d'en indiquer 3) a._____ b.._____ c._____	Oui	Non
195. Suggérer d'autres aliments particuliers ? (Si oui, merci d'en indiquer 3) a._____ b.._____ c._____	Oui	Non
196. Parler de l'utilisation du sel iodé dans l'alimentation ?	Oui	Non
197. Administrer une dose de vitamine A ?	Oui	Non
198. Prescrire un sirop ou des comprimes de fer ?	Oui	Non
199. Suggérer un test VIH ?	Oui	Non
200. Suggérer une visite de suivi ?	Oui	Non
201. Quel est selon vous le conseil le MOINS souvent suivi par les accompagnateurs qui s'occupent des enfants	Oui	Non
202. A votre avis pourquoi ce conseil n'est pas suivi ? a._____ b.._____ c._____		

Remercie l'agent de santé pour son temps et ses efforts

Vérification de la fiche effectuée

Annex 7: CHW Training Matrix (includes other health personnel, including MOH)

Project Area: District	Type of community health worker	Official government CHW, grantee developed cadre or other	Paid or Volunteer	Number trained over the life of the project	Focus of Training
All nine districts	Auxiliary midwife (*matrone*) , nurse's aides, vaccinators	Official paid government position at CSCom	Paid	• 162 personnel trained in May 2007 • 81 personnel in Nara and Kolokani Districts trained in September 2007 • 406 personnel in remaining 7 districts in May-July 2008 • 317 personnel trained in 2009	• Nutrition and Essential Nutrition Actions (ENA) framework • Management of acute malnutrition • Management of acute malnutrition • Using Behavior Change Communications (BCC) techniques to promote the seven key nutrition actions together with appropriate hygiene practices
All nine districts	Rural radio broadcasters	Existing position with radio	Both paid and volunteer	Personnel from 29 rural radios trained in June 2007	Two-day training for radio agents in ENA
All nine districts	Volunteer community	Official government CHW	Volunteer	• 752 trained in 2007 in	• Community management of acute malnutrition (CMAM)

	health agents (*relais*)			Kolokani and Nara Districts • 3,675 trained by March 2009 in remaining 7 districts	• Social mobilization, community-based screening for malnutrition, ENA
All nine districts	Grandmother groups and leaders	Traditional society groups	Volunteer		ENA
All nine districts	Volunteer community health agents	Official government CHW	Volunteers	2,914	Refresher training on how to use MUAC tool
All nine districts	10 mothers' groups	Grantee developed volunteer groups	Volunteers	216 women by March 2009	Mothers trained in 10 villages to promote ENA and CMAM
All nine districts	Medical officers at CSComs and District Reference Centers	Official paid government position	Paid	• 57 trained in 2007 for Kolokani and Nara Districts • 322 trained in 2008 for remaining 7 districts • 227 trained in 2009 (all 9 districts)	• Management of acute malnutrition • Management of acute malnutrition • ENA

Includes training funded by CSHGP and other funding sources such as OFDA and UNICEF

Annex 8: Evaluation Team Members

A. Government of Mali (Ministry of Health and Ministry of Social Development and Economic Solidarity)

1. Issouphi Touré, Program Manager (*Chargé de Programme*)
   Regional Directorate of the Ministry of Social Development and Economic Solidarity (MSD), Koulikoro

2. Filifing Traoré, representing Regional Focus Person for Nutrition (*Point Focal*)
   National Health Directorate, Bamako

3. Dr. Ouologem Fatoumata Dougnon, Section Chief
   National Nutrition Division of the Ministry of Health (MOH), Bamako

4. Dr. Kouyaté Fatoumata Diarra, District Focus Person for Nutrition
   District Reference Health Center, Kati

5. Dr. Adama Soumaoro, District Focus Person for Nutrition
   District Reference Health Center, Ouelessebougou

6. Dr. Tiéfolo Diarra, District Focus Person for Nutrition
   District Reference Health Center, Dioïla

7. Dr. Yaya Diakité, District Focus Person for Nutrition
   District Reference Health Center, Kangaba

8. Dr. Hyacinthe Dakoua, District Focus Person for Nutrition
   District reference Health Center, Koulikoro

B. HKI

1. Kadiatou Sanogo, SAN+ Supervisor, Fana

2. Dr. Fama Kondo, SAN+ Supervisor, Koulikoro

3. Kalifa Soumaoro, SAN+ Supervisor, Kolokani

4. Fakoro Koné, SAN+ Supervisor, Banamba

5. Assanatou Traoré, SAN+ Supervisor, Ouelessebougou

6. Mamadou Keita, SAN+ Supervisor, Kati

7. Sylvie Diarra, SAN+ Supervisor, Dioïla

8. Amadou Fily Sissoko, SAN+ Supervisor, Nara
9. Moussa Koné, SAN+ Supervisor, Kangaba
10. Yacouba Diallo, Community Agent, Bamako
11. Ousmane Sogodogo, Community Agent, Bamako
12. Zoumana Berthé, Deputy Project Coordinator
13. Dr. Sangaré Anne Marie Dembele, Project Coordinator
14. Jennifer Nielsen, Senior Program Manager for Nutrition and Health, HKI/New York
15. Ibrahim Sangare, Driver
16. Amadou Coulibaly, Driver

C. Consultants

1. Kathleen Tilford, Evaluation Team Leader
2. Nancy Keith, BCC Consultant

Annex 9: Evaluation Assessment Methodology

The final evaluation of the SAN+ project was conducted in two phases. The **first phase** took place in April 2009 when INFO-STAT (Center for Statistics and Data Processing) carried out the final quantitative survey using basically the same indicators measured during the baseline survey. The objectives were to evaluate:

- the nutritional status of mothers and children 0-23 months
- the availability and access of health and nutrition services
- household behaviors concerning child health and nutrition
- the quality of services in the health facilities

This final quantitative survey consisted of two parts:

- a household survey of 300 mothers of children 0-23 months and 302 pregnant women
- a Health Facility Assessment (HFA) of 23 CSComs and three District Reference Centers

For the Health Facility Assessment the surveyors used two methods to gauge the quality of key services delivered to mothers and young children at health facilities. The first method was an examination of the health facility registers, which record actual services delivered as well as stocks of medicines on hand. The second method consisted of a series of interviews with 79 health care providers on how they carry out consultations: What physical exams do they conduct? What questions do they ask the mother? What advice do they provide? The 79 health care providers included 15 health aides, 25 nurses, 4 midwives, 10 doctors, and 25 auxiliary midwives.

For more information on the methodology and results of this phase of the final evaluation, see Annex 6: Final KPC Report and Health Facility Assessment.

The **second phase** of the final evaluation was a qualitative evaluation conducted in August 2009 by a 16-member team of HKI staff, MOH and MSD personnel, and an independent consultant. During a three-day planning meeting, the team developed individual questionnaires for six groups (See Annex 19 for the French version of the questionnaires):

- mothers of young children (180 interviews)
- health care providers at the CSCom level (45 interviews)
- representatives of the District Health Management Teams (17 interviews)
- women leaders (34 interviews)
- volunteer community health workers or *relais* (33 interviews)
- community radio staff (4 interviews)

The larger team was then divided into four smaller teams for the field work which consisted of individual interviews with respondents from each of the six groups. The field work was carried out over a period of three days in four of the nine districts in the Koulikoro Region: Dioïla, Fana, Kati, and Ouelessebougou. The three main criteria for the choice of districts were:

- Accessibility and distance from the capital given the time constraints and the fact that it was the rainy season

- Level of success in working with volunteer community health workers: working in a peri-urban district such as Kati posed challenges whereas Dioïla District had more success with volunteer community health workers.

- Participation in the midterm evaluation: The team decided to include two districts which had participated in the midterm evaluation (Dioïla and Kati) and two districts which had not (Fana and Ouelessebougou).

At the district capital each team interviewed one community radio manager and several members of the District Health Management Teams. The teams then went to communities with CSComs for the remaining interviews. The choice of CSComs was based on two factors: accessibility and availability of CSCom staff. (See Annex 10 for a list of the CSComs.)

Following the field work, the entire team met for three days to tally the results, discuss finding, draw conclusions, and prepare a debriefing for USAID/Mali and a presentation of preliminary results for the Government of Mali and other partners.

In addition to the field work, two members of the evaluation team carried out an extensive document review and conducted individual interviews with all SAN+ project staff, representatives of the Ministry of Health, and technical partners. The complete list of those interviewed is presented in Annex 10.

The following calendar summarizes the activities for the qualitative evaluation:

Date	**Day**	**Activity**
Saturday 8/15		Jennifer Nielsen, HKI/NY and Kathy Tilford, external consultant, arrive in Bamako
Sunday 8/16	Day 1	Free
Monday 8/17	Day 2	- Meeting with HKI/Mali: CD, SAN+ Coordinator and Deputy Coordinator to review schedule and plans - Begin Team Planning Meeting with entire team
Tuesday 8/18	Day 3	Team Planning Meeting
Wednesday 8/19	Day 4	Team Planning Meeting
Thursday 8/20	Day 5	Data collection in the field
Friday 8/21	Day 6	Data collection in the field
Saturday 8/22	Day 7	Data collection in the field
Sunday 8/23	Day 8	Free
Monday 8/24	Day 9	Data analysis (with Evaluation Team)

Tuesday 8/25	Day 10	Data analysis and preparation of debriefing (with Evaluation Team)
Wednesday 8/26	Day 11	Individual interviews with key informants and stakeholders
Thursday 8/27	Day 12	- Debriefing with USAID/Mali - Preparation of presentation for stakeholders' meeting - Individual interviews with key informants and stakeholders
Friday 8/28	Day 13	- Presentation to stakeholders in Koulikoro - Jennifer Nielsen and Kathy Tilford depart Bamako for U.S.

Annex 10: List of People Interviewed and Contacted

1. Individual Interviews with MOH and MSD Personnel and Partners

Mme. Fatimata Ouattara, Special Advisor for Nutrition and Child Health
USAID/ATN+ Project (National Technical Assistance Plus project)

Dr. Ouologem Fatoumata Dougnon, Nutrition Division
Ministry of Health

Dr. Yaya Diakité, Focus Person for Nutrition
Kangaba District Reference Center

Dr. Bakary Konaté, Chief of Health Planning
Koulikoro Regional Health Directorate

Dramane Yossi, Focus Person for Nutrition
Fana District Reference Health Center

Mme. Koné Bakoro, Focus Person for Nutrition
Koulikoro Regional Health Directorate

2. Individual Interviews With District and CSCom Teams

The final evaluation team interviewed MOH personnel at two levels:

- Representatives of the District Health Management Teams (DHMT) or *Equipes Cadres de District* in French: In most cases the representatives included the District Health Officer (*Médecin Chef de District)*, the head of the Ministry of Social Development (*Chef de Service du Développement Social et de l'Economie Solidaire*), and the Chief Midwife (*Sage Femme Maîtresse*)

- Representatives of the CSCom teams: This usually included the Chief Medical Officer (*Chef de Poste Médical*), auxiliary midwives (*matrones***),** vaccinators and nurse's aides.

The team also interviewed one community radio manager in each of the four districts.

A. Ouelessebougou District

1. District Health Management Team

    - District Health Officer: Dr. N'Tji Boubacar Diarra
    - District Head of the Ministry of Social Development
    - Chief Midwife

2. Tiélé CSCom

- Chief Medical Officer
- Vaccinator
- Auxiliary Midwife

3. Ouelessebougou Central CSCom

    - Chief Medical Officer
    - 2 Auxiliary Midwives

4. Digan CSCom

    - Chief Medical Officer
    - Auxiliary Midwife

5. Dialkoroba CSCom

    - Chief Medical Officer
    - Auxiliary Midwife

6. Beneko CSCom

    - Chief Medical Officer
    - Auxiliary Midwife

B. Fana District

1. District Health Management Team

    - District Health Officer: Dr. Mariam Sidibé
    - District Head of the Ministry of Social Development
    - Chief Midwife

2. Fana Central CSCom

    - Chief Medical Officer: Dr. Bamba Issa
    - Obstetrician: Dr. Kadiatou Sow
    - Nurse's Aide: Mrs. Assitane Daou

3. Marakakoungo CSCom

    - Chief Medical Officer: Dr. Oumar Diarra
    - Registered Nurse: Mrs. Diallo Kartoum Mangassoula
    - Auxiliary Midwife: Mrs. Diarra Habi Kansaye
    - Vaccinator: Amadou Diabaté

4. Tingolé CSCom

    - Chief Medical Officer: Dr. Moussa Touré
    - Vaccinator: Koungossery Kané
    - 2 Auxiliary Midwives: Mrs. Togola Konsa and Mrs. Diallo Awa Konaté

5. Nangola CSCom

    - Chief Medical Officer: Brahima Boly
    - Vaccinator: Mamadou Coulibaly
    - 2 Auxiliary Midwives: Mrs. Adama Diarra and Mrs. Adama Fall

6. Kéréla CSCom

    - Chief Medical Officer: Klazié Isaac Cissouma
    - Auxiliary Midwife: Mrs. Mariam Coulibaly

C. Kati District

1. District Health Management Team

    - District Health Officer: Dr. Diarra Tiefolo
    - District Head of the Ministry of Social Development
    - Chief Midwife

2. Kati Faraba CSCom: 2 interviews

3. Soninkegne CSCom: 2 interviews

4. Dioliba CSCom: 2 interviews

5. Kalifabougou CSCom: 2 interviews

D. Dioïla District

1. District Health Management Team

    - District Health Officer: Dr. Moussa Bagayoko
    - District Head of the Ministry of Social Development
    - Chief Midwife: Mrs. Arafa Touré

2. Wacoro CSCom

    - Chief Medical Officer: Bréhima Fomba
    - Auxiliary Midwife: Mrs. Brigitte Sainton

3. Banko CSCom

    - Chief Medical Officer: Dr. Modibo
    - Nurse-Obstetrician: Mrs. Guimbala Keita
    - Auxiliary Midwife: Mrs. Rokiatou Mariko

4. Massigui CSCom

    - Chief Medical Officer: Dr. Boubakar Diarra
    - Auxiliary Midwife

5. Niantjila CSCom

    - Chief Medical Officer: Moussa Traoré
    - Auxiliary Midwife

3. Individual Interviews with HKI Personnel and Consultant

Dr. Sangaré Anne Marie Dembelé
SAN+ Project Coordinator

Zoumana Berthé
SAN+ Deputy Coordinator

Mrs. Kadiatou Sonogo
SAN+ Supervisor for Fana District

Dr. Fama Kondo
SAN+ Supervisor for Koulikoro District

Kalifa Soumaoro
SAN+ Supervisor for Kolokani District

Fakoro Koné
SAN+ Supervisor for Banamba District

Mrs. Assantou Traoré
SAN+ Supervisor for Ouelessebougou District

Mamadou Keita
SAN+ Supervisor for Kati District

Mrs. Sylvie Diarra
SAN+ Supervisor for Dioïla District

Amadou Fily Sissoko

SAN+ Supervisor for Nara District

Moussa Koné
SAN+ Supervisor for Kangaba District

Nancy Keith, PhD.
BCC Consultant for HKI/Mali

4. Contacts

1. USAID/Mali Health Team (Debriefing)

   Robert de Wolfe
   Deputy Team Leader/Child Health Advisor

   Dr. Mariama Ciré Bah
   Senior Public Health Advisor

   Souleymane Sogoba
   Health Team

2. Marjon Tuinsma, HKI/Mali Country Director

3. Dr. Bakary Doumbia, Director of INFO-STAT

Annex 11: Special Report

Screening for acute childhood malnutrition during the National Nutrition Week in Mali increases treatment referrals

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[2]Helen Keller International, Regional Office for Africa, Dakar, Senegal
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[4]Cellule de Planification et Statistique en Santé, Bamako, Mali

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Abstract

Background: Acute childhood malnutrition remains a public health problem in Mali, where the national prevalence is estimated to be 15% and a national protocol has been developed for the Community Management of Acute Malnutrition (CMAM). Semi-annual Child Nutrition Weeks (Semaines d'Intensification des Activites de Nutrition, or "SIAN") provide an opportunity to screen a large number of children for acute malnutrition, by measuring their mid-upper arm circumference.
Objective: To evaluate the effects of integrating mass screening for acute malnutrition into the SIAN carried out in June, 2008.
Methods: A cross-sectional survey was conducted in two health districts in the Koulikoro region, using a population-proportionate, multi-stage random sample of 1) health centers and 2) households with children 6-59 months of age in villages linked to each of the selected health centers. Interviews were conducted with 1741 child caregivers, 17 community-based CMAM volunteers and 45 health center staff members.
Results: 1334 of the caregivers (77%) reported that their child participated in SIAN. Of children who participated in SIAN, 1307 (98%) received vitamin A, 1040 (78%) received anti-helminth tablets, and 669 (50%) were screened for acute malnutrition, of whom 186 (28%) were reportedly identified as acutely malnourished. SIAN screening covered a significantly greater proportion of children (39% of all children) than either village-based screening (21.6%) or health center-based screening (5% of all children) during the 4-5 months after the SIAN ($P<0.0001$).
Conclusion: The integration of screening for acute malnutrition in SIAN events provides an opportunity to assess and refer a large number of malnourished children, and should be continued.

Background

Mali is a West African country with a population of nearly 13 million inhabitants[1]. According to the Human Development Index, Mali ranks 168 out of 179 countries, and 77% of the population lives on less than US$2/day[2]. In 2004-2005, Mali experienced a severe food and nutrition crisis due to drought, which led to an increased number of acutely malnourished children. The government responded by preparing a National Protocol for the Management of Acute Malnutrition in collaboration with several partner agencies and implementing a national program for the community-based management of acute malnutrition (CMAM). The program guidelines include recommendations for periodic nutritional screening of pre-school children and referral of acutely malnourished children to the nearest health center or inpatient nutrition service, depending on the severity of malnutrition and the presence of clinical complications. To enhance the program's coverage, community volunteers have been trained in community-based screening and staff members of local health centers have been instructed to conduct active case-finding among all children who present to the health center for any reason [3].

The CMAM program was introduced in the Kolokani and Nara districts of the Koulikoro region of Mali in 2007. The objectives of the program were to provide the aforementioned community-based activities and to link preventive and curative services. Community volunteers were trained to provide nutritional education sessions, community-based screening for acute malnutrition, using mid-upper arm circumference (MUAC), and referral and follow-up of cases of acute malnutrition. Early experience with the program indicated that fewer than expected numbers of children were being referred for treatment, so new approaches to screening and referral were considered. In June 2008, the Ministry of Health and its partners decided to take advantage of the National Child Nutrition Week, known in French as the "Semaine d'Intensification des Activites de Nutrition" (SIAN), to conduct mass screening for acute malnutrition in Kolokani and Nara districts.

SIAN is a week-long campaign for vitamin A supplementation of children 6-59 months of age and early post-partum women and deworming of children 12-59 months. Since 2003, the campaign has exceeded its goal of 80% coverage, and other programs have begun capitalizing on this success to integrate additional health-related activities, such as deworming in 2006, and immunization and bednet distribution in December, 2007[4].

The objectives of the present study were to evaluate the outcomes of integrating mass screening for acute malnutrition during the SIAN and to determine the feasibility of further expansion during future Child Nutrition Weeks.

Methods

Study setting and population

The SIAN evaluation was conducted in randomly selected health centers and surrounding communities in the Kolokani and Nara health districts. The study population included caregivers of children 6-59 months, community volunteers and health center staff members. The survey was carried out from October 26 to November 14, 2008, approximately four to five months after the June, 2008 SIAN.

Sampling

The study was designed as a cross-sectional survey using a multi-stage, population-proportionate, random sample. The first stage of sampling was the random selection of health centers in both districts. The second stage involved the random selection of a village in the catchment area of each of the selected health centers. In total, 20 health centers and 20 villages were selected, 11 in Kolokani and 9 in Nara. In each of the selected villages, households were randomly selected using the SMART survey methodology[5], and those with children 6-59 months of age were invited to participate in caregiver interviews. A household was defined as "a group of people who eat from the same kitchen".

The sample size was calculated based on the assumptions that 15% of children 6-59 months would have been acutely malnourished at the time of the SIAN and 50% of them would have subsequently sought treatment at the health center. We chose a sample size that would permit detection of the hypothesized level of service utilization ± 10% with 95% confidence, assuming a design effect of 2 (because of the cluster sampling method) and a non-response rate of 10%. A sample size of 1423 caregivers was estimated to be sufficient.

Data collection

Separate questionnaires were administered to caregivers of children 6-59 months, community volunteers and health center staff members. In the selected households, all caregivers with children 6-59 months were interviewed. For each caregiver identified, only one child 6-59 months was randomly selected for inclusion in the study. The child's age was determined by examining a birth certificate or vaccination card, when available, or by using a local events calendar. The child's MUAC was measured, and the caregiver was asked a series of questions on household socio-economic status, participation in the SIAN, subsequent visits to the health center, and participation in any nutrition-related activities in the community and at the health center.

Community volunteers were interviewed if they were involved in nutrition activities in their communities and had received training on the national CMAM protocol. Because at least one

community volunteer per village was to have received training, the evaluation team planned to interview a total of 20 community volunteers, one randomly selected in each community.

In the selected health centers, the evaluation coordinator and one supervisor, both of whom were trained on the CMAM protocol and participated in the SIAN, reviewed the list of children who were identified as being malnourished during SIAN, other SIAN documents and the CMAM register to determine the proportion of these children who returned to the health center following SIAN screening and the outcome of treatment. The evaluation team also interviewed each member of the health center staff who had participated in the June 2008 SIAN, and was trained on the CMAM protocol. The team planned to interview three staff members per health center, for a total of 60 interviews.

Data collection, processing and analysis

Thirteen interviewers and three field supervisors were recruited and trained to implement the survey. The three-day training course consisted of a review of general data collection methods and the specific contents of the questionnaires, and supervised practice interviews. In addition, interviewers were trained on MUAC assessment techniques. All interviewers were standardized against a lead anthropometrist, who served as the reference to assess measurement accuracy and intra- and inter-observer measurement variability[7]. The six interviewers whose measurements were most accurate were selected as anthropometrists for the duration of the study.

SPSS version 10 was used to create the database and for data entry, and two data clerks independently entered data. Any inconsistencies identified during data entry were cross-checked with the original survey form. The data were analyzed using SAS 9.0 (SAS Institute, Cary, NC). Categorical variables, such as household socio-economic characteristics, participation in SIAN and services received, and reasons for not participating, were evaluated by examining frequency distributions. Continuous variables, such as age and MUAC measurements, were evaluated by frequency distributions, means and standard deviations. Following completion of the descriptive analyses, chi-square tests were used to assess relationships between different categorical variables, and the McNemar test was used to compare the proportions of children screened at the different potential screening sites. Finally, logistic regression models were developed to determine factors associated with participation in SIAN and with utilization of health services. For factors associated with participation in SIAN, only children who were old enough to participate in SIAN in June 2008 were considered. There were 1543 children 6-59 months who were eligible to participate in the June 2008 SIAN.

We assumed that the index child selected randomly from each household represented all of the caregivers' eligible children in terms of participation in SIAN and general health care-seeking behaviors. Therefore, weighting factors were applied to account for the caregivers' other eligible children who were not selected for the study. Analyses conducted with unadjusted and adjusted values did not differ, so the results are reported with unadjusted values.

Informed consent

The study protocol and questionnaires were reviewed and approved by the Ministry of Health Nutrition Division, the Regional Health Directorate of Koulikoro, the National Public Health Research Institute, and the Cellule de Planification et Statistique-Sante. At the household level, oral informed consent was obtained from the village chiefs, head of households and child caregivers before the caregivers were interviewed.

Results

Description of study populations

Interviews were conducted with 1741 caregivers, of whom 877 were from Kolokani and 864 from Nara. The caregivers' general characteristics are described in **Tables 1 and 2**. Almost all primary child caregivers were women (99.4%), most of whom were less than 30 years of age (62.9%), married (97.8%), uneducated (77.7%), and employed in either commerce (58.4%) or agriculture (31.5%). The children's ages and other characteristics are shown in **Table 3**.

Seventeen community volunteers were interviewed for the study. Most of the volunteers (88%) practiced agriculture as their main occupation (**Table 4**). Only 18% of the volunteers were exclusively involved in nutrition activities, while 35% were involved in nutrition and one other volunteer activity, and 47% were involved in two or more volunteer activities in addition to nutrition.

Forty-five health center staff members from 20 health centers were interviewed. Each health center covered an average of 13 villages and a population of nearly 11,000 inhabitants.

Participation in SIAN

According to the caregivers, 77% of all children in our sample participated in the SIAN. Of those who participated, 98% reportedly received vitamin A, 78% received anti-helminthic treatment and 50% were screened for acute malnutrition (**Figure 1**). Thus, 75% of all eligible children were supplemented with vitamin A, 60% received an anti-helminthic tablet, and 39% were screened for acute malnutrition. Participation in SIAN did not differ by district, nor did the percentage of children who received any of the specific services that were provided during the SIAN.

For those caregivers whose children did not participate in SIAN (N=409), the reasons given for non-participation were they were traveling (55%), not properly informed (21%), too late for the session (13%), too busy (9%) or sick (0.4%). Notably, the children who did not participate in SIAN were more likely to be malnourished at the time of the follow-up survey than those who did participate (OR=1.7; 95% CI = 1.2, 2.6; p=0.0071).

Considering only children who were eligible to participate in SIAN in June 2008 (N=1543), we assessed factors associated with participation in SIAN using logistic regression modeling (**Table 5**). Children whose caregivers were >20 years of age were more likely to participate compared to children of younger caregivers, as were children >12 months of age compared to younger ones. Children were also more likely to participate in SIAN if their caregivers had participated previously in nutrition education sessions in the community and if they resided in communities that included routine MUAC screening measurements.

Screening for acute malnutrition and utilization of treatment services

As indicated above, 669 children were screened for acute malnutrition during SIAN. Of those caregivers whose children were screened, 186 (27%) stated that their children were identified as being malnourished. Fifty-seven percent of the caregivers whose children were reportedly malnourished said that they subsequently visited the health center for further evaluation and treatment. Seventy eight (74%) of those who attended the health center stated that their children received treatment for malnutrition and 55 (71%) of those whose children were treated indicated that they completed treatment (**Figure 2**).

Caregivers were also asked whether their children were screened in the community for acute malnutrition at any time during the ~4 months since the June 2008 SIAN. Only 377 (22%) responded that their child was screened in the community during that period. Most of the community-based nutritional screening was completed by a community volunteer during routine examinations (80%), and only occasionally during a growth monitoring session (11%) or a community immunization visit by health center staff (9%). Of the 377 children screened in the village, 86 (23%) were reportedly identified as malnourished (**Figure 3**). Fifty-five of these children (54%) were subsequently taken to the health center for treatment, and 42 of the 55 (79%) reportedly finished treatment.

Thirty percent of caregivers reported that they attended the local health center with the index child during the ~4 months since the SIAN. Their reasons for attending the health center included child illness (68%), immunization (24%), volunteer referral for treatment for acute malnutrition (4%), growth monitoring (0.8%), and maternal pre-natal care (3%). Of the caregivers who attended the health center, only 16% reported that their child was screened for acute malnutrition. **Figure 4** summarizes activities related to screening and management of acute malnutrition at the health center.

Considering both the children's level of participation in the different screening opportunities (SIAN, village and health center contacts) and the frequency with which nutritional status screening actually took place at each of these potential screening opportunities, 39% of all children were screened during SIAN, compared to the 22% of all children who were screened in the village and 5% of all children who were screened at the health center during the ~4 months following SIAN. SIAN screening covered a significantly greater proportion of children than either of the other two methods during this time period ($P<0.0001$).

We examined the reasons for the relatively low coverage of the routine village-based and health center-based screening. According to caregivers, screening was conducted in all villages, but not all eligible children were being screened. Interviews with community volunteers revealed that they did not always conduct screening because they were either too busy or unaware that they were supposed to be performing this task. Interviews with health agents also indicated that not all health centers were conducting nutritional screening during community outreach actvities. The reasons given were that there were insufficient personnel, the staff members were not aware of this responsibility, or they lacked adequate financial support and/or transportation.

Only the subset of children who visited the health center during the ~4 months after SIAN had the possibility of being screened at the health center during this period. Factors that favored health center visits were having access to a motorcycle for transportation, having younger age, and prior participation in nutritional education sessions at the health center (**Table 6**). Even when the children did visit the health center, their nutritional status was not always assessed. The majority of the health agents (89%) reported that they screened children just once a week. The remainder stated that they conducted screening twice weekly (2%), every two weeks (2%), or once a month (7%).

Treatment for acute malnutrition

The caregivers of nearly all children who were taken to the health center because of a referral following nutritional screening stated that the children received treatment. The majority of the children who were treated (~90%) received Corn Soy Blend, vegetable oil and sugar. Most children (70%) reportedly completed treatment for acute malnutrition, regardless of where they were originally diagnosed.

Malnourished children at the time of the survey

A total of 1740 children were assessed at the time of the survey using MUAC. The prevalence of acute malnutrition, defined as MUAC <120 mm, was 6.3%. The prevalence of acute malnutrition was significantly higher among girls (8.3%) than boys (4.5%) and among children, 6-11 months (11%) compared to older children (5.4%), as shown in **Table 7**. Of the children who were identified as acutely malnourished during the survey, 29 (27%) had ever participated in nutritional screening in the village since the previous SIAN. Forty six of the malnourished children (43%) had ever attended the health center during the previous ~4 months; and, of those, 14 (18%) had been screened for acute malnutrition at the center.

Health agents' preparation for nutritional screening during SIAN

The 18 health center directors who were interviewed were asked about the preparation they received for integrating nutritional status screening during SIAN. Fourteen of 18 felt that they were sufficiently prepared to carry out the activity, including 13 of the 14 (93%) who had received training at the district hospital. Of those who did not feel prepared for this activity, two said that they were understaffed, one did not have adequate transportation, and the fourth declined to answer.

Acceptability of nutritional screening during SIAN

To assess the feasibility and acceptability of introducing nutritional screening in SIAN, we asked caregivers, community volunteers and health center staff members to describe their overall impressions of the experience. The vast majority of caregivers who participated in SIAN (98%) found the integration of nutritional screening in SIAN to be beneficial. Health agents also felt that integration of screening during SIAN provided an excellent opportunity for them to screen more children (87%), supervise the community volunteers (4%), or both (4%). Some also mentioned that this allowed them to promote CMAM-related health services (5%). Fourteen of the 17 volunteers who were interviewed found the activity beneficial because it allowed them to screen many children, but one found the inclusion of screening during SIAN to be overly burdensome.

Discussion

The study results show that inclusion of MUAC measurements to detect for acute childhood malnutrition in the portfolio of SIAN activities yielded higher nutritional screening coverage than the routine screening activities carried out in the communities or at the health center during the subsequent ~4 months. The relatively high rate of screening during the SIAN can be attributed to the fact that the SIAN itself is a successful campaign with high coverage[4], which led to a correspondingly greater coverage of screening for acute malnutrition. Additionally, contact with caregivers during the SIAN provided health workers with an opportunity to inform them about appropriate nutrition practices and available nutritional services, which may have contributed to the subsequent high rate of utilization of health center treatment services for those children identified as acutely malnourished.

There are several advantages of this type of integrated health service delivery. A systematic review by Wallace et al, revealed that service integration increases uptake when an intervention with low coverage is linked with one that has high coverage[8], which seems to be the case with the current study. Reviews of the Malian SIAN program from 2003 through 2008[4, 9], indicated vitamin A coverage rates were ~90% or greater, according to service provider tally sheets. In contrast, several reports of the CMAM program suggest that screening coverage is relatively low in the Koulikoro region, where Kolokani and Nara health districts are located. With a total population of 404,299 children 6-59 months of age[10] in the Koulikoro region (~20% of whom reside in Kolokani

and Nara), and a 16% prevalence of acute malnutrition, we would expect a prevalence of ~64,688 acutely malnourished children in this region. However, the most recent quarterly report indicated that only 17,766 children in the Koulikoro region (27.5% of the estimated prevalence of acute malnutrition) had been treated[11], suggesting that either screening is not taking place regularly or that caregivers of children identified as malnourished are not utilizing the available health services. The current results do indeed indicate that routine screening coverage was only ~30% during the preceeding ~4 months, although the majority of caregivers whose children were identified as malnourished used the services that were provided.

The rapid uptake of nutritional screening during the SIAN also may have been due to the similarities between the two interventions (vitamin A supplement distribution and screening for acute malnutrition), both of which seek to improve the nutritional status of preschool children. This compatibility maximizes efficient use of human resources, thereby reducing costs[7]. For example, training on MUAC screening and related data management were incorporated in the health agents' SIAN training; and data collection tools were modified only slightly to incorporate the screening component, thus simplifying the health agents' comprehension. The service integration also may have prompted greater community participation than would have otherwise occurred because more of the communities' needs were being met. In other settings, for example, when vitamin A supplementation was integrated into community-directed treatment of parasitic diseases, program participation increased when both services were provided [12].

Child caregivers who did not take part in the SIAN missed this event because they were transiently absent from their own communities or were either insufficiently informed or poorly motivated to participate. As has been seen in other settings, non-participants in the SIAN were more likely to be malnourished at the time of the follow-up survey. Similar results were found, for example, in rural Indonesia[13] where children who did not receive vitamin A capsules during the vitamin A distribution campaign were more likely to be malnourished.

Possible strategies for increasing participation in the SIAN include strengthening social mobilization efforts and scheduling post-campaign follow up activities. A previous study in Mali found that vitamin A supplementation coverage during the SIAN was increased by using traditional communication channels[14], so these types of communication channels should be incorporated more consistently into the SIAN social mobilization plan. In the current study, prior participation in nutritional education activities was associated with greater participation in the SIAN. Although it is plausible that the educational sessions are causally related to subsequent service utilization, it is also conceivable that caregivers who participated in educational programs were those who would have been more likely to exploit nutritional screening services anyway. The current study design does not permit us to distinguish between these two possibilities. Possible approaches to strengthen the follow up activities after the SIAN include active surveillance in the community to identify those children missed by the SIAN and referral to the health center staff for subsequent service delivery and nutritional evaluation. However, this would require additional training, supervision, and motivation of the community volunteers and related logistical support for the health center staff who would supervise these efforts.

The study results showed that routine screening in both the communities and health centers remained low, possibly due to understaffing at the health center, poor personnel management or insufficient motivation of health agents and volunteers to conduct this activity. Indeed, many of the health centers visited during the study did not have the minimum number of staff members (health center directors, nurse aide and matron) specified by the Ministry of Health guidelines. Even where

the staffing was complete, many of those who had been trained in the CMAM protocol were not involved in nutritional screening or case management of malnourished children. Moreover, nutritional screening was conducted only sporadically at the health centers; and, according to caregivers, not all children were being screened. This failure to screen all children examined at the health center represents a missed opportunity for the CMAM program, because it is likely that a disproportionate number of malnourished children are taken to the centers for treatment of associated illnesses. Indeed, nearly half the children who were found to be acutely malnourished at the time of the present survey had attended the health center during the previous four months, but less than one-fourth of them were reportedly assessed for malnutrition at the center.

In the communities, some volunteers did not complete nutritional screening because they reported being too busy. In addition to conducting CMAM activities, 82% of the volunteers were involved in other health and non-health related activities, and all of them had other primary income-generating responsibilities. Thus, it might be necessary to provide incentives to ensure that these individuals are able to dedicate sufficient time to these tasks. Also, some volunteers reported that health center staff members had not instructed them to carry out this task. The health center agents also reported that they had insufficient resources to supervise the volunteers adequately.

Approximately half of the children identified as malnourished at the time of the survey had not been screened or treated for acute malnutrition in the village or at the health center during the period following the SIAN. This further highlights the need to strengthen nutritional screening in the village and at the health center to avert the risk of malnutrition. Interestingly, caregivers reports suggested considerably higher rates of acute malnutrition detected by the nutritional screening than the 6.3% prevalence that was found at the time of the survey. This may have been due to inaccurate measurements by the community volunteers and health workers during the different screening events, intentional over-diagnosis of acute malnutrition to exploit available supplementary food supplies, or seasonal differences in nutritional status. Alternatively, the survey anthropometrists may have under-reported acute malnutrition, although this seems unlikely because the survey team had been carefully trained and standardized on MUAC measurements before initiating the field work. With regard to the issue of possible seasonality of acute malnutrition prevalence, the months of June through September during which caregivers' children would have been screened for acute malnutrition represent the hungry season, whereas the month of October (during which the survey was conducted) is the beginning of the post-harvest season. Thus, this may explain some of the difference in the reported prevalence and that which was measured.

Limitations of study

There are several limitations of the present study, which should be recognized. First, the survey was conducted ~4 months after the SIAN, which may have introduced some recall bias in caregivers' responses. Vitamin A supplementation has been occurring in Mali since 1998, and caregivers are generally well aware of this activity. At the time of the survey, the caregivers were shown examples of the vitamin A capsules that were distributed during the SIAN to prompt their memory. The reported vitamin A coverage rates are consistent with the results of several national reports[4, 9].

MUAC measurements were also completed during the survey, so this should have assisted caregiver recall concerning MUAC screening during the SIAN. However, it is conceivable that caregivers may not have reported the occurrence of nutritional status screening during the SIAN correctly. This possibility of recall error may be even greater with regard to nutritional status screening at the health center, because health center screening may be based on either MUAC or

weight-for-height assessments, and the caregivers may not have realized that weight-for-height assessments at the health center represented another form of nutritional screening. If this were the case, that might explain some of the apparently low rates of reported screening in the health center. On the other hand, the health staff members themselves also reported that nutritional screening was completed fairly infrequently, so the caregiver reports may, in fact, be correct.

Another limitation of the study is the fact that not all children who participated in the survey would have been eligible to participate in the SIAN. In particular, children who became six months of age after the SIAN would not have been scheduled to be included in the SIAN activities. This may partially explain some of the apparent lower participation of younger children in the SIAN that was reported in the survey. However, logistic modeling considering only children who were six months of age or older at the time of the June 2008 SIAN showed that younger children 6-11 months were less likely to participate in SIAN than older ones.

Conclusions

The integration of nutritional status screening during semi-annual child health weeks (SIAN) provides an opportunity for identifying children with acute malnutrition and referring them for appropriate treatment. The present results suggest that mass screening during the SIAN should be continued and expanded to other areas where the CMAM program is being implemented. The study showed that routine screening coverage in the communities and health centers remains inadequate, so these activities should be strengthened, as discussed above. Attempts should be made to identify other individuals who can assist community volunteers in routine screening or to increase the level of financial incentives and/or technical support provided to the volunteers. Other individuals who might be able to support or advocate for nutritional screening include school teachers, agricultural extension workers, and leaders of local women's groups. Finally, all children who attend the local health centers for any purpose should be assessed for acute malnutrition. In health centers with inadequate numbers of staff members, efforts should be made to reinforce the staff by recruiting additional personnel, such as recent nursing schools graduates or health technicians, to provide the human resources necessary to carry out these activities.

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Figures

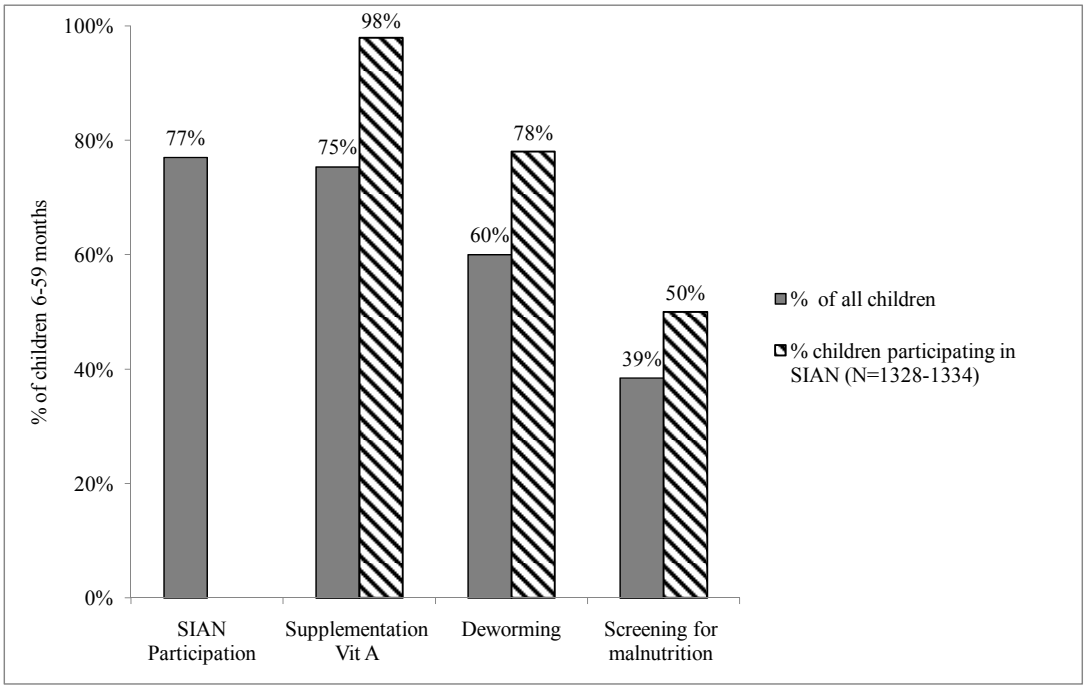

Figure 1. Percent of children 6-59 months who participated in SIAN in June 2008 (N=1741)

Figure 2. Outcome of screening during SIAN

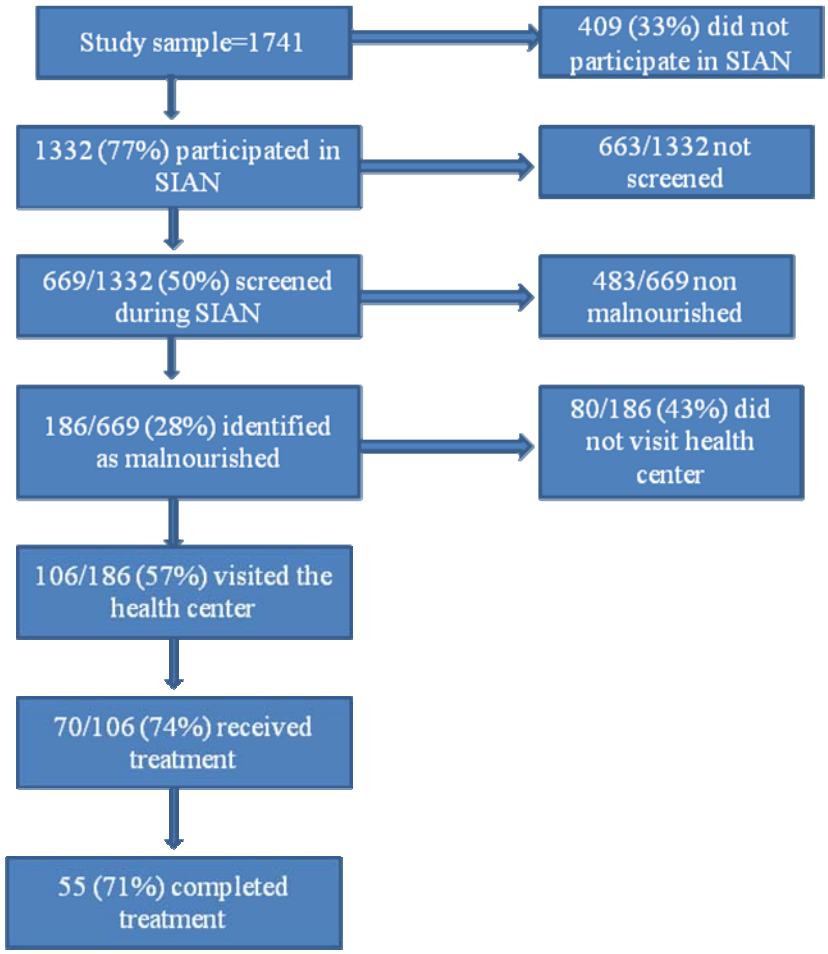

Figure 3. Village screening

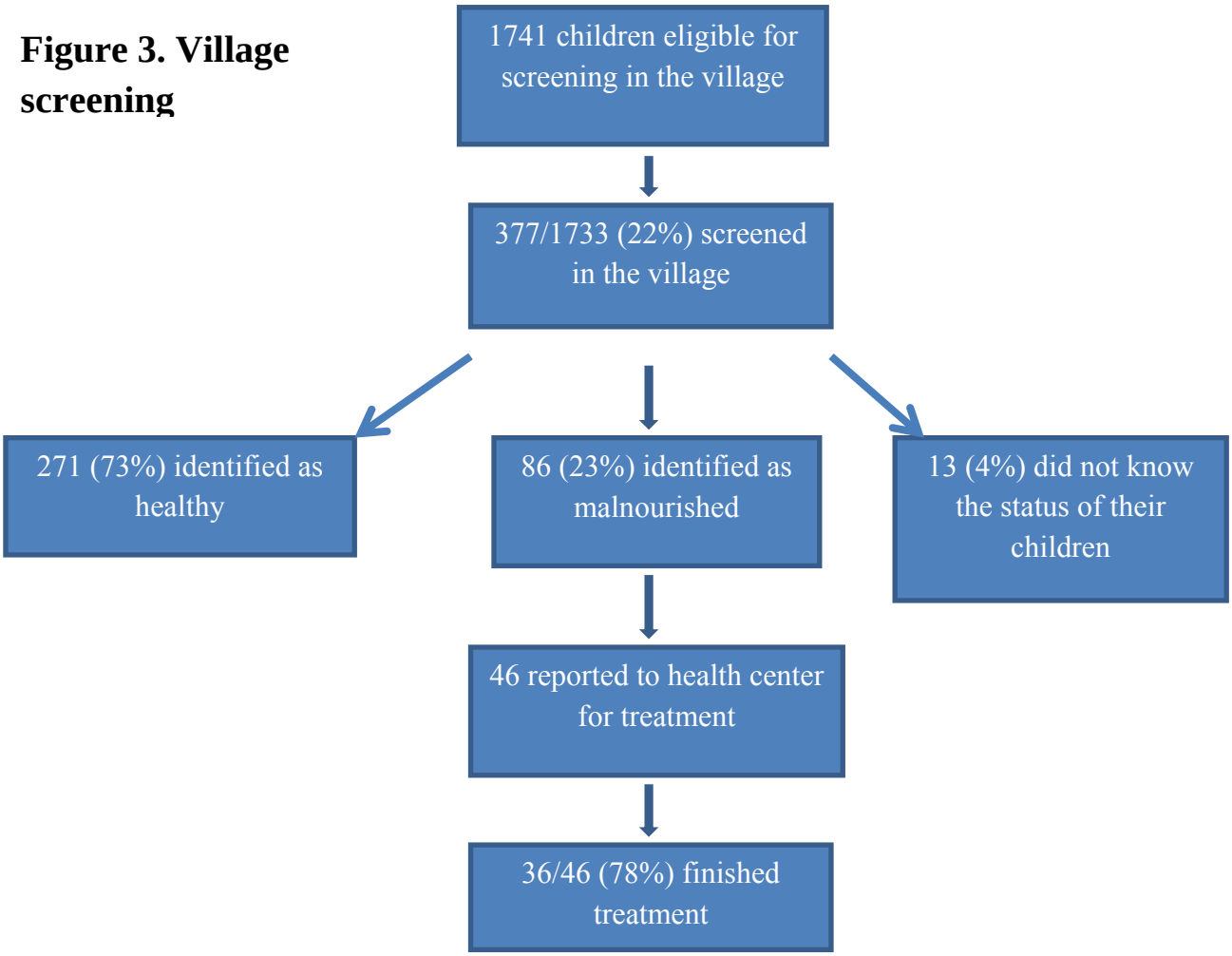

Figure 4. Screening for acute malnutrition at the health center

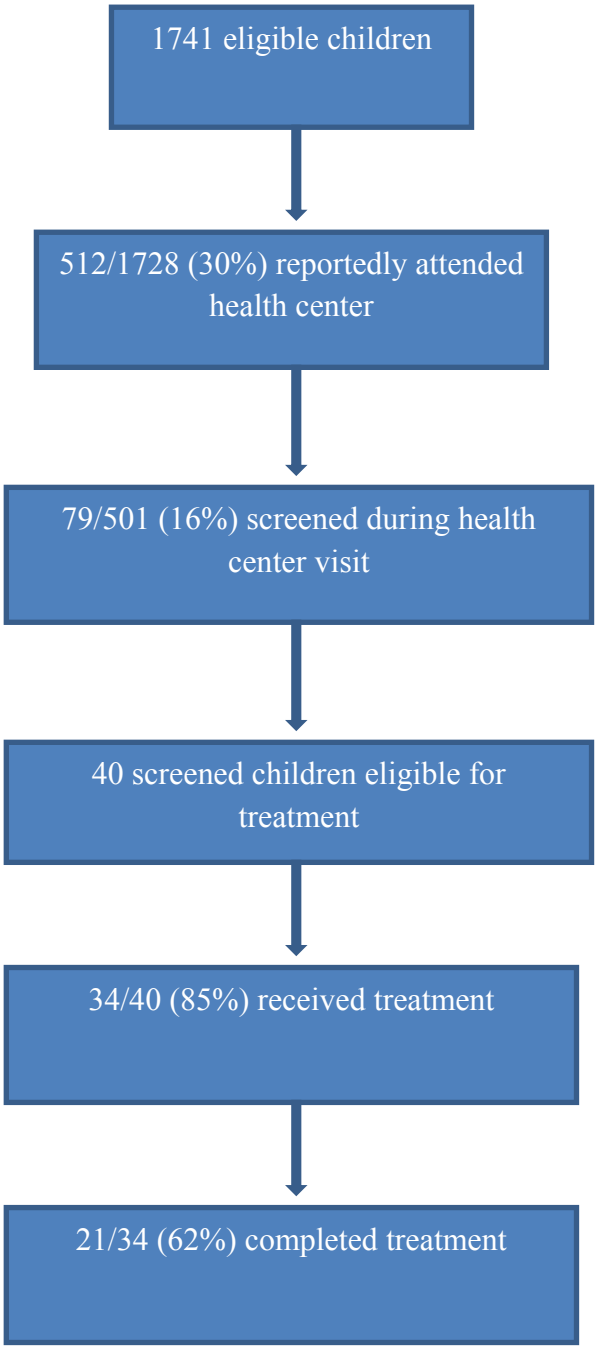

Table 1. Characteristics of caregivers of children 6-59 months who participated in the evaluation survey (N=1741)

Variables	Subcategories	N (%)
Age (years)	< 20	203 (11.7)
	20 < 30	892 (51.2)
	30 < 40	462 (26.5)
	≥ 40	184 (10.5)
Sex	Female	1731 (99.6)
	Male	10 (0.6)
Number of births	< 4	748 (42.9)
	4 -6	623 (35.8)
	7 -10	329 (18.9)
	≥ 11	41 (2.4)
Number of living children	< 4	966 (55.5)
	4 -6	622 (35.7)
	7 -10	152 (8.7)
	≥ 11	1 (0.1)
Number of children 6-59 months	1	1175 (67.5)
	2	521 (29.9)
	3 +	45 (2.6)
Marital status	Married	1704 (97.8)
	Widow	26 (1.5)
	Single	5 (0.3)
	Separated	6 (0.4)
Education	No education	1353 (77.7)
	Some schooling (primary and/or literacy training)	236 (13.6)
	Koranic school	126 (7.2)
	Some secondary school or higher	26 (1.4)
Occupation	Commerce	1018 (58.4)
	Agriculture	549 (31.5)
	Fishing	79 (4.5)
	Crafts	46 (2.6)
	None	35 (2.0)
	Teaching	11 (0.6)
	Herding	3 (0.2)

Table 2. Characteristics of households of the index children

Variables	Subcategories	N (%)
Primary water source	Open wells	1151 (66.1)
	Pump water	224 (12.9)
	Faucet water	198 (11.4)
	Closed wells	167 (9.6)
	Stagnant water	1 (0.1)
Primary form of transport	Carriage (donkey or horse)	719 (50.2)
	Walking	605 (34.8)
	Motorcycle	189 (10.9)
	Bicycle	50 (2.9)
	Public transport	21 (1.2)
	Private vehicle	2 (0.1)
Primary source of health information	Radio	437 (25.1)
	Community volunteers	409 (23.5)
	Health agents	385 (22.1)
	Village chiefs	206 (11.8)
	Family members	144 (8.3)
	No one	81 (4.7)
	Women's groups	39 (2.2)
	Television	23 (1.3)
	Friends	17 (0.9)
Electricity	None	1714 (98.4)

Table 3. Description of the study children 6-59 months

Variables	Male	Female	Total
N (%)	919 (52.8)	822 (47.2)	1741
Age (months)	-	-	-
6-11 months	143 (8.2)	129 (7.4)	272 (15.6)
12-23 months	246 (14.1)	213 (12.2)	459 (26.3)
24-35 months	213 (12.2)	209 (12.0)	422 (24.2)
36-59 months	317 (18.2)	271 (15.6)	588 (33.7)
Mid-upper arm circumference (MUAC) (N=1740)			
MAM (MUAC ≥110 and <120 mm)*	30 (3.3)	51 (6.2)	81 (4.7)
SAM (MUAC <110 mm)*	11 (1.2)	17 (2.1)	28 (1.6)
All acute malnourished (MUAC <12)	41 (4.5)	68 (8.3)	109 (6.3)

* MAM=moderate acute malnutrition, SAM=Severe acute malnutrition

Table 4. Description of community volunteers participating in the study (N=17)

Variables	Subcategories	N (%)
Sex		
	Male	15 (88)
	Female	2 (12)
Education		
	Some schooling	10 (59)
	Completed primary school	1 (6)
	Incomplete secondary school	4 (23)
	Koranic school	2 (12)
Primary occupation		
	Agriculture	15 (88)
	Crafts	1 (6)
	Street vendor	1 (6)
Other, non-health related, volunteer activities		
	None	3 (18)
	One activity	8 (47)
	Two or more activities	6 (35)
Other health-related volunteer activities		
	Nutrition only	3 (18)
	Nutrition + 1 activity	6 (35)
	Nutrition + 2 or more activities	8 (47)

Table 5. Factors associated with participation in SIAN

Variable	OR	95%CI	P-Value
*Caregiver age group**			
20 to <30 years old	1.5	1.02; 2.4	0.039
30 to <40 years old	1.6	1.04; 2.7	0.032
Child age group†			
12-23 months	1.3	0.90; 1.95	>0.05
24-35 months	2.0	1.31; 3.08	0.0014
36-59 months	10.8	7.9; 14.7	0.0011
Village-based screening	0.378	0.249;0.574	<0.0001
Participation in BCC sessions			
In the village	0.614	0.411; 0.919	0.017

Reference: *<20 years old; †6-11 months; child age group is the age at the time of the SIAN

Table 6. Factors associated with health center utilization

Variable	OR	95% CI	P-Value
*Mode of transportation**			
Motor cycle	1.52	1.12; 2.06	0.0425
Child's Age Group‡			
12-23 months	1.10	0.806; 1.51	0.538
24-35 months	0.596	0.426; 0.832	0.0024
36-59 months	0.473	0.343 ; 0.651	<0.0001
Participation in BCC sessions	0.458	0.310; 0.677	0.0001

Reference: *walking, ‡6-11 months

Table 7. Risk factors for acute malnutrition			
Variables	**Odds Ratio**	**95% CI**	**P-Value**
*Sex**			
Female	1.9	(1.3; 2.9)	0.0010
*Age group***			
12-23 months	1.09	(0.67; 1.7)	0.71
24-35 months	0.440	(0.245; 0.789)	0.0058
36-59 months	0.086	(0.035; 0.211)	<0.0001

Reference categories: *Male, ** 6-11 months

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Child Survival and Health Grants Program Project Summary

Dec-22-2009

Helen Keller International (Mali)

General Project Information

Cooperative Agreement Number:	GHS-A-00-05-00013
HKI Headquarters Technical Backstop:	Jennifer Nielsen
HKI Headquarters Technical Backstop Backup:	
Field Program Manager:	Anne Marie Dembele
Midterm Evaluator:	Marguerite Joseph
Final Evaluator:	Kathleen Tilford
Headquarter Financial Contact:	Jennifer Nielsen
Project Dates:	9/30/2005 - 9/30/2009 (FY05)
Project Type:	Standard
USAID Mission Contact:	Bob de Wolfe
Project Web Site:	

Field Program Manager

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Grant Funding Information

USAID Funding: $1,497,877

PVO Match: $501,195

General Project Description

The Child Survival 21 Project: Synergy and Action for Nutrition+ (SAN+), intervenes in the Koulikoro Region of the densely populated South Western part of Mali. According to a 2004 WorldBank analysis, public health expenses per capita for Koulikoro region are the third lowest of the 8 Regions in Mali. The Region of Koulikoro has health and nutrition indicators that are not significantly better than the national average. Recent analyses show that 51% of child deaths in Mali are attributable to malnutrition, making malnutrition the single greatest risk of child mortality in Mali. According to the M/DHS-2001, 88% of children 6-59 months old are anemic (92% in Koulikoro Region) with iron deficiency as the lead cause. The 3 primary causes of infant and young-children under nutrition in Mali are: a) poor maternal health and nutritional status and consequent intra-uterine growth retardation; b) sub- optimal breastfeeding and complementary feeding practices; and c) poor nutritional management of childhood illness. The goal of the SAN+ project is to improve the nutritional status, morbidity, and mortality of children 0-23 months and pregnant and breastfeeding women in Koulikoro Region by increasing the access and use of curative and preventive Nutrition+ interventions in community health centers (CSComs); improving the quality of key Nutrition+ actions delivered by sub-national health staff to households; improving household knowledge and behaviours related to Nutrition+ and enhancing the capacity of partners to plan, implement, monitor and sustain project interventions. SAN+ project wants to ‘’inject’’ the Koulikoro health staff and local elected officials with a commitment to and knowledge of nutrition. The strategies of the SAN+ project will be 4 cross-cutting implementation strategies: 1) joint design, implementation, and evaluation of approaches to deliver a minimum package of essential nutrition services consistent with MOH/SD standards and protocols; 2) capacity-building and training to improve access, availability, and quality of facility-based services; 3) community mobilization to improve demand for, and use of, key health services; and 4) tailored BCC and advocacy to improve key household behaviours and care-seeking practices and commitment of local decision makers. The project will perform further qualitative assessments of cultural practices and will try to raise funds to do further operational research. The project (as its name mentions) will seize opportunities for synergy with partners working in the region: UNICEF, WFP, USAID/Kénéya Ciwara project. At the regional level, HKI will be a member of the regional Child Survival Committee which will meet every trimester to discuss progress and obstacles for Child Survival. The SAN+ project will also benefit from HKI Mali synergies, since HKI Mali received funding for a nutrition project (2 sites) funded by the McKnight foundation, the MI/Sahel project for Vitamin A supplementation, the GAIN funded fortification project and the USAID funded Communication for Development project. The 4 year project began in October 2004 with the selection of the SAN+ team and sensitization of partners. The implementation of the program interventions has been planned to take off in the last quarter of 2006 and the program has been scheduled to end in September 2009.

Project Location

Latitude: 12.87	**Longitude:** -7.56
Project Location Types:	(None Selected)
Levels of Intervention:	(None Selected)
Province(s):	--
District(s):	SAN+ is located in Koulikoro, Mali, West Africa. Koulikoro is one of the eight regions of Mali, situated in the south western part of the country. The main cities of the region are Koulikoro, Banamba, Dioila, Kati, Kolokani, Kangaba, Nara, Ouelessebougou and Fana. They are all linked to Bamako by tarred and laterite roads. Koulikoro region has 7 administrative "circles" and 9 health districts with 116 currently functional Community Health Centers.
Sub-District(s):	--

Operations Research Information

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

Partners

UNICEF (Collaborating Partner)	$0
WFP (Collaborating Partner)	$0
National Health Directorate (Collaborating Partner)	$0
9 Health Districts (Collaborating Partner)	$0
150 Community Health Centers (Collaborating Partner)	$0

Strategies

Social and Behavioral Change Strategies:	Group interventions Interpersonal Communication Mass media and small media
Health Services Access Strategies:	Implementation with a sub-population that the government has identified as poor and underserved Implementation in a geographic area that the government has identified as poor and underserved
Health Systems Strengthening:	Supportive Supervision Developing/Helping to develop clinical protocols, procedures, case management guidelines Developing/Helping to develop job aids Monitoring health facility worker adherence with evidence-based guidelines Providing feedback on health worker performance Community role in recruitment of CHWs Development of clinical record forms Review of clinical records (for quality assessment/feedback) Coordinating existing HMIS with community level data
Strategies for Enabling Environment:	Create/Update national guidelines/protocols Advocacy for revisions to national guidelines/protocols Stakeholder engagement and policy dialogue (local/state or national) Advocacy for policy change or resource mobilization
Tools/Methodologies:	BEHAVE Framework Rapid Health Facility Assessment

Capacity Building

Local Partners:	Dist. Health System Health Facility Staff Other National Ministry Health CBOs Other CBOs Government sanctioned CHWs

Interventions & Components

Immunizations	IMCI Integration	CHW Training HF Training
Nutrition (70%) - ENA - Complementary Feeding from 6 months - Continuous BF up to 24 months - Growth Monitoring - Maternal Nutrition	IMCI Integration	CHW Training HF Training
Vitamin A	IMCI Integration	CHW Training HF Training
Micronutrients		CHW Training HF Training
Pneumonia Case Management	IMCI Integration	CHW Training HF Training
Control of Diarrheal Diseases (10%) - Hand Washing - ORS/Home Fluids - Feeding/Breastfeeding - Care Seeking - Case Management/Counseling - Zinc	IMCI Integration	CHW Training HF Training
Malaria (10%) - Antenatal Prevention Treatment - ITN (Bednets) - IPT - ACT	IMCI Integration	CHW Training HF Training
Maternal & Newborn Care	IMCI Integration	CHW Training HF Training
Healthy Timing/Spacing of Pregnancy	IMCI Integration	CHW Training HF Training
Breastfeeding (10%) - Promote Exclusive BF to 6 Months - Introduction or promotion of LAM - Support baby friendly hospital - Peer support	IMCI Integration	CHW Training HF Training
HIV/AIDS		CHW Training HF Training
Family Planning	IMCI Integration	CHW Training HF Training

Tuberculosis	IMCI Integration	CHW Training HF Training

Operational Plan Indicators

Number of People Trained in Maternal/Newborn Health			
Gender	**Year**	**Target**	**Actual**
Female	2009		0
Male	2009		0
Female	2010	0	
Male	2010	0	
Female	2011	0	
Male	2011	0	
Number of People Trained in Child Health & Nutrition			
Gender	**Year**	**Target**	**Actual**
Female	2009		0
Male	2009		0
Female	2010	0	
Male	2010	0	
Female	2011	0	
Male	2011	0	
Number of People Trained in Malaria Treatment or Prevention			
Gender	**Year**	**Target**	**Actual**
Female	2009		0
Male	2009		0
Female	2010	0	
Male	2010	0	
Female	2011	0	
Male	2011	0	

Locations & Sub-Areas

Total Population: 1,871,120

Target Beneficiaries

	Mali - HKI - FY05
Infants < 12 months	28,448
Children 0-59 months	56,541
Women 15-49 years	190,840
Beneficiaries Total	275,829

Rapid Catch Indicators: DIP Submission

Sample Type: 30 Cluster

Indicator	Numerator	Denominator	Percentage	Confidence Interval
Percentage of children age 0-23 months who are underweight (-2 SD from the median weight-for-age, according to the WHO/NCHS reference population)	**51**	**300**	**17.0%**	**6.3**
Percentage of children age 0-23 months who were born at least 24 months after the previous surviving child	**119**	**300**	**39.7%**	**9.0**
Percentage of children age 0-23 months whose births were attended by skilled health personnel	**48**	**300**	**16.0%**	**6.1**
Percentage of mothers of children age 0-23 months who received at least two tetanus toxoid injections before the birth of their youngest child	**235**	**300**	**78.3%**	**11.0**
Percentage of infants age 0-5 months who were exclusively breastfed in the last 24 hours	**27**	**134**	**20.1%**	**10.2**
Percentage of infants age 6-9 months receiving breastmilk and complementary foods	**64**	**66**	**97.0%**	**24.1**
Percentage of children age 12-23 months who are fully vaccinated (against the five vaccine-preventable diseases) before the first birthday	**35**	**90**	**38.9%**	**16.4**
Percentage of children age 12-23 months who received a measles vaccine	**118**	**180**	**65.6%**	**13.7**
Percentage of children age 0-23 months who slept under an insecticide-treated bednet the previous night (in malaria-risk areas only)	**144**	**300**	**48.0%**	**9.7**
Percentage of mothers who know at least two signs of childhood illness that indicate the need for treatment	**228**	**300**	**76.0%**	**11.0**
Percentage of sick children age 0-23 months who received increased fluids and continued feeding during an illness in the past two weeks	**7**	**214**	**3.3%**	**3.4**
Percentage of mothers of children age 0-23 months who cite at least two known ways of reducing the risk of HIV infection	**137**	**300**	**45.7%**	**9.5**
Percentage of mothers of children age 0-23 months who wash their hands with soap/ash before food preparation, before feeding children, after defecation, and after attending to a child who has defecated	**208**	**300**	**69.3%**	**10.8**

Rapid Catch Indicators: Mid-term

Sample Type: LQAS

Indicator	Numerator	Denominator	Percentage	Confidence Interval
Percentage of children age 0-23 months who are underweight (-2 SD from the median weight-for-age, according to the WHO/NCHS reference population)	**0**	**0**	**0.0%**	**0.0**
Percentage of children age 0-23 months who were born at least 24 months after the previous surviving child	**0**	**0**	**0.0%**	**0.0**
Percentage of children age 0-23 months whose births were attended by skilled health personnel	**0**	**0**	**0.0%**	**0.0**
Percentage of mothers of children age 0-23 months who received at least two tetanus toxoid injections before the birth of their youngest child	**0**	**0**	**0.0%**	**0.0**
Percentage of infants age 0-5 months who were exclusively breastfed in the last 24 hours	**0**	**0**	**0.0%**	**0.0**
Percentage of infants age 6-9 months receiving breastmilk and complementary foods	**0**	**0**	**0.0%**	**0.0**
Percentage of children age 12-23 months who are fully vaccinated (against the five vaccine-preventable diseases) before the first birthday	**0**	**0**	**0.0%**	**0.0**
Percentage of children age 12-23 months who received a measles vaccine	**0**	**0**	**0.0%**	**0.0**
Percentage of children age 0-23 months who slept under an insecticide-treated bednet the previous night (in malaria-risk areas only)	**0**	**0**	**0.0%**	**0.0**
Percentage of mothers who know at least two signs of childhood illness that indicate the need for treatment	**0**	**0**	**0.0%**	**0.0**
Percentage of sick children age 0-23 months who received increased fluids and continued feeding during an illness in the past two weeks	**0**	**0**	**0.0%**	**0.0**
Percentage of mothers of children age 0-23 months who cite at least two known ways of reducing the risk of HIV infection	**0**	**0**	**0.0%**	**0.0**
Percentage of mothers of children age 0-23 months who wash their hands with soap/ash before food preparation, before feeding children, after defecation, and after attending to a child who has defecated	**0**	**0**	**0.0%**	**0.0**

Rapid Catch Indicators: Final Evaluation

Sample Type: 30 Cluster

Indicator	Numerator	Denominator	Percentage	Confidence Interval
Percentage of children age 0-23 months who are underweight (-2 SD from the median weight-for-age, according to the WHO/NCHS reference population)	**39**	**297**	**13.1%**	**5.6**
Percentage of children age 0-23 months who were born at least 24 months after the previous surviving child	**228**	**300**	**76.0%**	**11.0**
Percentage of children age 0-23 months whose births were attended by skilled health personnel	**60**	**300**	**20.0%**	**6.8**
Percentage of mothers of children age 0-23 months who received at least two tetanus toxoid injections before the birth of their youngest child	**177**	**286**	**61.9%**	**10.7**
Percentage of infants age 0-5 months who were exclusively breastfed in the last 24 hours	**49**	**110**	**44.5%**	**15.6**
Percentage of infants age 6-9 months receiving breastmilk and complementary foods	**29**	**36**	**80.6%**	**32.0**
Percentage of children age 12-23 months who are fully vaccinated (against the five vaccine-preventable diseases) before the first birthday	**44**	**102**	**43.1%**	**16.0**
Percentage of children age 12-23 months who received a measles vaccine	**89**	**102**	**87.3%**	**19.2**
Percentage of children age 0-23 months who slept under an insecticide-treated bednet the previous night (in malaria-risk areas only)	**207**	**300**	**69.0%**	**10.8**
Percentage of mothers who know at least two signs of childhood illness that indicate the need for treatment	**147**	**300**	**49.0%**	**9.7**
Percentage of sick children age 0-23 months who received increased fluids and continued feeding during an illness in the past two weeks	**31**	**148**	**20.9%**	**9.9**
Percentage of mothers of children age 0-23 months who cite at least two known ways of reducing the risk of HIV infection	**135**	**300**	**45.0%**	**9.5**
Percentage of mothers of children age 0-23 months who wash their hands with soap/ash before food preparation, before feeding children, after defecation, and after attending to a child who has defecated	**12**	**300**	**4.0%**	**3.2**

Rapid Catch Indicator Comments

No quantitative survey was budgeted for mid-term.

Annex 13: HKI Plans to Address Final Evaluation Recommendations

- **Continue to work through the existing health structure rather than setting up parallel systems**.

HKI concurs with this observation of the appropriateness of this approach and gives the highest priority to building the capacity of government and community partners to implement child survival activities rather than implementing these directly. This means that activities sometimes move forward more slowly than we would like but that the long-term outcomes are stronger and more sustainable. Nevertheless, we have examined our approach and identified a number of areas for improvement we will be addressing, as outlined below.

We also recognize the need to continue to support the government's regular procurement channels in organizing the supply and distribution of appropriate forms of zinc for the treatment of acute diarrhea.

- **Put in place a management team with adequate human resources to carry out all the key management functions**.

HKI recognizes that the project coordinator and deputy were overburdened and that during much of the life of SAN+ the country office grew at a pace that exceeded management capacity. We believe we have addressed most of these issues, having recruited a Deputy Country Director, reduced the responsibilities of the SAN+ project staff who continue with HKI and hired additional staff to divide the workload, and also increasing the number of field supervisors to provide continued support to the health and community agents implementing the preventive and curative activities.

- **Include adequate resources for supervision of and support to both project field staff and health care providers implementing the project**.

HKI has a long-term commitment to strengthening the health system and community capacity for preventive and curative nutrition services in Koulikoro. A follow-on grant from UNICEF is focused on reinforcing the supervision system, in particular its formative nature. Standards and norms and other quality assurance techniques will be incorporated into training, supervision, and the monthly staff meetings to improve health worker awareness of, commitment to, and correct performance of nutrition protocols, including elimination of missed opportunities to screen children and to counsel mothers individually on improved nutrition practices. The project coordinator for this grant and HKI's new Deputy Country Director will work together with the HKI field supervisors and government counterparts to enhance their knowledge and skills. These new staff will model good supervision using the formative supervision grid being refined, demonstrating to project and government supervisors how to improve the commitment and performance of health and community agents during supervision by providing immediate and constructive feedback. Both formal service protocols and counseling and negotiating for behavior change around ENA practices will be observed and strengthened. In addition, monthly district staff meetings will discuss findings and challenges and brainstorm to identify solutions.

- **Design a BCC strategy which includes regular, structured follow-up support to people who want to change behaviors and practices**.

HKI agrees that community *relais* need more structure at the community level for their efforts to promote the ENA practices. Elsewhere it has been shown that working through existing organizations such as women's credit coops or NGOs at the community level greatly enhances the dependability and quality of the work of these volunteers. Women's groups of several sorts, including microcredit, exist in most communities, consisting of mothers who are naturally interested in the health of their children: "affinity groups" who know and trust each other. In the final months of SAN+ the staff initiated a pilot effort to test the effectiveness of working with and through such women's groups, training members to do both the promotion of preventive messages and the screening and referral of malnourished children. The performance of *relais* in these communities will be compared to communities working with more loosely affiliated volunteers, and if promising, the new approach will be scaled up under follow on grants.

In addition, regular monthly mass screening days will be established in every community and used also as a venue for awareness-raising and overcoming misperceptions of malnutrition (i.e., that it is due to the evil eye rather than under control of mothers and their feeding practices) and for promoting ENA messages with BCC techniques. These activities will also be closely and regularly supervised so that the *relais* master techniques for encouraging and supporting women in the adoption of improved nutrition-related practices.

A new position of Community Nutrition Support Agent has been created: field-level staff who are trained in CMAM, ENA, BCC and supervision, and assigned to work in each of the villages where community volunteers are active. These agents will help strengthen the link between communities and their CSCom, supervise and coach *relais* and women's group volunteers, and hold monthly meetings with them to improve BCC skills and support the community level work.

Moving forward we will also need to give special attention to hand washing behaviors (universally among the most challenging to change, especially where water is limited).

- **Where resources permit, include a CMAM component for nutrition interventions focusing on infants and young children**.

HKI's model for SAN+ (and the child survival project in Diffa) has been to strive to integrate prevention with treatment for acute malnutrition. We recognize this is a work in progress, and that a clearer specification is needed of how preventive actions should be incorporated at all levels and stages of the screening, referral and management of acute malnutrition and how those conducting preventive activities can more actively screen for, identify and refer or treat malnutrition.

Under the direction of the new staff, HKI will provide more specific guidelines to health agents on how to include the appropriate ENA messages in each of the six life cycle-driven contact points with health centers: pregnancy; delivery/early neonatal; postnatal and family

planning; immunization; well child and growth monitoring and promotion; and sick child and CMAM consultations. Likewise staff and government counterparts will support the community *relais* to understand when the appropriate maternal nutrition or infant and young child feeding advice should be delivered and the opportunity seized to inform, motivate and improve nutrition-related practices. Appropriate tools will be developed for both formal health agents and community volunteers to serve as reminders of the appropriate messages and diagnostic actions at each contact point. Training programs will continue to reiterate the synergies between the two approaches.

- **Where feasible, use a multi-media approach for disseminating IEC messages. Radio, for example, can be particularly effective in rural areas.**

We believe that our collaboration with local radios has been particularly effective in reinforcing the messages conveyed by interpersonal communication at the CSCom and community level. USAID supported a Communications for Development project that built capacity of local radio stations to develop health education programming and supported listening groups in which community members could discuss and assimilate the radio messages. This partnership continued in SAN+ and the capacity of radio stations to develop engaging programs in which key concepts are debated or conveyed through skits and stories continues to grow.

- **Include in the design strategies for motivating broad community participation**.

By this HKI understands the evaluator was addressing the need to raise community awareness that undernutrition is a problem and that feeding and health seeking behaviors can solve it. We agree that efforts must be continued to this end through more concerted and structured activities at the community level, more attention to role models who can provide positive examples of the impact of the new practices, and sustained support for a process of behavior change that is gradual and progressive.

- **Ensure the same multi-faceted approach that was successful in the SAN+ project design: targeting both WRA and children; using a variety of cross-cutting strategies; relying on synergy to complement project interventions; and using a BCC strategy which includes both interpersonal communication and mass media.**

As noted previously, we are very committed to this integrated approach and to working on refining and strengthening each component strategy

Annex 14: Leveraging Other Funds and In-Kind Contributions

Donor	Budget	Period	Title	General objective	Region of Mali
USAID/Office of Foreign Disaster Assistance (OFDA I)	$169,886	10/2006 – 9/2007	Capacity building for preventing and treating malnutrition in the Sahel (Burkina Faso, Mali, Niger)	To develop and institutionalize intervention models for treatment and prevention of malnutrition in the 3 Sahelian Countries	Health districts of Nara and Kolokani in the Koulikoro Region
OFDA II (cost extension)	$420,637	10/2007 – 9/2008	Capacity building for preventing and treating malnutrition in the Sahel (Burkina Faso, Mali, Niger)	To develop and institutionalize intervention models for treatment and prevention of malnutrition in the 3 Sahelian Countries	Health districts of Banamba, Koulikoro, Kangaba, Kati and Ouelessebougou in the Koulikoro Region
USAID	$1,052,305	1/2004-3/2008	Communications for Development	To strengthen local capacity to develop and disseminate health and nutrition messages via community radio	National
USAID through Abt Associates	$505,442	10/2003-9/2008	National Technical Assistance project (ATN) and follow-on ATN+	To strengthen nutrition services throughout the health system	National
The Richard and Rhoda Goldman Fund	$40,000	3/2007-3/2008	Community Therapeutic Care for Treatment of Malnutrition	To strengthen systems for preventing and treating malnutrition	Koulikoro Region

Donor	Budget	Period	Title	General objective	Region of Mali
Monsanto Foundation	$399,485	6/14/2007-6/13/2010	Community Therapeutic Care for Treatment of Malnutrition	To develop and institutionalize intervention models for treatment and prevention of malnutrition	Kolokani and Nara Districts in the Koulikoro Region
Micronutrient Initiative	$347,380	3/2005-5/2008	National Vitamin A Supplementation for Child Survival	To support vitamin A supplementation nation-wide	National
UNICEF	In kind therapeutic foods and supplies: F100 (169 cartons); F75 (46 cartons); Plumpy-nut (138 cartons); growth monitoring materials kits (33) and a grant supporting CMAM work in Koulikoro for $260,585 for the period from 7/1/08 to 12/31/09. Note: UNICEF has provided additional in-kind contributions for the program directly to the Government of Mali.				
WFP	In kind food: CSB (178.4 tons); cooking oil (17.85 tons) Note: The World food Program has provided additional in-kind contributions for the program directly to the Government of Mali.				

Annex 15: Partners Supporting SAN+ Results

Partner	Dates	Coverage	Intervention	Strategy/Results
USAID-HKI	10/05-9/09	Koulikoro	CMAM protocol development, capacity development, and service delivery through existing structures	Training of all health staff of Koulikoro Region and selected community groups in community based growth monitoring, screening and treatment for acute malnutrition
USAID ComDev	3/05-3/08	Koulikoro	Radio Communications	Capacity development of rural radios and organization of listening clubs; campaigns to promote nutrition and hygiene messages
UNICEF-SASDE			Accelerated Strategy for Child Survival and Development (SASDE)	Three components: (a) integrated and sustained care at the community level (EPI, insecticide-treated mosquito nets, vitamin A "plus", "prenatal plus" consultations, and malnutrition and AIDS prevention); (b) treatment for malnutrition, emergency obstetric and neonatal care, as well as HIV/AIDS care; and (c) water, hygiene and sanitation
ATN and ATN+ (Abt/USAID)	2003-present	National with targeted support to regional and district levels	Policy development, expanded access, QA, BCC and partnerships in technical areas of VAS, EPI, malaria, control of diarrheal disease and family planning, and essential newborn care	Supported validation and adaptation of ENA/BCC framework for Mali
Keneya Ciwara (CARE, JHU-CCP/USAID)	2003-8	11 districts throughout Mali (2-3 in Koulikoro)	Improve services and behaviors around immunization, malaria, control of diarrheal diseases, nutrition and vitamin A supplementation, and family planning and reproductive health	In target areas: -- doubled the proportion of children 6-69 months receiving Vitamin A, from 31% in 2004 to 61% in 2006 --more than doubled the percentage of children under age 5 who sleep under ITNs, from 9.7% in 2005 to 23.5% in 2006 --Increased demand for antenatal services tenfold during ITN campaign --developed quality improvement tools for use at CSComs
USAID/GAIN/ MI Oil Fortification-HKI	6/05-6/08	National	Develop: region-wide norms for vitamin A fortification of cooking oil (locally produced and imported); public-sector social marketing; and capacity of private - public sector partners to sustain vitamin A fortification of cooking oil.	--National policy with requirements and standards promulgated --National fortification alliance established --Fortification and branding launched --Social marketing of fortified oil underway

Partner	Dates	Coverage	Intervention	Strategy/Results
USAID Flour Fortification-HKI	10/08-10/11	National	Ensure fortification of wheat flour with iron, zinc, VA, folic acid & B-group through mandatory regulations & standards, building capacity of Grands Moulins, and achieving fortification of 90% of all wheat products in market	--ECOWAS (Economic Community of West African States) Assembly of Health Ministers resolution on mandatory fortification of cereal flour, 2008 --Adoption of regional norms for cooking oil and wheat flour fortification by UEMOA Council of Ministers (June 2009)
MI/CIDA/UNICEF/HKI			SIAN	Financial and logistical support for semi-annual VAS and de-worming of children <5 and post-partum women (NNW)
Monsanto - HKI	2007-9	Kolokani, Nara, Fana, Dioila	Reinforce and replicate CMAM strategy	--Training selected agents in community based growth monitoring, screening and treatment for acute malnutrition --Built storage rooms in Dioila and Fana --Support ing BCC communication activities --Supplying complementary food (Misola)
An Be Ji Gi (McKnight – HKI, ICRISAT, IER)	2006-10	Dioila	Participatory development of iron- and zinc-enriched varieties of millet and sorghum + enhanced IYCF practices	--New varieties tested in field and analyzed for yield, acceptability, nutritional content --Participating women's groups trained in preparation of enriched bouillie using biofortified varieties
Save the Children		Koulikoro	Saving Newborn Lives	--Preventing hypothermia through drying, wrapping, and delayed bathing of the newborn; --preventing infections through immediate and exclusive breastfeeding and cutting the umbilical cord with a clean blade; and --overall hygiene and care for mother and newborn at delivery
Børne Fonded (Denmark)		Dioila, Fana	Nutrition, EPI	--Constructed nutrition centers and warehouses in selected CSComs

Annex 16: BEHAVE Matrix

<u>Objective 1</u> : Improve nutritional status through the decrease of prevalence of underweight (W/A) children under two years

Headings	Description	Indicators
Behaviors	Mothers with children under two seek child growth monitoring services every month.	- Number of under 2 years seen at the growth monitoring services
Priority Groups,	Women in Reproductive age with child aged 0 to 24 months who are preparing to eat, looking for wood in the bush, bringing water from a pump or pond, practicing small gardening in group or alone who wish to have healthy children and want to have financial autonomy	% Of women in reproductive age with child under 2 years of age in the project area affected by the messages
Supporting Groups	- Mothers in law and other elder women holders of ancestral practices in the health sector, heavily involved in the management of health issues of women and her child, give support to mothers in the diet and guiding children who want to have healthy children. - Father, farmer or rancher, little literacy with the power and economic decision-making Community volunteers, appointed manager of health and nutrition, involved in the awareness and orientation of communities	- Number of mothers in law and elder women affected by the messages in the project area - Number of husbands affected by the messages in the project area - Number of people affected by the messages given by the Community volunteers
Key Factors	Increase the perception of husbands, mothers and grandmothers on the importance of growth monitoring in the child's development	% Of husbands, mothers of children under 2 years or grandmother mothers who can cite two benefits of growth monitoring
Activities	- Train heads of CSCOMS and matrons on the interpretation growth curve - Integrating / reinforce the theme of grow the monitoring during ANC, PNA, vaccination counseling sessions - Develop messages for Growth monitoring - Producing / reproduce materials on the growth monitoring - Broadcast messages on the Growth monitoring	- % of trained heads CSCOM and matrons who can give 3 advantages of growth monitoring - Number of tools BCC developed

Headings	Description	Indicators
Behaviors	Women Who newly give birth breastfed their babies within the first hour after birth	% of newborns who were breastfed within the first 30 minute after their birth
Priority Groups,	Women in Reproductive age with child aged 0 to 24 months who are preparing to eat, looking for wood in the bush, bringing water from a pump or pond, practicing small gardening in group or alone who wish to have healthy children and want to have financial autonomy	% of women who newly give birth in the project area affected by the messages
Supporting Groups	- Mothers in law and other elder women holders of ancestral practices in the health sector, heavily involved in the management of health issues of women and her child, give support to mothers in the diet and guiding children who want to have healthy children. - Father, farmer or rancher, little literacy with the power and economic decision-making Community volunteers, appointed manager of health and nutrition, involved in the awareness and orientation of communities	% of mothers in law and elder women affected by the messages in the project area
Key Factors	1- Increase the perception of pregnant women on the importance of the colostrum in the health of the newborn 2- Increase the perception of pregnant women about the benefits of breastfeeding immediately on their children's health	-% of women who newly give birth who are able to cite two benefits of immediate breastfeeding for the newborn baby -% of women who have given birth recently cited two benefits of immediate breastfeeding for mother health
Activities	1- Train matrons on importance of immediate breastfeeding 2- train the muso koroba on immediate breastfeeding advantages 3- Integrating / reinforce the theme of grow the monitoring during ANC, PNA, vaccination counseling sessions 4- Producing / reproduce materials on the growth monitoring 5- Broadcast messages on the Growth monitoring	- % of trained matrons who can cite at least 4 advantages immediate breastfeeding - % of oriented elder women who can cite at least 2 advantages of immediate breast feeding - Number BCC sessions organized on the immediate breast feeding advantages

Headings	**Description**	**Indicators**
Behaviors	Mothers exclusively breastfeed their children till to 6 months (no water or thing else will given without medical prescription)	% of children from 0 to 5 months who were exclusively breastfed during the last 24 hours
Priority Groups,	Women in Reproductive age with child aged 0 to 24 months who are preparing to eat, looking for wood in the bush, bringing water from a pump or pond, practicing small gardening in group or alone who wish to have healthy children and want to have financial autonomy	% of women who breastfed their children under 6 months old, affected by the messages in the project area.
Supporting Groups	- Mothers in law and other elder women holders of ancestral practices in the health sector, heavily involved in the management of health issues of women and her child, give support to mothers in the diet and guiding children who want to have healthy children. - Father, farmer or rancher, little literacy with the power and economic decision-making Community volunteers, appointed manager of health and nutrition, involved in the awareness and orientation of communities	% of mothers in law and elder women affected by the messages in the project area
Key Factors	- Increase the perception of mothers on the fact that breast milk provides all the needs for growth and development of the baby until the age of six months - Educating mothers to good technical nursing - Do not give water to children under 6 months - Eliminating the practice of giving the infusions, decoctions, butter to the new born before 6 months	- % of mothers who breastfed their children who agree that breast provide all the needs to bay until the age of 6 months. - % exclusively breastfed children
Activities	1. Train the matrons on exclusive breastfeeding 2. Oriented elder women (musokoroba) on exclusive breastfeeding 3. Integrating / reinforce the theme of exclusive breastfeeding during ANC, PNA, vaccination counseling sessions 4. Producing / reproduce materials on the growth monitoring 5. Broadcast messages on the Growth monitoring	% of trained matrons who can cite at least 4 advantages exclusive breastfeeding - % of oriented elder women who can cite at least 2 advantages of exclusive breast feeding - Number BCC sessions organized on the exclusive breast feeding advantages

Headings	Description	Indicators
Behaviors	Mother complementary fed their children aged 6 to 24 months	% of children aged 6 to 24 months who received complementary food at least twice during the past 24 hours
Priority Groups,	Women in Reproductive age with child aged 6 to 24 months who are cooking meals to eat, looking for wood in the bush, bringing water from a pump or pond, practicing small gardening in group or alone who wish to have healthy children and want to have financial autonomy	% Breastfeeding women reached by the messages in the project area
Supporting Groups	- Mothers in law and other elder women holders of ancestral practices in the health sector, heavily involved in the management of health issues of women and her child, give support to mothers in the diet and guiding children who want to have healthy children. - Father, farmer or rancher, little literacy with the power and economic decision-making Community volunteers, appointed manager of health and nutrition, involved in the awareness and orientation of communities	% of husbands, mothers in law and muso koroba in the project area affected by messages
Key Factors	- Increase breastfeeding women knowledge on local food which content necessary nutrient for children - Increase breastfeeding women knowledge on the importance of giving additional meals to their children aged of 6 to 12 months - Increase husbands, grand mothers knowledge on the importance of giving additional meals to their children aged of 6 to 12 months	- % of breast feeding women who can cite 2 local food rich in micronutrient (Vitamin A, Iron and proteins) - Number of husband who support complementary feeding practice - Number grand mother who qui accept giving complementary feeding to children aged of 6 to 12 months
Activities	1. Train the matrons on complementary feeding 2. Oriented elder women (musokoroba) on complementary feeding 3. Integrating / reinforce the theme of complementary feeding during ANC, PNA, vaccination counseling sessions 4. Producing / reproduce materials on the complementary feeding 5. Broadcast messages on the complementary feeding	-% trained matrons who can cite 4 advantages of complementary feeding - % oriented muso koroba who can cite 2 advantages of complementary feeding - Number of messages produce on complementary feeding - Number broadcasted messages on complementary feeding

Objective 2 : Increase the proportion of children 6-23 months receiving VAS

Headings	Description	Indicators
Behaviors	Mother bring their children aged 6 to 23 months to the vitamin A distribution points every 6 months	% of children 6 to 23 months who received vitamin A capsule during last 6 months
Priority Groups,	Women in Reproductive age with child aged 0 to 23 months who are cooking food to eat, looking for wood in the bush, bringing water from a pump or pond, practicing small gardening in group or alone who wish to have healthy children and want to have financial autonomy	% of children 6 to 23 months reached by messages
Supporting Groups	- Mothers in law and other elder women holders of ancestral practices in the health sector, heavily involved in the management of health issues of women and her child, give support to mothers in the diet and guiding children who want to have healthy children. - Father, farmer or rancher, little literacy with the power and economic decision-making Community volunteers, appointed manager of health and nutrition, involved in the awareness and orientation of communities	% of grand mother muso koroba affected by the messages in the project area
Key Factors	- Increase the knowledge of women with children aged of 6 to 23 months, grand-mothers and husbands on the importance of vitamin A in child growth	% women with children 6 to 23 months who can cite 3 advantages vitamin A to children
Activities	1. Train the matrons on vitamin A 2. Oriented elder women (musokoroba) on vitamin A 3. Integrating / reinforce the theme of vitamin A during ANC, PNA, vaccination counseling sessions 4. Producing / reproduce materials on vitamin A 5. Broadcast messages on vitamin A	-% trained matrons who can cite 4 advantages of vitamin A - % oriented muso koroba who can cite 2 advantages of vitamin A - Number of messages produce on vitamin A - Number broadcasted messages vitamin A

Objective 3 : Improve nutritional status through the decrease of prevalence of anemia among 6-23 months children

Headings	Description	Indicators
Behaviors	Women make sleeping their children 0 to 23 months under insecticide treated bed nets every night	% of children 0 to 23 months who slept under insecticide treated Bed net last night
Priority Groups,	Women in Reproductive age with child aged 0 to 23 months who are cooking food to eat, looking for wood in the bush, bringing water from a pump or pond, practicing small gardening in group or alone who wish to have healthy children and want to have financial autonomy	% of women with to 0 to23 months affected by messages
Supporting Groups	- Mothers in law and other elder women holders of ancestral practices in the health sector, heavily involved in the management of health issues of women and her child, give support to mothers in the diet and guiding children who want to have healthy children. - Father, farmer or rancher, little literacy with the power and economic decision-making Community volunteers, appointed manager of health and nutrition, involved in the awareness and orientation of communities	% of husbands, grand mothers who declare working on children sleep under insecticide treated bed nets
Key Factors	- Increase the knowledge of women with children aged of 6 to 23 months, grand-mothers and husbands on the importance sleeping under insecticide treated bed nets	- % women with children under 2 years age , grand-mothers and husbands who know that Insecticide treated bed nets prevent Malaria
Activities	Train the matrons on malaria prevention Orient elders (musokoroba) on malaria prevention through ITN Integrating / reinforce the theme of ITN during ANC, PNA, vaccination counseling sessions Producing / reproduce materials on ITN Broadcast messages on ITN	-% trained matrons who can cite ITN as malaria prevention way - % oriented muso koroba who can cite 2 advantages of ITN - Number broadcasted messages on ITN

Headings	Description	Indicators
Behaviors	Mother bring their children aged 12 to 23 months to the deworming distribution points every 6 months	% children 12-23 months who were dewormed during the last 6 months
Priority Groups,	Women in Reproductive age with child aged 0 to 24 months who are preparing to eat, looking for wood in the bush, bringing water from a pump or pond, practicing small gardening in group or alone who wish to have healthy children and want to have financial autonomy	% of women with to 12 to23 months affected by messages
Supporting Groups	- Mothers in law and other elder women holders of ancestral practices in the health sector, heavily involved in the management of health issues of women and her child, give support to mothers in the diet and guiding children who want to have healthy children. - Father, farmer or rancher, little literacy with the power and economic decision-making Community volunteers, appointed manager of health and nutrition, involved in the awareness and orientation of communities	% of grand mother muso koroba, husbands affected by the messages in the project area
Key Factors	- Increase the knowledge of women with children aged of 6 to 23 months, grand-mothers and husbands on the importance the deworming on the anemia prevention	- % women with children under 2 years age , grand-mothers and husbands who know the importance of deworming on the anemia prevention of children.
Activities	- Integrating / reinforce the theme of deworming during ANC, PNA, vaccination counseling sessions - Producing / reproduce materials on deworming - Broadcast messages on deworming	- Number of broadcasted messages on deworming

Objective 4 : **Improve control of diarrheal diseases in infant and young children (0-23 months**

Headings	Description	Indicators
Behaviors	Women with children under 2 years who give more fluid and additional food to their sick children during their illness	% of children under 2 years suffering of diarrhoea who received more fluid and additional food during their illness
Priority Groups,	Women in Reproductive age with child aged 0 to 24 months who are cooking food to eat, looking for wood in the bush, bringing water from a pump or pond, practicing small gardening in group or alone who wish to have healthy children and want to have financial autonomy	% of women with children aged of 0 to 23 months affected by messages
Supporting Groups	- Mothers in law and other elder women holders of ancestral practices in the health sector, heavily involved in the management of health issues of women and her child, give support to mothers in the diet and guiding children who want to have healthy children. - Father, farmer or rancher, little literacy with the power and economic decision-making Community volunteers, appointed manager of health and nutrition, involved in the awareness and orientation of communities	% of grand mother muso koroba, husbands affected by the messages in the project area
Key Factors	Increase the knowledge of women with children aged of 6 to 23 months, grand-mothers and husbands on the importance of additional feeding and giving increased fluid to children during their illness	% women with children under 2 years age , grand-mothers and husbands who know the importance of additional feeding and giving increased fluid to children during their illness
Activities	1- Integrating / reinforce the theme of additional feeding and giving increased fluid to children during their illness into ANC, PNA, vaccination counseling sessions - Producing / reproduce materials on additional feeding and giving increased fluid to children during their illness - Broadcast messages on additional feeding and giving increased fluid to children during their illness	- Number of broadcasted messages on the importance of additional feeding and giving increased fluid to children during their illness

Headings	Description	Indicators
Behaviors	Women with children under 2 years old wash their hand with soap during the following , 4 keys activities : before cooking meals, before feed their child, after clean their children who had has defected , after they use toilet	% of mothers who declare wash their during the 4 keys activities : before cooking meals, before feed their child, after clean their children who had has defected , after they use toilet
Priority Groups,	Women in Reproductive age with child aged 0 to 24 months who are preparing to eat, looking for wood in the bush, bringing water from a pump or pond, practicing small gardening in group or alone who wish to have healthy children and want to have financial autonomy	% of women with children aged of 0 to 23 months affected by messages
Supporting Groups	- Mothers in law and other elder women holders of ancestral practices in the health sector, heavily involved in the management of health issues of women and her child, give support to mothers in the diet and guiding children who want to have healthy children. - Father, farmer or rancher, little literacy with the power and economic decision-making Community volunteers, appointed manager of health and nutrition, involved in the awareness and orientation of communities	% of grand mother muso koroba, husbands affected by the messages in the project area
Key Factors	Increase the knowledge of women with children aged of 6 to 23 months, grand-mothers and husbands on the importance of hand washing on diarrhea control, decrease their traditional behave on hand washing with soap, promote the use appropriate hand washing materiel.	% women with children under 2 years age , grand-mothers and husbands who know the importance of hand washing with soap during for occasion on diarrhea control.
Activities	- Integrating / reinforce the theme of hands washing with soap into ANC, PNA, vaccination counseling sessions - Producing / reproduce materials on hands washing with soap - Broadcast messages on hands washing with soap.	Number of broadcasted messages on the importance of hands washing with soap during 4 keys occasions on diarrhea control

Objective 5 : Improve the nutritional status of pregnant women through the decrease of anemia prevalence

Headings	Description	Indicators
Behaviors	Pregnant women attend at least 3 ante Natal sessions	% pregnant women who attend at least 3 ante Natal Care sessions
Priority Groups,	Women in Reproductive age with child aged 0 to 23 months who are preparing to eat, looking for wood in the bush, bringing water from a pump or pond, practicing small gardening in group or alone who wish to have healthy children and want to have financial autonomy	% of pregnant women who affected by messages on the importance of ANC visit on safe motherhood
Supporting Groups	- Mothers in law and other elder women holders of ancestral practices in the health sector, heavily involved in the management of health issues of women and her child, give support to mothers in the diet and guiding children who want to have healthy children. - Father, farmer or rancher, little literacy with the power and economic decision-making Community volunteers, appointed manager of health and nutrition, involved in the awareness and orientation of communities	% % of grand mother muso koroba, husbands affected by the messages on the importance of ANC visit on safe motherhood in the project area
Key Factors	Increase the knowledge of women with children aged of 6 to 23 months, grand-mothers and husbands on the importance of ANC visit on safe motherhood.	% women with children under 2 years age , grand-mothers and husbands who know the importance of ANC visit on safe motherhood.
Activities	- Integrating / reinforce the theme on the importance of ANC visit on safe motherhood into ANC, PNA, vaccination counseling sessions - Broadcast messages on the importance of ANC visit on safe motherhood	Number of broadcasted messages on the importance of ANC visit on safe motherhood

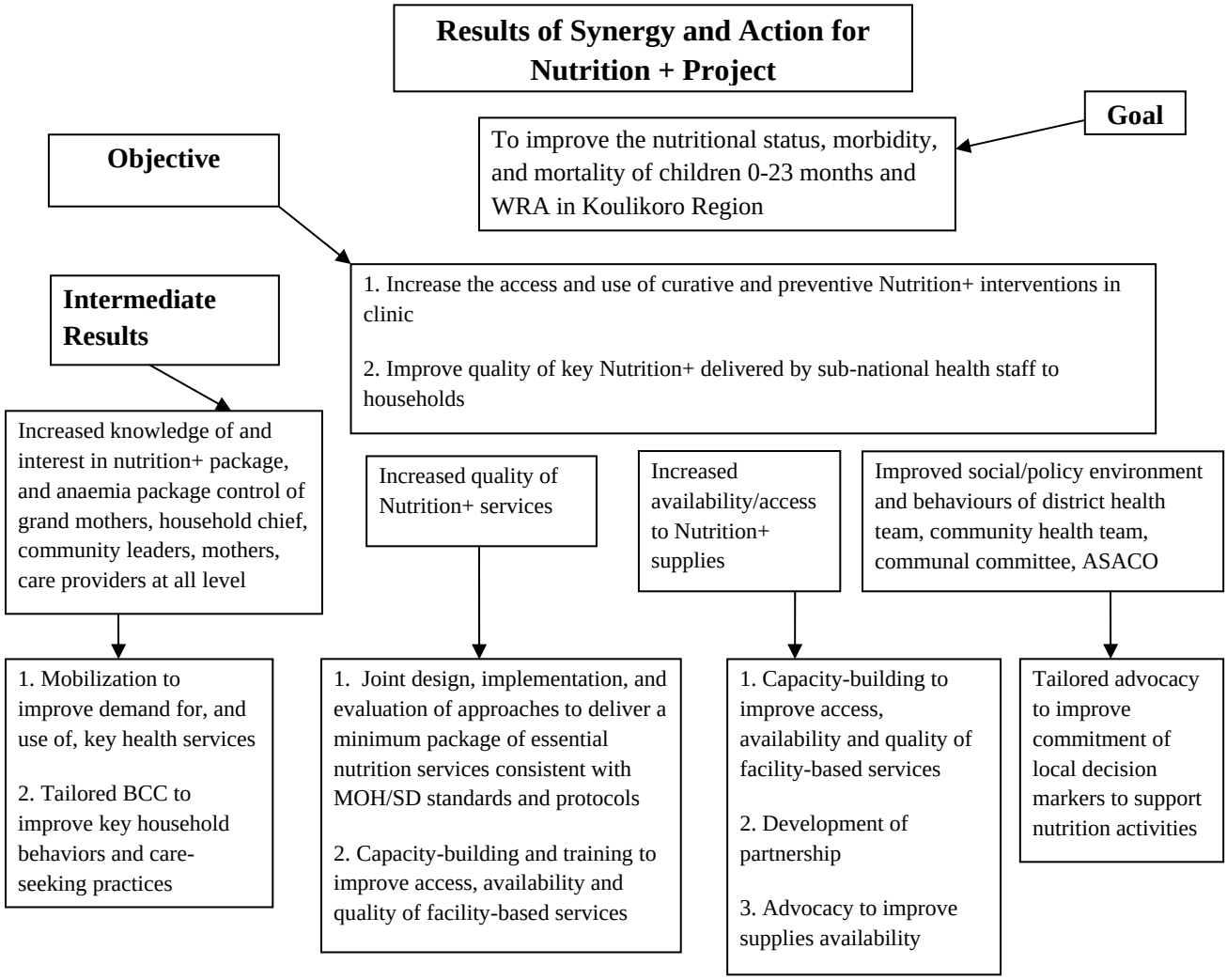
Headings	Description	Indicators
Behaviors	Pregnant women seen to ANC session took their daily IFA tablets til to two after giving birth	% of pregnant who took IFA tablet the last 24 hours
Priority Groups,	Women in Reproductive age with child aged 0 to 24 months who are preparing to eat, looking for wood in the bush, bringing water from a pump or pond, practicing small gardening in group or alone who wish to have healthy children and want to have financial autonomy	% of pregnant women who affected by messages on the importance of IFA absorption during pregnancy on safe motherhood
Supporting Groups	- Mothers in law and other elder women holders of ancestral practices in the health sector, heavily involved in the management of health issues of women and her child, give support to mothers in the diet and guiding children who want to have healthy children. - Father, farmer or rancher, little literacy with the power and economic decision-making Community volunteers, appointed manager of health and nutrition, involved in the awareness and orientation of communities	% % of grand mother muso koroba, husbands affected by the messages on the importance of IFA absorption during pregnancy safe motherhood in the project area
Key Factors	Increase the knowledge of women with children aged of 6 to 23 months, grand-mothers and husbands on the importance of importance of IFA absorption during pregnancy on safe motherhood.	% women with children under 2 years age, grand-mothers and husbands who know the importance the importance of IFA absorption during pregnancy on safe motherhood.
Activities	- Integrating / reinforce the theme on the importance of ANC visit on save motherhood into ANC, PNA, vaccination counseling sessions - Broadcast messages on on the importance of importance of IFA absorption during pregnancy safe motherhood	Number of broadcasted messages on the importance of ANC importance of IFA absorption during pregnancy safe motherhood

Headings	Description	Indicators
Behaviors	Pregnant women sleep under insecticide treated bed nets	% pregnant women who slept under ITN during the last night
Priority Groups,	Women in Reproductive age with child aged 0 to 24 months who are preparing to eat, looking for wood in the bush, bringing water from a pump or pond, practicing small gardening in group or alone who wish to have healthy children and want to have financial autonomy	% of pregnant women who affected by messages on the importance of sleeping under ITN as part of malaria prevention method
Supporting Groups	- Mothers in law and other elder women holders of ancestral practices in the health sector, heavily involved in the management of health issues of women and her child, give support to mothers in the diet and guiding children who want to have healthy children. - Father, farmer or rancher, little literacy with the power and economic decision-making Community volunteers, appointed manager of health and nutrition, involved in the awareness and orientation of communities	% of grand mother muso koroba, husbands affected by the messages on the importance of of sleeping under ITN as part of malaria prevention method
Key Factors	Increase the knowledge of women with children aged of 6 to 23 months, grand-mothers and husbands on the importance of of sleeping under ITN as part of malaria prevention method	% women with children under 2 years age, grand-mothers and husbands who know the importance the importance of sleeping under ITN as part of malaria prevention method
Activities	- Integrating / reinforce the theme on the importance of ANC visit on save motherhood into ANC, PNA, vaccination counseling sessions - Broadcast messages on on the importance of of sleeping under ITN as part of malaria prevention method	Number of broadcasted messages on the importance of ANC importance of sleeping under ITN as part of malaria prevention method

Headings	Description	Indicators
Behaviors	Pregnant women received Intermittent Presumptive Treatment of Malaria between 4th et 8th month of their pregnancy	% of mothers with children under 1 year old who received two doses of IPT during the last pregnancy
Priority Groups,	Women in Reproductive age with child aged 0 to 24 months who are preparing to eat, looking for wood in the bush, bringing water from a pump or pond, practicing small gardening in group or alone who wish to have healthy children and want to have financial autonomy	% of mothers with children under 1 year old affected by messages on importance of IPT as malaria prevention method during pregnancy
Supporting Groups	- Mothers in law and other elder women holders of ancestral practices in the health sector, heavily involved in the management of health issues of women and her child, give support to mothers in the diet and guiding children who want to have healthy children. - Father, farmer or rancher, little literacy with the power and economic decision-making Community volunteers, appointed manager of health and nutrition, involved in the awareness and orientation of communities	% of grand mother muso koroba, husbands affected by the messages on the importance of IPT as malaria prevention method during pregnancy
Key Factors	Increase the knowledge of women with children aged of 6 to 23 months, grand-mothers and husbands on the importance of IPT as malaria prevention method during pregnancy	% women with children under 2 years age, grand-mothers and husbands who know the importance the importance of IPT as malaria prevention method during pregnancy
Activities	- Integrating / reinforce the theme on the importance of ANC visit on save motherhood into ANC, PNA, vaccination counseling sessions - Broadcast messages on the importance of IPT as malaria prevention method during pregnancy	Number of broadcasted messages on the importance of ANC of IPT as malaria prevention method during pregnancy

Headings	Description	Indicators
Behaviors	Pregnant women took deworming tablets during pregnancy	% of pregnant who took deworming tablets the last 24 hours
Priority Groups,	Women in Reproductive age with child aged 0 to 24 months who are preparing to eat, looking for wood in the bush, bringing water from a pump or pond, practicing small gardening in group or alone who wish to have healthy children and want to have financial autonomy	% of pregnant women who affected by messages on the importance of deworming tablet absorption during pregnancy on safe motherhood
Supporting Groups	- Mothers in law and other elder women holders of ancestral practices in the health sector, heavily involved in the management of health issues of women and her child, give support to mothers in the diet and guiding children who want to have healthy children. - Father, farmer or rancher, little literacy with the power and economic decision-making Community volunteers, appointed manager of health and nutrition, involved in the awareness and orientation of communities	% % of grand mother muso koroba, husbands affected by the messages on the importance of deworming tablet absorption during pregnancy safe motherhood in the project area
Key Factors	Increase the knowledge of pregnant women, grand-mothers and husbands on the importance of importance of deworming tablet absorption during pregnancy on safe motherhood.	% women with children under 2 years age, grand-mothers and husbands who know the importance the importance of deworming tablet absorption during pregnancy on safe motherhood.
Activities	- Integrating / reinforce the theme on the importance of of deworming tablet absorption during pregnancy on safe motherhood. into ANC, PNA, vaccination counseling sessions - Broadcast messages on on the importance of importance of of deworming tablet absorption during pregnancy on safe motherhood.	Number of broadcasted messages on the importance of ANC importance of deworming tablet absorption during pregnancy safe motherhood

Annex 17: Results Framework from the DIP



Annex 18: Quality of Care

During the baseline survey and the final survey, INFO-STAT conducted a Health Facility Assessment. This assessment consisted of two types of surveys used to gauge the quality of key services delivered to mothers and young children at health facilities. The first survey was an examination of health facility registers, which record actual services delivered. The second survey consisted of a series of interviews with health care providers on how they carry out consultations: What physical exams do they conduct? What questions do they ask the mother? What advice do they provide? The results of both surveys showed that there was a significant improvement in the quality of key services by the end of the SAN+ project.

The following table, taken from the survey conducted using health facility records, highlights some of the more dramatic improvements. For the complete Health Facility Assessment conducted as part of the final evaluation, see Annex 6: Final KPC Report and Health Facility Assessment.

Indicators	Baseline Value	N	Final Value	N
% of mothers who were de-wormed during antenatal care (ANC) visits in the last month	0%	945	30%	509
% of mothers attending ANC in last month counseled on importance of immediate and exclusive BF as part of routine ANC	39%	945	90%	913
% of mothers delivering at CSCom/CSRef in last month who received VAC immediately after delivery	84%	771	94%	738
% of children presenting at CSCom/CSRef in last month with measles, diarrhea, ARI, or malnutrition who received appropriate VAC dose(s)	7%	476	63%	1,692
% of children 0-23 months reporting to CSComs with diarrhea in the previous month who received care in accordance with IMCI algorithms for diarrhea.	54%	122	88%	185
% of mothers attending with children 0-23 months in last month who have received Nutrition+ counseling package	2%	470	71%	560

Indicators	Baseline Value	N	Final Value	N
% of CSComs/CSRefs with continuous stocks of **VAC** during last 6 months	81%	27	88%	26
% of CSComs/CSRefs with continuous stocks of **IFA** during last 6 months	52%	29	91%	26
% of CSComs/CSRefs with continuous stocks of **SP** during last 6 months	76%	29	91%	25
% of CSComs/CSRefs with continuous stocks of **ORS** during last 6 months	74%	27	92%	25

Evaluation Finale du Projet SAN+
Questionnaire : CSComs
Tally : Total 45

1. Avez-vous reçu l'appui des superviseurs (HKI-District) dans la mise en œuvre de ce projet sur les activités nutritionnelles ?

OUI = 100%

1. A. Si oui, lesquelles ? [NE PAS LIRE]

a. La connaissance en matière de nutrition **37/45 82%**
b. La capacité de conseiller les mères **20/45 44%**
c. La capacité de suivre la croissance des enfants **17/45 37%**
d. La capacité de prendre en charge les enfants malnutris **34/45 75%**
e. La disponibilité des rations à distribuer **27/45 60%**
f. L'approvisionnement en micronutriments **14/45 31%**
g. La tenue des séances de causerie en des thèmes nutritionnels **22/45 49%**
h. La mobilisation de la population **1/45 - 2%**
i. Autres à préciser_____

--Dépistage **5/45 11%**
--Matériels pour démonstration **5/45 11%**

Aussi cité : SRO (2) ; démonstrations culinaires (3) ; support gestion (2) ; vaccination (2) ; support IEC (3) ; médicament (1) ; formation relais (1) ; remplissage des supports (1)

2. A votre avis, y a-t-il eu des améliorations dans les activités nutritionnelles dans les CSCom depuis le début des activités SAN+ ?

OUI 45/45= **100%**

2. A. Si oui, lesquelles ? [NE PAS LIRE]

a. La connaissance en matière de nutrition 30/45 = **67%**
b. La capacité de conseiller les mères 22/45 = **49%**
c. La capacité de suivre la croissance des enfants 13/45 = **29%**
d. La capacité de prendre en charge les enfants malnutris 37/45 = **82%**
e. La disponibilité des rations à distribuer 25/45 = **56%**
f. L'approvisionnement en micronutriments 11/45 = **24%**
g. La tenu des séances de causerie en des thèmes nutritionnels 30/45 = **67%**
h. La mobilisation de la population 12/45 = **27%**
f. Autres à préciser_____

--démonstrations culinaires (2) ; diminution du taux de la mortalité (2) ; dépistage (2) ; supports données (2) ; lavage de mains (1) ; alimentation de la femme enceinte (1) ; augmentation de la fréquentation des CSComs (1) ; médicaments (1)

3. Selon vous, y a-t-il eu des changements dans l'application des Actions Essentielles en Nutrition y compris les pratiques de l'alimentation de la mère et de l'enfant ?

OUI 44/45 = 98% NON 1/45 = 2%

3. A. Si oui, lesquelles ? [NE PAS LIRE MAIS DEMANDER PRECISION]

a. Pratique de l'allaitement exclusif des enfants de moins de 0 à 6 mois 34/45 = **76%**
b. Alimentation de complément des enfants à partir de six mois 38/45 = **84%**
c. Alimentation de l'enfant malade 7/45 = **16%**
d. Traitement de la diarrhée chez les enfants 4/45 = **9%**
e. Utilisation des moustiquaires traitées d'insecticide 4/45 = **9%**
f. Prise en charge des enfants malnutris 20/45 = **44%**
g. Alimentation de la femme enceinte 24/45 = **53%**
h. Alimentation de la femme allaitante 20/45 = **44%**
i. Autres à préciser_____
--adhésion à la prestation de service (4) ; prise de Vit. A (2) ; prise de FAF (2) ; hygiène (2) ; vaccination (2) ; dépistage (1) ; counseling (1) ; utilisation de sel iode (2) ; prise de SP (1) ; disponibilité des intrants (1) ; démonstrations culinaires (1) ; réduction de la mortalité liée à la malnutrition (1) ; déparasitage des femmes enceintes (1) ; causeries (1) ; moins de malnutrition (1)

4. Avez-vous rencontré des difficultés au cours de l'exécution des activités de nutrition ?

OUI 44/45 = 98% NON 1/45 = 2%

4. A. Si oui, lesquelles ? [NE PAS LIRE]

a. Mobilité du personnel 0
b. Motivation du personnel 2/45 = **4%**
c. L'adhésion de la communauté 16/45 = **36%**
d. Difficultés dans le changement des pratiques des mères 11/45 = **24%**
e. Ruptures de stock d'intrants 11/45 = **24%**
f. Manque de certains intrants 5/45 = **11%**
g. Insuffisance du personnel 5/45 = **11%**
h. Augmentation de la charge du travail 8/45 = **18%**
i. Autres à préciser_____
--manque de matériel [thermos pour conserver eau chaude pour préparation du lait] (2) ; qq enfants n'aiment pas misola (1) ; manque d'intrants (1) manque de formation (1) ; manque de motivation de la part des relais (1) ; abandons de la PEC (2) ; manque de salle URENI (1) ; risque de divorce dû à AME (1)

5. A votre avis, dans l'avenir qu'est-ce que vous suggérez comme stratégie pour la mobilisation de la communauté afin d'améliorer les pratiques nutritionnelles ?

--motivation des relais (6)
--formation/recyclage (8)
--impliquer relais et les groupes de femmes, y compris groupes de mères (7)
--IEC (au niveau des villages) (8)
--concours/cérémonies de reconnaissance des enfants bien nourris (2)

--avoir des intrants disponibles (6)
--séances de IEC, y compris dans les villages (8)
--augmenter les messages à la radio (2)
--démonstrations culinaires (2)

Cité une fois :
--appuyer la stratégie avancée
--promotion des produits locaux
--avoir un local pour la nutrition
--SIAN
--impliquer les hommes

6. Le projet SAN+ prend fin en septembre 2009. Quelles activités nutritionnelles préventives compter vous continuer ? [NE PAS LIRE]

a. consultations nutritionnelles au CSComs 24/45 = **53%**
b. Séances d'éducation sur les thèmes d'allaitement et alimentation de l'enfant 38/45 = **84%**
c. séances d'éducation sur les thèmes d'alimentation de la mère 23/45 = **51%**
d. dépistage de la malnutrition à base communautaire 27/45 = **60%**
e. démonstrations culinaires 36/45 = **80%**
f. autres à préciser_____
--VAS (4) ; déparasitage (2) ; groupement féminin (1) ; PEC (2) ; promotion des aliments locaux (1) ; vaccination (1) ; importance de fréquenter le CSCom (1)

8. Avez-vous des suggestions pour l'amélioration et la continuité des activités nutritionnelles ?
--fournir des intrants (11) ou ajouter d'autres (1)
--former et recycler le personnel (9)
--motiver les relais
--démonstrations culinaires (5)
--organisation des activités au niveau des villages (2)
--supervisions (1)
--supports (2)
--causeries (1)
--création d'un endroit pour PEC (4)
--renouvèlement du projet (4)
--encourager le jardinage (1) et aliments locaux (1)
--créer un centre de nutrition pour la région avec personnel médical (1)
--éviter ruptures d'intrants (1)
--implication de tous leaders (1)
--SIAN (1)
--vaccination (1)
--hygiène alimentaire (1)
--plus de médicaments pour les enfants malades (1)
--continuer distribution de Vit. A et les ATPE

Evaluation Finale du Projet SAN+
Questionnaire : Equipe cadre du district

17 Questionnaires au total

1. Est-ce que la nutrition est prise en compte dans le plan opérationnel annuel du District ?

OUI 16 = 94%
NON 1 = 6%

2. Si oui, avez-vous un budget associé à ce plan ?

OUI 13 = 76%
NON 4 = 24%

3. A votre avis, quelles sont les changements apportés dans les activités de nutrition dans les services des CSRefs et les CSCom depuis le début du projet SAN+?

a. La connaissance du personnel en matière de nutrition 13 = 76%
b. La capacité du personnel de donner les conseils aux mères 10=59%
c. La prise en charge de la malnutrition 17=100%
d. Les rations à distribuer 7=41%
e. L'approvisionnement en micronutriments 9=53%
f. Dotation d'équipements et d'infrastructure 6=35%
g. Autres :

Mise en place des groupes de mères (4) ; sensibilisation à la radio pour bouillie enrichie (3) ; cités une fois : engouement dans la prise en charge des MA ; augmenter la prévention ; démonstrations culinaires ; AEN ; prise de conscience ; supervision

4. A votre avis, dans l'avenir qu'est-ce que vous suggérez comme stratégies pour la mobilisation de la communauté afin d'améliorer les pratiques nutritionnelles ?

Mise en place des groupes de mères (3) ; aussi : démonstration nutritionnelles ; recherche de financement pour les activités de nutrition ; construction hangar pour centre ; renforcer la diffusion des messages à travers les médias ; organiser des journées de plaidoyer sur la nutrition des enfants et des mères ; mettre à la disposition des relais des supports éducatifs ; renforcer les capacités des prestataires/relais ; élaborer un plan annuel de communication sur la nutrition ; promotion des produits locaux ; rendre disponibles les intrants

5. Selon vous, y a-t-il eu des changements dans l'application des Actions Essentielles en Nutrition y compris les pratiques des mères dans l'alimentation des enfants ?

OUI 17 = 100%
NON 0

5. A. Si oui, lesquelles ?

a. pratique de l'allaitement exclusif des enfants de 0 à 6 mois 12=71%
b. alimentation de complément les enfants à partir de six mois 15=88%

c. alimentation de l'enfant malade 7=41%
d. traitement de la diarrhée chez les enfants 4=24%
e. utilisation des moustiquaires traitées d'insecticide 4=24%
f. prise en charge des enfants malnutris 11=65%
g. autres à préciser _____

- Consommation des aliments riches en micronutriments (3)
- Promotion des AEN (3)
- Hygiène alimentaire de l'enfant
- Promotion du lavage des mains à l'eau et au savon
- Connaissance des 3 groupes d'aliments par les mères

6. Avez-vous rencontré des contraintes dans la mise en œuvre des activités nutritionnelles ?

OUI 14 = 82%
NON 3 = 18%

6. A. Si oui, lesquelles ?

a. mobilité du personnel 2=12%
b. motivation du personnel 1=6%
c. manque d'intérêt des communautés 3=18%
d. difficultés de changement des pratiques nutritionnelles des mères 3=18%
e. ruptures des intrants 6=35%
f. autres à préciser _____

Cités une fois : le taux élevé des cas d'abandon ; difficulté de maintien des mamans pendant le traitement à l'URENI ; absence de soutien alimentaire pour les mamans ; l'insuffisance d'implication des pères dans la prise en charge des malnutris ; augmentation de la charge du travail des prestataires ; durée d'hospitalisation trop longue pour les mamans ; manque spécifique de salle d'hospitalisation pour les enfants malnutris

7. Le projet SAN+ prend fin en septembre 2009. Quelles activités nutritionnelles préventives comptez-vous continuer ?

a. Suivi préventif des enfants aux CSComs 12=71%
b. Séances d'éducation sur les thèmes sur les Actions Essentielles en Nutrition 15 = 88%
c. Dépistage de la malnutrition aiguë à base communautaire 6=35%
d. Promotion de la croissance de l'enfant à base communautaire 3=18%
e. Séances de démonstrations nutritionnelles 11=65%

f. Autres à préciser : _____
-Promotion des messages sur les AEN pendant la SIAN
-Supervision des groupements mères et relais
-Renforcement du dépistage systématique des malnutris
-Diffusion des messages de nutrition par les radios de proximité
-Renforcer la démonstration nutritionnelle
-Promotion de la consommation des aliments locaux

8. Avez-vous des suggestions pour l'amélioration et la continuité des activités nutritionnelles ?

-Formation du personnel complémentaire CSRef/CSCom sur les AEN
-Continuer à rendre disponible les intrants, les supports sur les AEN
-Former les relais
-Promouvoir le dépistage systématique des cas de malnutris
-Renforcer la supervision des agents formés
-Poursuivre les activités de nutrition de HKI (SAN+)
-Impliquer le service de Développement Social dans les activités du projet
-Promouvoir la prise en charge nutritionnelle à base d'aliments locaux

9. Avez-vous des questions pour moi ?

Le projet est-il renouvelable ? 4 = 24%

Evaluation Finale du Projet SAN+
Synthèse des Questionnaires : Leaders des Associations Féminines

34 Questionnaires au Total

1. Avez-vous entendu parler des activités communautaires pour la promotion de la santé et la croissance de l'enfant de 0-23 mois et leurs mères ?

OUI 32 = 94%
NON 2 = 6%

2. Avez-vous constaté des changements dans les pratiques des mères dans l'alimentation des enfants de 0-6 mois?

OUI 34 = 100%
NON 0

2A. Si oui, lesquels?

a. la pratique de l'allaitement exclusif des enfants de 0-6 mois 30=88%
b. l'alimentation de l'enfant malade 10=29%
c. le traitement de la diarrhée chez les enfants 9=26%
d. l'alimentation de la femme allaitante 14=41%
e. l'utilisation des moustiquaires traitées 14=41%
f. la prise en charge des enfants malnutris 18=53%
g. autres à préciser_____
Techniques de l'allaitement (3)
Vaccination (2)
Alimentation de la femme enceinte (2)
Lavage des mains (2)
Fréquentation des services de santé (2)
Cités une fois : hygiène alimentaire ; planification familiale ; appréciation de la nutrition pour les mères ; connaissance sur l'alimentation riche et variée

3. Avez-vous constaté des changements dans les pratiques des mères dans l'alimentation de leurs enfants de 6-23 mois ?

OUI 34 = 100%
NON 0

3B. Si oui, lesquels?

a) la continuation de l'allaitement 28=82%
b) l'alimentation de complément des enfants à partir de l'âge de six mois 29 = 85%
c) l'enrichissement de la bouillie 32=94%
d) l'alimentation de l'enfant malade 8=24%
e) le traitement de la diarrhée chez les enfants 9=26%
f) l'utilisation des moustiquaires traitées d'insecticide 17=50%
g) prise en charge de leurs enfants malnutris 22=65%
h) autres à préciser_____

Fréquentation du centre de santé (3)
Administration de la Vitamine A (3)

Cités une fois : adhésion des femmes ; consommation des fruits et légumes ; pratique de lavage des mains ; suivi pondéral des enfants sains ; entretien des enfants ; maîtrise de la préparation de la bouillie

4. Est-ce que votre association a participé aux activités de promotion de la bonne nutrition [croissance] de l'enfant ?

OUI 32 = 94%
NON 2 = 6%

4A. Si oui, lesquelles ?

a. promotion de l'allaitement exclusif des enfants de 0 à 6 mois 27=79%
b. promotion des messages sur l'alimentation de complément des enfants à partir de 6 mois 27=79%
c. promotion des messages sur l'alimentation de l'enfant malade 5=15%
d. promotion des messages sur le traitement de la diarrhée chez les enfants 6 = 18%
e. promotion de la consommation du sel iodé 14=41%
f. promotion des messages sur l'utilisation des moustiquaires traitées d'insecticide 14=41%
g. promotion de la prise en charge des enfants malnutris 14=41%
h. les séances de démonstrations nutritionnelles 17=50%
i. mobilisation pour les campagnes de masse et promotion de la vaccination 19 = 56%
j. autres à préciser_____

- Dépistage (6)
- Promotion de l'hygiène (4)
- Fréquentation du centre (3)

Cités une fois : fréquence de l'alimentation de l'enfant ; donner un temps suffisant aux enfants pendant les repas ; prévention du VIH/SIDA ; sensibilisation des mères pour le séjour des enfants à l'UREMI ; entretien des enfants

5. Avez-vous des suggestions pour l'amélioration des activités futures de nutrition ?

OUI 34 = 100%
NON 0

5A. Si oui, lesquelles ?

- Rendre disponible les rations sèches aux niveaux village et CSCom 14=41%
- Information et sensibilisation sur l'alimentation de la femme allaitante/enceinte 7 = 21%
- Formations 6 = 18%
- Renforcer davantage les activités8 = 24%
- Donner les aliments riches et variées (3)
- Appui pour les démonstrations culinaires (3)
- Lutte contre le paludisme de l'enfant (2)
- Augmenter le nombre de personnel pour la PEC(2)

Cités une fois : bien entretenir les enfants ; promotion de la consommation des aliments locaux ; supervision des groupements féminins ; suivre des malnutris dans les villages

6. Avez-vous des questions pour moi ?

- Est-ce que vous pouvez nous informer davantage sur la nutrition des enfants ? (2)
- Comment faire pour alimenter les enfants ? (2)
- Allez-vous nous amener de l'argent ? (3)
- Conduite à tenir devant un nourrisson qui ne grandit pas malgré l'allaitement exclusif (1)
- Pourquoi cette incertitude du projet ? (1)
- Est-ce que mes préoccupations seront prises en compte ? (1)
- Qu'est-ce que vous pensez de nous pour cette activité? (1)
- Qu'est-ce qu'on fait pour les personnes âgées malnutries ? (1)

Evaluation Finale du Projet SAN+
Synthèse des Questionnaires – Mère d'Enfant de 0-23 mois

180 Questionnaires

1) Fréquentez-vous le Centre de Santé ?

OUI 179 = 99%
NON 1

1A. Si oui, qu'est-ce que le personnel fait pour vous aider à mieux faire grandir votre enfant ?

a) Donner des conseils sur l'alimentation pendant les consultations 135=75%
b) Ils pèsent l'enfant 111=62%
c) Ils tiennent des causeries sur l'alimentation 117=65%
d) Ils distribuent des aliments pour les enfants malnutris 94=52%
e) Ils font des démonstrations nutritionnelles 45=25%
f) Ils visitent les villages pour discuter l'alimentation de l'enfant et la mère 10 = 6%
g) Autres à préciser _____

- Vaccination 42 = 23%
- MII 13 = 7%
- Hygiène alimentaire de l'enfant 10 = 6%
- Distribution de lait/rations 4
- Allaitement maternel exclusif 3
- Conseils sur les maladies de l'enfant 2
- Dépistage avec PB 2
- Fer 2
- Médicament gratuit 2
- Consultation à temps 2

Cités une fois : planning familial ; prise en charge diarrhée ; prise en charge palu ; administration de Vitamine A ; lavage des mains ; fréquence allaitement ; alimentation de la femme enceinte ; SRO donné gratuitement aux enfants ; déparasitage des enfants ; conseiller les fruits ; donner des farines enrichies ; comment préparer la bouillie ; avantage de la CPN

2) Avez-vous bénéficié de ces services?

OUI 172 = 96%
NON 8 = 4%

2A. Si oui, quels services?

a) J'ai reçu des conseils sur l'alimentation pendant les consultations 131=73%
b) Ils ont pesé mon enfant 115=58%
c) J'ai assisté à une causerie sur l'alimentation 84=47%
d) J'ai reçu des aliments 55=31%
e) Ils sont venus au village pour discuter de l'alimentation 9=5%

f) Autres à préciser… _____

- Vaccination 20 = 11%
- Moustiquaires 9 = 5%
- Conseil pour allaitement exclusif 6 = 3%
- Hygiène 5 = 3%
- Aliment de complément 4 = 2%
- Traitement enfant malnutri 3

Cité une fois : consultation ; technique d'allaitement; démonstration nutritionnelle ; hygiène alimentaire ; mesure PB/dépistage ; diarrhée (IEC) ; administration Vitamine A ; prise en charge mère ; allaitement continu

3) Avez-vous reçu des conseils sur la façon de faire mieux grandir votre enfant ?

OUI 173 = 96%
NON 7 = 4%

3A. Si oui, lesquels?

a) L'allaitement exclusif 131=73%
b) L'enrichissement de la bouillie 105=58%
c) La fréquence de donner à manger à l'enfant 17=9%
d) L'alimentation riche et variée 61=34%
e) Les aliments riches en vitamines 69=38%
f) Le traitement des enfants malnutris 22=12%
g) Autres à préciser _____

- Aliments de complément 26 = 14%
- Hygiène alimentaire 13 = 7%
- Vaccination 11 = 6%
- Hygiène corporelle 10= 6%
- Dormir sous moustiquaire imprégnée d'insecticide (6)
- Technique d'allaitement (4)
- Planning familial (3)
- Administration Vitamine A (2)
- Allaitement continu (2)
- Consommation des fruits (2)
- Utilisation du Plumpy Nut (2)

Cité une fois : consommation de sel iodé ; administration Vitamine A aux FPPI ; allaitement maternel exclusif ; revenir en cas de malnutrition ; bien alimenter l'enfant ; démonstrations culinaires

3B. Qui vous a donné des conseils ?

a) Chef de poste 93=52%
b) Matrone du CScom 149 =83%
c) Relais communautaire 47=26%
d) Groupement féminin 26=14%
e) Grand'mère (formée en nutrition) 5=3%
f) Radio 52=29%

g) Télé 41=23%
h) Parents 10=6%
i) Autres à préciser _____
- Agent vaccinateur 22 = 12%
- Autres femmes (3)
- Lors des vaccinations (2)
- Agent PNLP (2)

Cités une fois : Superviseurs Régionaux et Districts ; pendant une formation ; animatrice de PLAN

4) Si votre bébé a été pesé, avez-vous reçu les conseils sur l'état nutritionnel de votre enfant? (SI NECESSAIRE, DONNEZ DES EXEMPLES : IL GRANDIT BIEN, IL A MAIGRI, etc.)

OUI 131 = 73%
NON 48 = 27% (+1 un enfant qui n'a pas été pesé)

4A. Si oui, quels conseils?

a) Votre enfant grandit bien 85=47%
b) Votre enfant a perdu du poids 48=27%
c) Conseils sur l'alimentation 68=38%
d) Quand revenir à la pesée 31=17%
e) Autres à préciser _____

- Vaccination (3)
- Allaitement optimal (2)
- Conseil sur l'alimentation (2)

Cités une fois : hygiène de l'alimentation de l'enfant ; donner la bouillie à l'enfant ; augmenter quantité de nourriture ; conseil CPN/CPON ; prise en charge mère ; don d'aliment thérapeutique ; utiliser MII 1

5) Est-ce que votre village a des personnes ou une personne qui suit la croissance de l'enfant ?

OUI 151 = 84%

NON 28 = 16%

Ne sais pas 1

6) Si oui, que font-elles (fait-elle)?

a) Promotion de l'allaitement maternel exclusif 88=49%
b) Comment préparer de la bouillie enrichie 62=34%
c) Les aliments en plus du lait maternel 53=29%
d) Démonstrations nutritionnelles 28=16%
e) La pesée/ traitement de l'enfant malnutris (10)

f) Autres à préciser_____

- Dépistage/prise en charge 12 = 7%
- Hygiène alimentaire de l'enfant 11 = 6%
- Participer dans les campagnes 10 = 5%
- Vaccination (9)
- Distribution médicaments (9)
- Hygiène corporelle (6)
- Je ne connais pas leur rôle (5)
- Conseil MII (4)
- Mobilisation sociale (3)
- Rappels sur le RDV prochain de vaccinations (2)
- Visite à domicile (2)
- Consultation à temps (2)
- IEC (2)
- Administration de Vitamine A aux enfants (2)
- Habiller bien l'enfant (2)

Cités une fois : prévention du paludisme ; CPN ; planning familial ; aliments compléments ; référence aux CSCom; habiller bien l'enfant; lavage des mains ; fréquence alimentation de l'enfant ; donner bien à manger à l'enfant ; consommer sel iodé ; déparasitage systématique des enfants

7) Avec quelle fréquence avez-vous des contacts avec ces ou cette personne?

a) une fois seulement (6)
b) de temps en temps 45=27%
c) 2 fois dans l'année (3)
d) tous les mois 13=7%
e) toutes les semaines 28=16%
f) autres à préciser_____

- Aucune 17 = 9%
- Ne sais pas (7)
- Lors de la vaccination (6)
- 2-3 fois/mois (5)
- Tous les 15 jours (4)
- Deux fois/mois (3)
- Plusieurs fois dans le mois (2)
- Deux ou trois fois/an (1)
- Une fois tous les 2-3 mois (1)

8) Avez-vous déjà entendu les messages sur l'alimentation de l'enfant à la radio ?

OUI 130 = 72%

NON 50 = 28%

8A. Si oui, quels étaient les thèmes ?

a) Perte de poids de l'enfant et ses causes 7=4%
b) L'allaitement maternel exclusif 82=46%
c) L'alimentation des enfants à partir de six mois 63=35%
d) Les aliments riches en vitamine A (aliments qui peuvent lutter contre la cécité crépusculaire) 43=24%
e) Le sel iodé 27=15%
f) L'alimentation de l'enfant malade 10=6%
g) L'alimentation de la femme enceinte ou allaitante 26=14%
h) L'hygiène et le lavage des mains à l'eau et au savon 61=34%
i) La diarrhée et la préparation d'eau sucrée salée 18=10%
j) L'importance des consultations au centre de santé 39=22%
k) L'utilisation des moustiquaires traitées 45=25%
l) Autres à préciser _____

- Hygiène alimentaire de l'enfant 9 = 5%
- Faire correctement la vaccination (5)
- Planning familial (4)
- Aucun message sur la nutrition (4)
- Aliments de complément (2)
- Allaitement optimal (2)

Cité une fois : hygiène corporelle de l'enfant ; vaccination ; prévention diarrhée ; mise au sein précoce ; malnutrition ; importance de Vitamine A pour enfant ; protection de l'enfant contre le froid ; importance de la CPN ; hygiène du milieu ; palu chez l'enfant

9) Avez-vous entendu parler du zinc pour le traitement de la diarrhée chez l'enfant ?

OUI 45 = 25%
NON 135 = 75%

10) Pourquoi c'est important pour une femme enceinte de dormir sous moustiquaire ?
(Cocher même si la moustiquaire n'est pas traitée)

a) éviter le palu 173 = 96%
b) autre à préciser _____
- Empêcher les contacts avec mouches, moustiques (8)
- Lutter contre les maladies (4)

Cité une fois : éviter démangeaisons ; éviter les avortements ; naissances prématurées ;
éviter l'anémie

11) Avez-vous constaté chez les femmes d'ici, un changement dans l'alimentation de leurs enfants?

OUI 159 = 88%
NON 20 = 11%

11A. Si oui, lesquels ?

a) L'allaitement exclusif 119=88%
b) L'enrichissement de la bouillie 103=57%
c) L'alimentation riche et variée 52=29%
d) L'alimentation plus riche en vitamines (tous les micronutriments qu'elle mentionne) 56=31%
e) La fréquence de donner à manger à l'enfant 22=12%
f) Autre à préciser _____

- Dormir sous moustiquaire 9 = 5%
- Prise en charge/rations 8 = 4%
- Augmentation du taux de vaccination 8=4%
- Lavage des mains/hygiène 7
- Allaitement optimal 7
- Hygiène de l'enfant 6
- Hygiène de l'alimentation de l'enfant 4
- Planning familial 4
- Diminution des maladies 4
- Consommation de sel iodé 3
- SRO 2
- Fréquentation du centre de santé 2

Cité une fois : distribution ATPE ; alimentation de l'enfant malade ; gain de poids ; augmentation CPN ; participation à la SIAN

12) Avez-vous des suggestions pour l'amélioration et la continuité des activités pour promouvoir le bien être des enfants ?

- Soutien nutritionnel des enfants/rations 51= 28%
- Conseil et éducation nutritionnelle 29= 16%
- Faire des démonstrations nutritionnelles 19=11%
- Prise en charge des maladies des enfants 11=6%
- Doter CS en intrants suffisants 11 = 6%
- Doter CS en médicaments 9 = 5%
- Continuer le projet/renforcer 9=5%
- Sensibiliser la population (5)
- Promotion nutrition/santé (4)
- Promotion de l'alimentation de la mère (4)
- Former les groupements de femmes (4)
- MII (3)
- Faire les émissions radio vers 18h ou la nuit (3)
- Visites à domicile par les relais (3)
- Formation communautés et prestataires (3)
- Planning familial (3)
- Sensibilisation pour la fréquentation du centre de santé (2)
- Suivre conseils de l'agent de santé (2)
- Prise en charge de malnutri aigue (2)
- Allaitement exclusif (2)
- Continuer avec IEC (2)

Cité une fois : surveillance préventive de l'enfant ; construction d'UREM ; traitement des femmes allaitantes ; contrôle état de santé/contrôle état sanitaire/consultation ; formation des prestataires ; promotion AGR ; encourager personnel ; formation sur le maraichage ; renforcer la collaboration entre agents de santé et leaders communautaires ; impliquer les hommes ; promotion de l'hygiène ; promotion des aliments locaux ; organiser des pesées des enfants dans les villages ; vaccination

13) Avez-vous des questions pour moi ?

- Comment faire l'espacement des naissances ?
- Comment faire la prise en charge des enfants rapprochés ?

Evaluation Finale du Projet SAN+
Synthèse des Questionnaires : Radios

4 Questionnaires au total

1. Avez-vous été forme par le projet dans le développement des messages pour promouvoir la nutrition ?

OUI 4

NON 0

1A. Si oui, quelle était la formation ?

a. Actions Essentielles en Nutrition = 3
b. L'alimentation du nourrisson et du jeune enfant = 2
c. La nutrition des femmes = 1
d. Importance de la supplémentation en vitamine A = 3
e. Aliments riches en vitamine A = 3
f. Autre à préciser _____

- Allaitement maternel = 1
- SIAN = 1
- Nutrition = 1

2. Avez-vous reçu des supports ou autres matériels ?

OUI = 4

NON = 0

Description :

- Cassettes sur les AEN - 2
- Cassettes sur la nutrition – 1
- Cassette sur l'alimentation de complément - 1

3. Selon vous, quels thèmes intéressaient les écouteurs le plus ?

a. Allaitement maternel exclusif - 4
b. Alimentation du jeune enfant de 6-23 mois - 3
c. Nutrition des femmes - 2
d. Hygiène et lavage des mains - 1
e. Importance de l'utilisation des moustiquaires - 0

f. Importance de la supplémentation en VA - 1
g. Aliments riches en vitamine A - 1
h. Autres : SIDA, changement de comportement, consommation de sel iodé, vaccinations (chacun mentionné une fois)

4. Le projet prendra fin le 30 septembre 2009. Si après il n'y a plus de fonds pour les contrats pour les émissions, quelles activités pourriez vous continuer à mener avec vos propres ressources ?

Toutes les activités nutritionnelles – 1

Les messages sur la nutrition - 3

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5. Si nous avons quelques nouveaux messages est-ce que vous serez d'accord de les transmettre ?

OUI 4

NON 0

6. Avez-vous des suggestions pour l'amélioration et la continuité des activités nutritionnelles ?

Diffusion des messages ; envoyer les messages nutrition en copie dure qui seront traduits en langue locale par les animateurs ; subvention des radios par les partenaires (2) ; formation des animateurs radio ; équiper la radio en supports de communication sur la nutrition

7. Avez-vous des questions pour moi ?

- Continuité des activités de nutrition de HKI ?
- 3 ans trop court pour évaluer l'impact des activités du projet ?
- Est-ce que les formations de HKI vont continuer ?
- Quel sort réservé aux radios ayant signé contact avec HKI ?

Evaluation Finale du Projet SAN+
Tally – Relais
Total 33

1. Quelles sont les activités que vous menez pour promouvoir la croissance de l'enfant de 0-23 mois?

a. Causerie de groupe de mères sur l'allaitement maternel exclusif **100%**
b. Causerie de groupe de mères sur l'alimentation de l'enfant à partir de 6 mois **88%**
c. Causerie de groupe de mères sur l'alimentation de la femme enceinte/allaitante **57%**
d. Causerie sur l'importance des aliments riches en vitamine A **60%**
e. Causerie sur l'importance de laver les mains avec du savon/cendre **45%**
f. Causerie sur l'importance de la consommation du sel iodé **36%**
g. Conseils sur le traitement de la diarrhée **30%**
e. h. L'importance de dormir sous moustiquaires traitées **57%**
i. Autres à préciser _____
--importance du dépistage **39%**
--importance de la fréquentation des CSCom **57%**
Aussi cités : promotion de la FAF (1) ; AM jusqu'à 24 mois et MAMA (LAM) (2); promotion de l'hygiène (4) ; campagnes de vaccination (5) ; promotion de la CPN (1) ; déclaration de la naissance (1)

2. Faites-vous le dépistage des enfants ?

OUI = 100%

2A. Si oui, avec quelle fréquence ?

a. Chaque mois **51%**
b. Quand le vaccinateur et la matrone visitent notre village **6%**
c. De temps en temps **33%**
d. Ne sais pas
e. Autres à préciser _____
-- un cas suspect **12%**
Aussi cités : au cours des causeries (1); tous les enfants malades (1) ; au cours des campagnes (2) ; 1 fois par semaine (2)

2B. Au cours de ce dépistage, que dites-vous à la mère si la bande est dans la zone jaune ?

a. Conseiller la mère de donner les aliments en dehors du lait maternel **70%**
b. Référer l'enfant au CSCom **88%**
c. Autres à préciser _____
--informer la mère que l'enfant est malnutri **30%**
Aussi cités : accompagner l'enfant au CSCom (1) ; donner de la farine enrichie (1)

3. Avez-vous des supports matériels éducatifs pour expliquer aux mères comment nourrir leurs enfants ?

OUI =82% NON=18%

3A. Si oui, au cours de quelles activités est-ce que vous les utilisez ?

a. A la causerie **64%**
b. Au centre de santé **3%**
c. Quand je fais les visites à domicile **39%**
d. Au dépistage des malnutris **57%**
e. Autres à préciser _____
--lors des campagnes de masse (1) et la stratégie avancée (1)

4. Qu'est-ce qui vous motive à faire votre travail de relais ?

a. Le respect des personnes du village **51%**
b. Contribuer à l'amélioration de la santé des enfants **70%**
c. Les contacts avec les supervisions en nutrition **9%**
d. L'appui du village (peut être travail dans mes champs, des vivres, etc.) **12%**
d. Autres à préciser _____
--connaissance apprise au cours des formations **21%**
--contribuer au développement du village **15%**
--aussi cités : appui du chef de poste (1) et intérêt à la santé (2)

5. Avez-vous entendu parler du zinc pour le traitement de la diarrhée chez l'enfant ?

OUI = 76% NON = 24%

6. Connaissez-vous les avantages liés au lavage des mains à l'eau et au savon ?

OUI = 100%

6A. Si oui, à quelles occasions faudrait-il se laver les mains ?

a. Avant de préparer à manger **67%**
b. Avant de donner à manger à l'enfant (ou avant de manger) **97%**
c. A la sortie des toilettes **100%**
d. Après avoir géré les excréments de l'enfant **57%**
e. Tous les quatre ont été mentionnés **30%**
f. Autres à préciser _____
Aussi cité : avant de donner des médicaments (1) ; avant de laver le visage (1)

7. Avez-vous constaté une amélioration dans l'alimentation des enfants dans cette communauté ?

OUI = 100%

7A. Si oui, lesquels ?

g) L'allaitement exclusif **88%**
h) L'enrichissement de la bouillie **67%**
i) L'alimentation riche et variée **48%**

j) L'alimentation plus riche en vitamines **42%**
k) La fréquence de donner à manger à l'enfant **15%**
l) Autres à préciser _____
--adhérence à la prise en charge **15%**
--respect des mesures d'hygiène **12%**
--réduction des maladies **9%**
Aussi cités : fréquentation des CSComs (3) ; utilisation des MII (2) ; adhésion à la vaccination (2) ; prise de sein (1) ; respect du PF (2)

8. Avez-vous rencontré des difficultés au cours de l'exécution des activités de nutrition ? [DEFINIR NUTRITION SI NECESSAIRE]

OUI =70% NON = 30%

8. A. Si oui, lesquelles ? [NE PAS LIRE]

a. Mobilité du personnel **0%**
b. Motivation du personnel **12%**
c. L'adhésion de la communauté **36%**
d. Difficultés dans le changement des pratiques des mères **36%**
e. Ruptures de stock d'intrants **21%**
f. Manque de certains intrants **3%**
g. Insuffisance du personnel **6%**
h. Augmentation de la charge du travail **6%**
i. Autres à préciser_____
--manque de moyens de déplacement **9%**
--distances de certaines mères **9%**
--aussi cités : taux d'abandons élevé (1) ; difficultés de déplacement durant l'hivernage (1) ; insuffisance de supports (1)

9. Avez-vous des suggestions pour l'amélioration et la continuité des activités nutritionnelles ?

---continuer l'approvisionnement des intrants **61%**
---continuer la formation des relais **27%**
---motiver/compenser les relais **21%**
---augmenter les supports pour les causeries **18%**

Aussi cités : augmenter le nombre de prestataires (3) ; intensifier la sensibilisation (2) ; activités de génération des revenues (1) ; multiplier la fréquence des émissions radios (1) ; implication des ASACOs (1) ; mettre les intrants au niveau des relais (2) ; fournir des vélos (1)