PERU CHILD SURVIAL XVI
Departments of Cajamarca & La Libertad

REDESS

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FINAL EVALUATION

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ACRONYMS

ANA	Analysis of Learning Needs (Analisis de Necesidades de Aprendizaje)
AOP	Annual Operating Plan (POA in Spanish)
ASOACS	CHA Association
ARI	Acute Respiratory Infection
BCC	Behavior Change Communication
CDD	Control of Diarrheal Disease
CHA	Community Health Agent (includes promoters, TBAs, women leaders)
CHP	Community Health Promoter (Volunteer)
COACS	CHA Committee
CODECO	Community Development Committee
CS	Child Survival
CSHGP	Child Survival and Health Grant Program
DCM	Diarrheal Case Management
DIP	Detailed Implementation Plan
ENLACE	Previous CARE Peru CS project 1996-2000.
FE	Final Evaluation
FOGEL	Facilitating Local Government Participation in Health
HC	Health Center
HH/C IMCI	Household/Community Integrated Management of Childhood Illnesses
HIS	Health Information System
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficient Syndrome
HQ	CARE Headquarters in Atlanta
IEC	Information, Education, Communication
IMCI	Integrated Management of Childhood Illnesses
KPC	Knowledge, Practice, and Coverage Survey
LQAS	Lot Quality Assurance Sampling
MNC	Maternal Newborn Care
MOH	Ministry of Health (MINSA)
MTE	Mid Term Evaluation
NGO	Non-Governmental Organization
ORS	Oral Rehydration Solution
PCM	Pneumonia Case Management
PVO	Private Voluntary Organization
SIVICS	Community Health Information System
TBA	Traditional Birth Attendant
TOT	Training of Trainers
TT	Tetanus Toxoid
USAID	United States Agency for International Development
WRA	Women of Reproductive Age

Table of Contents

A. Summary

CARE Peru received a Child Survival XVI grant to implement a four year project (10/00-9/04) in two northern Departments, La Libertad and Cajamarca. REDESS is a follow-on project to the previous ENLACE CS project 1996-2000. Many of the strategies which were proven effective during ENLACE were modified, improved, and implemented as part of REDESS. The replication of these interventions in a different geographic area was successfully accomplished. The underlying goal of these projects has gone beyond implementing technically sound health interventions to a broader scope of changing social structure-within communities and local governments. REDESS received a four month no-cost extension (through 1/05). A participatory Final Evaluation was conducted during 12/04 by a 14-person team of representatives from MOH central, regional and local offices, CARE Peru and headquarters, and an external evaluator.

The project goal of improved maternal-child health results from reaching four intermediate results through a partnering relationship between CARE Peru, the Ministry of Health (MOH), Community Health Agents (CHAs), local governments and community organizations within a national process of Health Sector Reform and decentralization. These changes have focused on health promotion, increased local control of resources and decision making, and strengthening of strategic alliances among all stakeholders. CARE has positioned itself to be ahead of these changes, developing models for local control and networks before legislation has mandated them. The institutionalization of interventions is a key element of sustainability.

IR 1 Improved coverage and quality of services provided by health networks REDESS influenced both the demand for services and the supply of quality services. The focus was not on improving the technical capacity of the MOH, rather on improving community outreach and management skills.

IR 2 Increased caretaker knowledge and practice

REDESS did not reach many preset targets for changing knowledge, in part because indicators were complex and measured multiple answers. The project did make significant changes in practices, for example:

- Increased from 48% to 78% mothers who seek appropriate medical treatment for children age 0 to 23 months with signs of pneumonia
- Increased from 55% to 84% women with an obstetrical complication who are treated by a health professional
- Increased from 56% to 81% women with 4 or more prenatal care visits

- Increased from 33% to 83% children 0 - 6 months exclusively breastfed

The approach utilized to stimulate behavior change through campaigns using a variety of methods and media, support groups, and education sessions was an effective way to improve the health of the population.

IR 3 Improved quality and coverage of care provided by CHAs.

The implementation by CHAs of the referral system, community support groups, and emergency evacuation plan have increased demand for services, linkages between Health Centers and communities have been strengthened by improving MOH staff skills and providing opportunities for coordination.

IR 4 Strengthened relationships between CHA associations, governments and civil society. The emphasis was to strengthen the structure within which technical interventions are implemented. This structure consists of CHAs, CHA and community organizations, MOH staff, local governments, and consensus building committees. CHA organizations have gained the skills necessary for self-management and for collaborating with the MOH and other community organizations. Community committees have given people a voice and mechanism for reaching consensus within an organized community.

REDESS has been able to successfully meet all intermediate results, or make substantial progress in completing them. The strength of this project was not the technical focus, (divided between maternal newborn care 40% and 60% integrated IMCI (nutrition 30%, pneumonia case management 15%, control of diarrheal disease 15%) but on the cross cutting approaches which were implemented. The first two strategies are expected to be adopted by program partners for wider scale applicability:

- Community Health Information System (SIVICS) including community mapping of vulnerable groups, census, and referral system,is a key tool for strengthening the link between communities and the health sector.
- Structure, organization, and operational skills of the CHA organizations
- Strengthening of community development committees, CHA organizations, and local government structures and the linkages united them.
- Health facility strengthening through improved organization and training of health staff, including IMCI training

Sustainability can be viewed based on four principles- **permanent behavior change**- KPC survey results show an increase in knowledge, practices, and coverage; **supportive structures**- REDESS has woven together a structure to support health activities; **links with permanent institutions**-The strength

of this project has been the focus in this area that is very much in step with current national political restructuring, and **financial support**- REDESS has encouraged financial sustainability at various levels.

The inclusion of partners and communities throughout the entire process foments excellent community ownership and pride in the work accomplished. The project took on the very difficult task of weaving together a structure capable of sustaining improved health practices and services. The improvements seen to date are the results of the sum of training at various levels. The fabric that has been woven is still very fragile, but the project has been able to successfully improve capacity, leaving human resources capable of continuing, and improving upon, health activities. REDESS has left excellent models for decentralization and increased citizen participation, but these models need to be systematized and replicated in other areas, including within other sectors as a model for grassroots development, CARE Peru and partners are actively seeking funding to support scaling up.

Key lessons learned during project implementation include:

- Information collection is not a valid activity unless that information is used for decision making. All projects need to create a culture of information use.
- Implement principal activities during the first two years of the project, and use the last two tears for monitoring and supervision
- Documentation and marketing of successful models is a long term challenge for CARE and its partners.
- Adult Education Methodologies should be used in all training events
- Training should never be held alone, without a follow-up plan for monitoring and supervision, particularly in IMCI
- Supervision visits made with an integrated focus and team are most effective
- Having a greater understanding and sensitivity to the local culture makes communication more effective.
- Advocacy and diffusion of project experiences is needed at local, regional and central levels.
- To achieve behavior change it is important to use a variety of media and techniques, each with the same standardized message.

B. Assessment of Results and Impact of the Program

1. Results: Summary Chart

Technical Interventions: Measured by KPC Survey at Baseline and Final

	Final	Reached Target	Improved Indicator
Pneumonia Case Management (15%): Improve pneumonia case management in children age 0-23 months			
Increase from 5.7 to 80% mothers who recognize two signs of pneumonia	59.6%	No	Very significant improvement *P=.000*
Increase from 47.8 to 80% mothers who seek appropriate medical treatment for children age 0 to 23 months with signs of pneumonia	78.1%	Yes	Significant Improvement *P=.001*
Prevention and Control of Diarrheal Disease (15%): Reduce prevalence of diarrhea in children age 0-23m			
Increase from 0.3 to 60% mothers with children 0 -23 m. that correctly identify at least two signs of dehydration and two signs of severe diarrhea	6.2%	No	Significant Improvement *P=.000*
Increase from 36.7 to 70% mothers, with children age 6 to 23 months with diarrhea, that receive the same or more food during the episode	56.2%	No	Significant Improvement *P=.006*
Decrease from 25.2 to 10% children age 0-23 moths with diarrhea who receive antibiotics during the episode	18%	No	No
Maternal Health (40%): Improve prenatal care, early detection of obstetric risk and post-natal practices			
Increase from 19.9 to 60% women of reproductive age that recognize at least two danger signs each during pregnancy, childbirth and post-partum	18.5%	No	No, there were problems with measuring this indicator as few women mentioned 2 danger signs, for each stage, but approx 65% could mention 1 sign per category
Increase from 56.3 to 80% pregnant women with 4 or more prenatal health care visits	81.1%	Yes	Very significant improvement *p=.000*
Increase from 37.6 to 80% women of reproductive age who had received two or more doses of tetanus toxoid before their last childbirth	54.5%	No	Very significant improvement *p=.000*
Increase from 55.4 to 70% women with an obstetrical complication who are treated by a health professional	84.3%	Yes	Very significant improvement *p=.000*
Increase from 11.1 to 60% mothers with children under two who can recognize three or more danger signs in newborns	27.2%	No	Very significant improvement *p=.000*
Nutritional Improvement (30%): Improve child feeding practices in children age 0 to 23 months			
Increase from 33.3 to 70% children 0 to 6 months exclusively breastfed	82.5%	Yes	Very significant improvement *p=.000*
Increase from 11.8 to 70% children age 6-23 months who receive five feedings per day	31.5%	No	Very significant improvement *p=.000*
Increase from 8.7 to 60% children age 6-23 months who receive treatment for parasites every 6 months.	11.7%	No	No

Additional project indicators are included in respective sections on capacity building and sustainability. The complete KPC report is included in Annex D.

2. Results: Technical Approach

a. Summary

CARE Peru received a Child Survival XVI grant to implement a four year project (October 2000-September 2004) in the northern Andean highlands in two contiguous Departments, La Libertad and Cajamarca. The *REDESS* Child Survival Project was implemented by CARE Peru, in collaboration with the Ministry of Health (MOH), Community Health Agents (CHAs) and local governments. The *REDESS* Project covers the entire province of Sanchez Carrion in the Department of La Libertad, consisting of 12 Districts, and three of the four districts in the province of Cajabamba in the department of Cajamarca. (Each department consists of provinces and each province is made up of districts.)

REDESS is a follow-on project to the previous ENLACE CS project 1996-2000 in provinces of Otuzco and Julcán in the Department of La Libertad. Many of the strategies which were proven effective during ENLACE were adapted, improved, and implemented as part of REDESS. To understand the basic philosophy of both of these projects, it is helpful to look at the meaning of the two names; ENLACE translates to "links" and REDESS means "networks". The underlying goal of these projects has gone beyond implementing technically sound health interventions to the larger scope of changing social structure and health care interaction-within communities and local governments.

GOAL: By the year 2004, to have improved the health of children under age five and women of reproductive age, with a focus on decreasing maternal, perinatal and infant morbidity and mortality, in 382 rural communities in Sanchez Carrion and Cajabamba provinces.			
Result 1 Improved MOH capacity for community outreach.	**Result 2** Increased community responsibility for improved personal health.	**Result 3** Sustained provision of front line services by CHAs.	**Result 4** Sustained participation of local governments in health management.
Intermediate Result 1 Improved coverage and quality of services provided by local health networks	**Intermediate Result 2** Increased caretaker knowledge and practice	**Intermediate Result 3** Improved quality and coverage of care provided by CHAs.	**Intermediate Result 4** Strengthened relationships between CHA associations and local municipal governments and civil society.

The project premise of improved maternal-child health was assumed to result from an emphasis on positive changes in health knowledge, attitudes and practices by individuals, families, communities and local health units through a partnering relationship between CARE, the Ministry of Health, local government and community organizations within a national process of modernization of health services. The partnership will ensure the institutionalization of program interventions as a key element of sustainability of health improvement actions.

Child survival interventions prioritized maternal newborn care (MNC) with 40% of project effort, followed by nutritional improvement at 30% effort, and pneumonia case management (PCM) and control of diarrheal disease (CDD) at 15% effort each. All interventions were implemented in accordance with plans outlined in the DIP (Detailed Implementation Plan).

The project proposed to serve 382 rural communities (269 in Sanchez Carrion and 113 in Cajabamba) with an estimated population of 160,169 and to provide benefits to 67,116 beneficiaries, consisting of 22,659 children under age five and 44,457 women of reproductive age (WRA). The actual project coverage was 348 communities (268 in Sanchez Carrion and 80 in Cajabamba). This change significantly effected the direct beneficiary population (121,957 actual vs. 160,169 planned). However the capacity-building and training activities for MOH staff in the province of Sanchez Carrion in the Department of La Libertad and the province of Cajabamba in the department of Cajamarca provided for improvements in health care for the entire MOH coverage area.

METHODOLOGY

REDESS received a four month no-cost extension (through January 2005) consequently the Final Evaluation (FE) was conducted during November/December 2004. A participatory evaluation was conducted by a 14-person evaluation team of representatives from MOH central office, MOH regional offices of La Libertad and Cajamarca, local Health Network MOH, CARE Peru REDESS, CARE USA headquarters, and led by an external evaluator, author of this document. Results from the FE were presented to CARE Peru and partners through a series of opportunities, including a presentation in Lima, attended by representatives from central MOH (including the new Health Promotion division); regional MOH, USAID, and

other NGOs. For additional information on the methodology used please see Annex B, for information on team members, see Annex A, and Annex C for a list of persons interviewed and contacted during the FE. The main objective of the FE was to identify lessons learned during the implementation of the REDESS project which would be useful to CARE, the MOH, or other organizations implementing similar projects in the future. Lessons learned are underlined and included throughout the document, as well as summarized in the final section.

The Summary Chart on page 3 summarizes the principal project indicators that were measured through a KPC (Knowledge, Practices, Coverage) Survey in 2000 and repeated in 2004. A copy of the complete final KPC Survey report is included in Annex D. Nine of the 13 (69%) indicators did not meet the target set at baseline, but 77% (10 of the 13) indicators showed a significant improvement. The strength of this project was not the technical focus, (which was adequate and in line with MOH policy) but on the cross cutting approaches which were implemented, the most important being:

- Community Health Information System (SIVICS)
- Health facility strengthening through improved organization and training of health staff, including IMCI (Integrated Management of Childhood Illnesses) training
- Strengthening of community development committees (CODECO), CHA committees and associations, and local government structures and the linkages united them within the context of new opportunities for action through decentralization to municipal governments and increased opportunities for civil society participation (e.g. "participatory budget process").

b. Progress report by intervention area

Maternal Newborn Care (MNC) (40%)

The main activities completed during the four-year project were:

1. Focus education in communities and training for CHAs (including traditional birth attendants) on recognizing signs and symptoms of danger during pregnancy, birth, postpartum and in the newborn
2. Organize Training of Trainers (TOT) workshops for MOH personnel to train CHAs in recommended prenatal and postnatal health care actions
3. Train CHAs to assist pregnant women to develop a Birth Plan

4. Development of SIVICS for surveillance of WRA which allowed CHAs to concentrate monthly home visits on households with pregnant women and, with referral and counter-referral for pre/post-natal care and follow-up.
5. Provide CHAs with health education materials for maternal health promotion to use in talks to groups of mothers or individual counseling to pregnant women.
6. Trained some MOH staff in the BABIES methodology to provide a deeper understanding of the causes of neonatal mortality and help determine appropriate interventions at the facility and community levels.
7. Train CHAs and CODECOs to motivate their communities and develop sustainable emergency evacuation plans
8. Work with the hospital and health centers (HCs) to provide training in emergency obstetric care, and supply two-way radios
9. Promote use of professional health personnel for delivery in either a home or institutional setting
10. Train mothers to perform basic interventions for newborns and to recognize danger signs.

These activities had the following impact, as measured by KPC Survey:

Indicator	Final
Increase from 19.9 to 60% WRA that recognize at least two danger signs each during pregnancy, childbirth and post-partum	18.5%
Increase from 56.3 to 80% pregnant women with 4 or more prenatal health care visits	81.1%
Increase from 37.6 to 80% women of reproductive age who had received two or more doses of tetanus toxoid before their last childbirth	54.5%
Increase from 55.4 to 70% women with an obstetrical complication who are treated by a health professional	84.3%
Increase from 11.1 to 60% mothers with children under two who can recognize three or more danger signs in newborns	27.2%

The first indicator for danger signs was unchanged by project activities but broken down shows an increase in knowledge; 76% of women surveyed could name one sign of danger during pregnancy (an increase from 27% at baseline) and 68% a danger sign during birth (an increase from 26%). More than half of the women surveyed recognized vaginal bleeding (the principal cause of maternal mortality) as a danger sign during pregnancy, 45% as a danger sign during birth, and 52% postpartum.

It is not logical that 81% of women had 4 prenatal visits and only 55% had tetanus toxoid (TT). The reason for this difference is that the denominator used in calculating women with prenatal care was only those women with a health card, whereas the denominator for women with TT was all women in the survey, but using the health card to verify vaccination. This does point out a potential problem related to accuracy of the information or retention of maternal immunization card.

The percent of births that took place in a health facility did not significantly change (17% at baseline to 24% at final) even though people informally reported that more women were delivering in health facilities. However, almost half (45%) of births are attended by health personnel in either a health facility or a home delivery.

IMCI

The remaining 60% of project effort was implemented under the integrated IMCI approach. The principal activities included:

- Training of MOH staff in HH/C IMCI (Household and Community) and Clinical IMCI
- Training of CHAs in two IMCI modules- Well Child and Sick Child
- Providing educational materials in two IMCI modules- Well Child and Sick Child for CHAs to use in educating community members
- Assist CHAs to develop appropriate techniques for community health education activities
- A supervision system for HH/C IMCI has been developed with the MOH and promoted by REDESS but the actual implementation was very limited. Supervision includes a CHA interview, client (mother) interview, and home visit observation.
- Implemented SIVICS for monitoring key IMCI activities

Project indicators did not include specific IMCI measures, but the project did measure Rapid CATCH indicators during the final KPC Survey. Details on all Rapid CATCH indicators can be found in Annex D. Some significant observations were:

- The percent of mothers who reported increased liquids and continued feeding for children 0–23 months with an illness in the 2 weeks prior to the survey increased significantly from 18% to 43%.

- The indicator for signs requiring care seeking was incorrectly asked during the survey. As this was CARE Peru's first experience in collecting Rapid CATCH indicators, some misinterpretation is understandable. CARE should increase training on the use of KPC 2000+, including the Rapid CATCH indicators, to ensure correct interpretation and data collection.
- Immunization was not a specific project focus but the KPC survey showed that children 12-23 months of age with all vaccines increased from 46.5% to 69%.

An additional capacity building indicator was included which relates to IMCI implementation:

Indicator	Result Achieved	Comment
80% of CHAs receive sufficient supplies of essential medicines (cotrimoxazole and ORS).	0% of CHAs have supply of essential medicines (cotrimoxazole and ORS).	MOH policy does not allow CHAs to distribute cotrimoxazole. Due to a shortage of supply of ORS, CHAs are taught to advise mothers to increase liquids during diarrhea and if danger signs are present, to refer the child to a HC

Work with MOH at all levels to advocate for changes in policy which limit child survival activities e.g. distribution of cotrimoxazole and ORS.

Nutrition (30%)

Principal project activities included:

1. Infant and child nutrition health messages included in all training for CHAs
2. Assist development and articulation between CHAs and local health units of SIVICS for surveillance of children, with referral to HC growth monitoring and nutrition programs
3. Provide CHAs with health education materials on appropriate feeding practices for children, including breastfeeding
4. Provide TOT to MOH to train CHAs in nutrition topics and support group facilitators
5. Create mothers' support groups and demonstration sessions to focus on breastfeeding, use of locally available foods, preparation of weaning foods, balanced diet, hygiene in food preparation, and maternal nutrition.
6. Promote use of growth monitoring services at HC through referral system.

Indicator	Final
Increase from 33.3 to 70% children 0 to 6 months exclusively breastfed	82.5%
Increase from 11.8 to 70% children age 6-23	

months who receive five feedings per day	31.5%
Increase from 8.7 to 60% children age 6-23 months who receive treatment for parasites every 6 months.	11.7%

Exclusive breastfeeding showed a very significant improvement and surpassed the project target. The comparison between baseline and final is not completely comparable as the baseline question ask "have you ever given…" (list of foods and liquids), whereas the final evaluation ask "have you given in the last 24 hours… (list of foods and liquids),

Feeding children 5 times per day did not reach the target of 70%, but the target may have been set too high for changing a practice and should have been stated differently as recommendations for feeding children 6-8 months of age are 2-3 times per day, children 9-11 months is 3-4 times per day, and children 12-24 months is 4-5 times per day. In the final KPC, children 6-23 months of age were fed 4 or more times per day in 60% of cases.

The indicator for parasite treatment was unchanged because although it was a project indicator, the MOH decided to prioritize other activities such as maternal health due to alarming rates of maternal mortality. REDESS respected this re-prioritization and did not implement anti-parasite activities.

Other changes in nutritional practices were observed in the KPC survey, including the addition of oil to children's food that increased from 61% to 92%, and the use of colostrum during the first three days after birth increased from 76% to 93%.

The project also collected the Rapid CATCH indicator for underweight. Levels of underweight (weight for age >-2 standard deviations from WHO/NCHS mean) showed an increase from 15% to 23% comparing baseline to final. While this was not a project indicator, it does point out an alarming trend in the area. Acute malnutrition also showed an increase from 0.3% to 3.7%. Chronic malnutrition (height for age) decreased from 41% to 35% during the same time period. These results are inconsistent with an informal investigation during the FE, in which no factors were found to suggest possible food shortage or severe change in household economic status. CARE

Peru's Title II program in the area should look further into this and/or compare data from its program.

Pneumonia case management (15%)

The prevalence of ARI is much higher in the project area compared with national levels. The prevalence did not change from baseline to final as measured by the KPC Survey (50 to 54), which is much higher than the national level of 20. Due to MOH policy, none of the CHAs interviewed during the FE had cotrimoxazole. This policy has changed recently in a national effort to control prescription drugs.

Project activities included:

1. Organize TOT workshops for MOH personnel to develop training of CHAs in standard case management protocols for pneumonia.
2. Assist development and articulation between CHAs and local HCs of SIVICS for surveillance of at-risk children, monthly reporting of PCM by CHAs, and referral and counter-referral of cases

Increase from 5.7 to 80% mothers who recognize two signs of pneumonia	59.6%
Increase from 47.8 to 80% mothers who seek appropriate medical treatment for children age 0 to 23 months with signs of pneumonia	78.1%

The indicator for recognition of signs of pneumonia did not reach the target, but did very significantly increase. In interviews with CHAs during the FE, all could mention two signs of pneumonia. According to the KPC Survey, women that did not know any sign of pneumonia decreased from 44% to only 19%. Even though the knowledge level did not reach the target, the change in care seeking practice was almost 80%.

Control of diarrheal disease (15%)

There is a high prevalence of diarrhea in the area, compared to national standards. Baseline level was 35% with diarrhea in the previous two weeks and 37% at final (no significant change). The national average is 15%. None of the CHAs interviewed during the FE had ORS due to nationwide shortages resulting from the MOH's lack of funds to purchase ORS. CHAs are taught to advise mothers to increase liquids during diarrhea and if danger signs are present, to refer the child to a HC. The percent of mothers who reported an

increase in liquids and continued feeding for children 0–23 months with an illness in the 2 weeks prior to the survey increased significantly from 18% to 43%. The project is teaching the use of homemade Sugar-Salt solution, but in asking two different people during the FE what the recipe was, two different answers were given, underscoring observations in other countries that implementing a standardized Sugar-Salt solution is very difficult. An increase in all liquids, including breastmilk, should be the emphasis for children with diarrhea, not the preparation of a homemade sugar and salt solution or ORS, if not readily available.

Project activities to support changes in knowledge and practices relating to diarrhea control included:

1. Organize TOT workshops for MOH personnel to develop training of CHAs in standard case management protocols for childhood diarrheal episodes.
2. Establish SIVICS for surveillance of at-risk children, monthly reporting of CDD treatment and preventive education by CHAs, and referral and counter-referral of cases.
3. Perform community risk mapping to motivate community members to improve community hygiene (building of latrines, development of potable water projects).
4. Assist CHAs to organize into associations and to develop the skills necessary to effectively communicate community demands and to coordinate community contribution to municipal-supported projects and Title II projects.
5. Enhanced linkages between CODECOs/CHA organizations, and the participatory budgeting process of local municipal governments which frequently resulted in improved water and sanitation.

Increase from 0.3 to 60% mothers with children age 0 to 23 months that correctly identify at least two signs of dehydration and two signs of severe diarrhea	6.2%
Increase from 36.7 to 70% mothers, with children age 6 to 23 months with diarrhea, that receive the same or more food during the episode	56.2%
Decrease from 25.2 to 10% children age 0-23 months with diarrhea who receive antibiotics during the episode	18%

Dehydrations signs were widely recognized as a sign of severe diarrhea and mention of blood in the stool increased from 3% to 39%, while persistent

diarrhea only increased from 11% to 14%. The problem of persistent diarrhea was not a project focus and this was reflected in the KPC outcomes as well as in interviews with CHAs during the FE.
The lack of more improvement in the indicator for increased feeding during diarrhea may be caused by confusion with the message which was promoted to give food more frequently, but in smaller amounts. Mothers who reported giving less food but more frequently increased from 5% to 56%.

The project did not focus a specific message on decreasing the use of antibiotics and anti-diarrheal medicines, just a basic message included in IMCI protocols.

c. New Approaches

Strategies implemented during the REDESS project built upon successful experiences in the ENLACE project. The replication of these successful interventions in a different geographic area was an objective of the REDESS project which was successfully accomplished. Two key integral strategies are expected to be adopted by program partners for wider scale applicability: a) the elements, organization and use of SIVICS and b) the structure, organization, and operational skills of the CHA Committees and Associations (COACS and ASOACS). Both of these approaches will be discussed in the next section of this document.

3. Results: Cross-cutting approaches

The emphasis of REDESS was to strengthen the structure within which the technical interventions were implemented. This structure consists of community level actors- CHAs, CHA organizations, and CODECOs; MOH staff at HCs, Micro-Networks, Networks, regional and central levels; and local governmental structures, including municipalities and consensus building committees at district and provincial levels. As one of the CARE Peru staff said; "we are weaving together a structure that can sustainably support health activities at all levels."

a. COMMUNITY MOBILIZATION

Community mobilization was the centerpiece of the REDESS project. The main target groups were: **CHAs** (which includes health promoters, traditional birth attendants, and support group facilitators); **CHA organizations**; committees-COACS and associations-ASOACS; and community development committees (**CODECO**). A clear focus on community development came late to the project, particularly in Cajamarca, but the results of this effort had an extremely positive impact on the sustainability of health activities. During the FE, results from the KPC Survey were analyzed with community members and one of the over-riding outcomes of these discussions was the commitment expressed to continue health activities in the future. Concrete ideas were expressed by community members as to how activities could be maintained, such as closer coordination with the MOH and local governments, continued educational activities by CHAs, and income generating projects.

CHAs

"They are our eyes and ears in the communities, and sometimes our hands too." That was the way it was expressed by a nurse in one of the HC visited during the FE. The CHA has been accepted within the MOH structure as a member of the team and given an identification card sponsored by the MOH. REDESS has helped to broaden the role of the CHA to be a more active health agent in the community, rather than only a link for organization with and communication to and from local health posts. They are no longer seen as just an appendage of the MOH, but as a health decision maker in the community. Of the 348 communities where REDESS works, 293 communities (84%) have trained CHAs. There is a total of 554 CHAs trained by the project, approximately 79% are men and 21% women.

Three of the four CHAs interviewed during the FE dedicated 5-10 hours per week to their work as a CHA. Only one of the CHAs worked within the ideal situation, according to MOH policy, that is to have various CHAs per community, each one with a maximum of 30 families. The other CHAs either worked with only a segment of the community (leaving the rest of the community unassisted) or were responsible for 85-110 families.

CHAs mentioned that the main impact of the project has been to improve mothers' hygiene practices and to promote a more balanced diet for weaning children, as well as increased use of health services (births, prenatal control, vaccinations). Health staff that were interviewed felt that the CHAs had been particularly effective in recognizing danger signs and referring patients. Other important contributions of the CHAs are:

- Providing continuous community health education activities primarily through education sessions and home visits. Support group facilitators have established groups for self-learning and demonstration sessions to improve nutrition. CHAs received health education materials to enhance the effectiveness of their education
- Use of SIVICS which includes a community census and map to identify cases and keep track of pregnant women and children under one year of age. CHAs accompany health staff during home visits to high risk families. 85% of communities have a census; 73% have a community map.
- Monthly reports by CHAs track cases of illness seen and educational activities
- Use of the referral system for identifying high risk cases and for encouraging routine health care
- Another component of SIVICS is the emergency evacuation system established in many communities by CHAs and CODECOs
- Development of female leaders through Support Group Facilitators which gives women a chance to develop skills and increase self-esteem while gradually moving into a leadership role within the formal power structure.

Selection criteria to help identify potential CHAs was developed in a checklist format for use by communities. The Human Resources Development office in the MOH Health Network regulates certification of CHAs. Certification requires 1 year of experience, completion of a least two training modules, participation in monthly meetings and monthly reporting, referral of patients, updating of vital statistics and census, providing

education in the community and participation in COACS. The process is a good idea, but took a lot of time. Ways to simplify and streamline the procedure need to be identified. The certification of CHAs can be an effective method for motivating CHAs and ensuring good quality work if the process is carried out in a timely fashion.

CHAs are supervised by an integrated team of MOH staff and a representative from the COACS. CHAs find the supervision they receive to be motivating, but may be problematic to continue in the future due to lack of transportation. They also mentioned the importance of monthly meetings with MOH staff, which in the long run may prove to be more sustainable. Health staff has a monthly meeting with CHAs and COACS to collect information, provide additional training in identified areas of weakness, and problem solve. Some HCs provide competitions with prizes to motivate friendly competition. During final evaluation interviews, HC personnel stated they feel constrained at how little opportunity and means they have to recognize the contributions of CHAs.

During the first year of the project, the desertion rate of CHAs was as high as 30%. In part this was due to unrealistic expectations on the part of some CHAs as to the objectives of the work and the benefits they would receive. The dissemination of project objectives and strategies from the beginning to all communities would clarify expectations and attract CHAs who are more dedicated, and serve to motivate communities.

In the KPC Survey, 88% of women knew that there was a CHA in their community and 55% of those women had received some service from them. The principal responsibilities of the CHA mentioned by mothers was to conduct education sessions, make home visits and refer cases to HCs.

CHA organizations: COACS and ASOACS

One of the unique aspects of REDESS, is the focus on providing an organizational structure for CHAs. All CHAs who work in the catchment area of each health facility come together to form a CHA committee (COACS). They pay a small quota to join the committee. The COACS elects a board of directors, comprised of president, vice president, secretary and treasurer. Monthly meetings are held with CHAs and health facility staff, in which promoters turn in monthly reports, solve problems, and plan activities.

To support the COACSs, an association of CHAs (ASOACS) is formed, comprised of the presidents of each COACS in an MOH micro-network of health facilities. The ASOACS is legally inscribed in the public registry as a private non-profit organization.

REDESS worked to establish four ASOACS in Sanchez Carrion and to strengthen the existing ASOACS in Cajabamba, called APROMSA-PAT. APROMSA-PAT was established in 1994; CARE helped them to reorganize and re-elect leaders and the group now has 22 members or representatives from COACS level? committees. Of the four ASOACS in Sanchez Carrion, two have been legally recognized, one has begun the legalization process, and one is still preparing documentation to begin the process.

REDESS has accomplished the following activities with CHA organizations:

1. Assisted COACS/ASOACS to develop annual operating plans (AOP), which articulate both short-term activities and long-term sustainability strategies, and to monitor the completion of AOPs and reschedule or redesign plans as necessary.
2. Train COACS/ASOACS in the transmission of leadership and organizational skills acquired.
3. Provide training to COACS/ASOACS in skills and tools necessary to provide supportive supervision to CHAs. This unique contribution of the project provides an opportunity for peer review and is an excellent way to motivate and inspire CHAs. The supervision tool creates an environment of positive support by focusing on what the CHA is doing well.
4. Provide training in managerial and leadership skills that enable members to be effective representatives of their communities in local government - civil society structures
5. Provide training in managerial and leadership skills that enable women community leaders to be effective representatives of their communities. Organizations interviewed during the FE reported approximately 21% of their leaders were women.

The COACS/ASOACS developed through REDESS have gained the skills necessary for self-management and for collaborating with the MOH as well as with a variety of other community organizations. According to CHA leaders interviewed during the FE, the main role of the COACS is to supervise and motivate CHAs, providing technical and moral support. They

feel they are now in a better position to negotiate with the MOH and have accomplished the following:

- Prepared AOPs which are reviewed on a regular basis to guide and evaluate progress on their activities. They are monitoring the completion of these plans and various COACS/ASOACS reported that they had accomplished 40-100% of their plans
- Held monthly meetings to coordinate and plan with MOH staff to carry out preventive and promotional activities in communities
- COACS supervised and evaluated the work of individual CHAs jointly with the MOH staff and ASOACS supervised COACS
- Participated in the participatory budget process and consensus building committees, including presenting their AOP for funding
- Organized network and micro-network-wide contests and other IEC activities to promote popular participation in health-related issues
- Motivated individual CHAs to be more involved and committed to their work in the community
- Used exchange visits as a method of motivating and exchanging experiences among the different organizations
- Solicited MOH and other multi-sectoral support for CHAs such as provision of training, supervision, and other types of coordination

Some problems still to be faced by the COACS/ASOACS are:

1. Desertion of CHAs. This is a problem all CS projects face in general and one the CHA organizations will continue to struggle with.
2. Continued supervision activities. The opinion was expressed that realistically supervision could only be carried out once a year to all CHAs. The suggestion was made that they should program less frequent supervisions to CHAs who were working well and prioritize problematic CHAs
3. Economic sustainability. The COACS/ASOACS have been able to raise some funds through activities such as raffles, sale of food at community events, and quotas, as well as establishing small businesses of gardens and small animals. COACS/ASOACS have become active voices in some governmental processes and will need to continue with advocacy and convincing authorities of the value of the organization.
4. The establishment of the ASOACS was mainly accomplished during the last year of the project, not allowing sufficient time to cement to still fragile structure. As one ASOACS director put it; " REDESS has given us the wings to know how to fly." The establishment of organizations such as

COACS/ASOACS and CODECO needs to be started early in the project cycle to allow sufficient time to acquire experience and to gain political support.

CODECOs

Of the 340 communities where REDESS worked, 289 are organized into CODECOs (85%) and 237 of those implemented a health project last year (70%). The percent of women in the CODECOs varies from 10-33% with an average of 24%

CODECO leaders interviewed during the FE felt the most important role of the CODECO was to give people a voice and a mechanism for reaching consensus, and to improve management, organization and coordination in the community. They felt the implementation of the participatory budget process had made the municipalities pay more attention to the CODECOs and that they were now able to effectively negotiate with municipal authorities, "CARE helped them to see that they could solve problems by forming alliances with other organizations, not just the MOH". REDESS has helped community representatives change their focus of requests for municipal input to capacity building activities and not only "inputs" such as water and sanitation systems. This change is only incipient as the majority of funds still focus on infrastructure. Several of the mayors mentioned during the FE that this is exacerbated because the part of the budget assigned to the participatory budgeting process is the amount of the budget specifically assigned to "works".

CODECOs have accomplished the following:

- Popularly elected 7-person committee
- All have statues and most have been legally recognized so they can represent the community
- CHAs are usually a member of the CODECO and are able to ensure a focus on health concerns in community planning processes.
- Written community development plans and AOPs
- Includes representatives from education, agriculture, and economic development, as well as from other organizations, such as teachers, Mothers Clubs, or the Glass of Milk food distribution program.

- Presented AOPs to pertinent government authorities to be included in the participatory budget process, mainly receiving funds for water and sanitation projects.
- Supported CHAs in establishing active and shared-responsibility community emergency evacuation committees in 91% of communities with CHAs in Huamachuco Province and 71% in Cajabamba.

REDESS has developed a comprehensive planning system for use by CODECOs. This includes an adaptation of guidelines provided by the Peru Ministry of Finance for use by Municipal Government in guiding the "participatory budget" process. It is a prioritization of actions based on the scope of the problem (effects everyone, half the people, less than half), the severity of the problem (serious, medium, mild) and the difficulty of the solution (easy, medium, hard). Additional, REDESS helped build the capacity of CODECOS to develop a annual work plan by months of the year in the sectors of health, education and community development, including available resources from the community and external resources. Lastly, although some orientation and skills-building training was provided to CODECOs, evaluation of AOPs and reprogramming of incomplete activities was not yet conducted.

In the final KPC Survey 28% of mothers interviewed knew what CODECO was and 26% knew if one was active in their community. Although 81% did not know the specific functions of CODECO, those who did know said that CODECO coordinates with other organizations (14%), 6% said they help with emergency evacuations and 5% said they support the CHAs.

Begin community mobilization by organizing the development committee, this provides support for the CHAs and the early implementation of project activities such as SIVICS,
An equal amount of effort should be dedicated to community organization and the training of CODECOs as is dedicated to forming CHAs, to provide them with sustainable support.

b. COORDINATION WITH GOVERNMENT STRUCTURES

In Peru, the last decade has been characterized by sweeping institutional changes, including Health Sector reform and governmental decentralization. These changes have focused on health promotion, increased local control of

resources and decision making, and strengthening of strategic alliances among all stakeholders. CARE PERU has identified these structural changes as an opportunity in their recent Strategic Plan (2204-2009). CARE has positioned itself to be ahead of these changes, developing models for local control and networks before legislation has mandated them.

As was previously described, a major focus of REDESS has been on the development and strengthening of CODECOs at the community level and CHA organizations. An additional focus has been on working with elected governmental officials within District and Provincial structures to form networks of decision makers that include COACS, ASOACS and CODECOs. Accomplishments in this area were focused on building the capacity of government-civil society consensus building groups and made possible due to receptiveness of the participants and to CARE's interest in assisting civil society to participate in health actions at multiple levels of government. Some of the most important activities in this arena are:

1. Participatory Budget Process

In an effort to encourage citizen participation, health advocacy as a means of influencing political leaders at various levels has been at the forefront of project activities. One of the most functional and output-oriented mechanisms for advocacy is through the participatory budget process. This process brings together health and other sectors to prioritize local needs to be included in the municipal budget. Health has gained a place in "development" but traditionally health was just infrastructure, and this is still the focus of many government officials. Through the participatory budget process it has been possible to also prioritize training, CODECO conferences, preventative activities, and in some area funds have been designated to help families while a family member is in the hospital. Municipal authorities interviewed as part of the FE feel the most important steps they could take to ensure sustainability are to continue providing support to the CHAs and CODECOs, including their participation in the participatory budget process at district and provincial levels.

2. Coordination with other CARE project

CARE's Title II project is working in the some of the same areas as REDESS, also in governmental strengthening, and includes projects like agriculture and water & sanitation. The Midterm Evaluation (MTE) found

that the project has been able to build upon the local government strengthening efforts of the *FOGEL* component of CARE's Title II program *(*Facilitating Local Government Participation in Health), in which municipalities developed long-term strategic plans that incorporate a focus on health needs, and to share problem analysis and action planning techniques with local government and civil society representatives. REDESS has supported and facilitated provincial and district Consensus Building Committees during the two years of project implementation. The greatest impact of this effort found at MTE was the direct contribution by roughly half of municipal governments in support of CHA organizations - primarily through the provision of office space/supplies.

3, Consensus Building Committees

Revitalization of Consensus Building Committees at District and Provincial Levels, and *Eje Tematica*, a sub committee of the Consensus Building Committee was one of the planned activities for REDESS. CARE began promoting Consensus Building Committees in 1998 before they were mandated by the government in 2001. Previously established committees have been combined with government mandated Consensus Building Committees Against Poverty (*Mesa de Concertacion de Lucha Contra la Pobreza*). The Consensus Building Committee consists of sub-committees for health, education, economic development, etc. but unfortunately in some area the health sub-committee is more active than the committee. Committees are made up of representatives from the MOH and other ministries, education, other NGOs, and COACS/ASOACS. Consensus Building Committees provide an opportunity for community participation, in developing and implementing a Strategic Development Plan, and in increasing the coordination of projects e.g. CHAs with the municipality and MOH with CARE in a garden project. Seven of 11 local government districts have a Consensus Building Committee that is active. <u>Continued effort is needed to maintain the Consensus Building Committees as an active body which is inclusive of all social actors.</u>

4. Development of Strategic Plans

Local governments received support from REDESS in developing Strategic Development Plan and seven local governments (64%) have developed a plan which included health activities. Local authorities are taught to analyze

problems, plan and evaluate actions to improve health and coordination with the MOH.

Other important steps taking place to strengthen the political network are:

- TOT for CHA Associations and MOH in health problem analysis, action planning and health advocacy techniques
- Linkage with activities for capacity building of COACS/ASOACS, CODECOs, and other community leaders
- Participation of women in community development processes through events at the district level, such as encounters of social actors and CODECO encounters, which are held three or four times a year.

Opportunities for citizen participation are increasing, but the quantity of participation is not enough, participation with knowledge is vital. REDESS has developed some important practical models for providing opportunities for civil society participation within the Peruvian context. There is a need to continue educating the population and political leaders in issues relating to health and development for effective decision making.

c. COMMUNICATION FOR BEHAVIOR CHANGE

The approach utilized by REDESS to stimulate behavior change was an effective way to improve the health of the population. Results from the final KPC Survey showed an improvement in 10 out of 13 health indicators. MOH staff interviewed during the FE felt that people are able to make better decisions relating to care seeking and home care with the increased knowledge they had received from project activities. The main BCC strategies utilized by the project were support groups, radio messages, education campaigns, educational sessions, including food preparation demonstration, home visits, and use of educational materials.

<u>Support Groups</u>

The original intent in the DIP was to form community support groups to increase exclusive breastfeeding. This was modified during the project to include a variety of types of groups including pregnant women, mothers of malnourished children, adolescents, WRA, and breastfeeding women. A range of topics are covered from danger signs for care seeking, to general maternal-child health, balanced diets and hygiene. The group observed

during the FE contained a number of elderly women, who can be influential decision makers in the community.

The support groups normally meet monthly and are usually combined with a food preparation session. The groups are comprised of 6-15 people. Support groups have a highly structured agenda which includes a greeting, announcements, thoughts from the previous meeting, presentation of participants, review of previous agreements, topic for the day, summary, evaluation, and farewell. Women are given the option to decide what future topics should be.

The support groups are lead by Facilitators, usually women who have been trained in technical health areas, as well as adult education and facilitation skills. This is one of the principal ways in which leadership skills for women are enhanced, by providing women with the opportunity to practice leadership skills and gain self confidence.

According to an LQAS survey conducted in 2003, the support groups have been effective in changing both knowledge and practices. Some examples of results from the study show that 57% of women in a support group began breastfeeding within 1 hour after birth, compared to 33% of women not in support groups. 71% of women in support groups could mention two signs of pneumonia compared to 8% of women not in a support group.

Food Preparation Demonstrations

Demonstrations are usually conducted during a support group meeting with the objective of learning by doing. During the demonstrations, community members donate all of the food for the session. Sessions include preparation of weaning foods, use of locally available foods, and the importance of a balanced diet.

Education Sessions

CHAs generally educate community members through either group sessions or individual home visits. According to CHA monthly reports 66% of CHAs provide health education. During interviews with mothers as part of the FE, home visits were mentioned most frequently as the activity which helped to change behaviors. Home visits provide an opportunity to tailor education to specific family needs and to include all family members. CHAs received

training in adult education methodologies, as well as the importance of complimenting mothers on the "good" practices they have, along with discussing changes in behavior.

Health Campaigns

REDESS coordinated the participatory development, along with MOH personnel and input from the Private University of Antenor Orrego, of a behavioral change communication campaign plan that incorporates multiple strategies to reach project beneficiaries through a variety of methods and media. These include: radio spots disseminated to all rural communities; "popular education" activities, such as games, songs, etc., in locations where community members normally gather; inter-personal methods of communication between CHAs and community members, such as individual counseling and support groups; the HC would have bulletin boards with the message; and community-based activities, such as painting murals. Examples of topics covered are: "Importance of Antenatal Control", "Warning Signs for Pregnant Women and Newborns", "Promotion of Institutional Delivery", "Control of ARIs", "Malaria Prevention", and "Diarrhea Prevention Measures."

The REDESS communication campaign was a strategic way of implementing measures that lead to behavior change. It included the various key steps, such as a baseline study of the problem; campaign planning and preparation; campaign implementation; and impact evaluation. During these campaigns health personnel, acting with the support of the project and the Communication Sciences Faculty, validated and produced pamphlets and radio spots covering the issues addressed in the campaigns.

Radio Spots

Use of the radio was listed during FE interviews as one of the three most important ways health information was communicated, along with home visits and demonstration sessions.

Educational Materials

All CHAs interviewed during the FE had educational materials including three flipcharts made of durable fabric and an accompanying guides on IMCI-Well Child, Sick Child and Maternal Health as well as an IMCI notebook. The high quality materials were developed through social marketing steps; adapting

messages to local context and validating all materials at the community level. As was pointed out during an interview with MOH staff during the FE, the BCC strategies and materials have helped to improve the quality of education by standardizing messages, making sure than everyone presents the same message.

A qualitative investigation on preferences for communications methods was conducted by students from the Communications Sciences Department at the Private University Antenor Orrega in Trujillo with the goal of developing an appropriate and effective IEC strategy. For example, the study found that almost all rural families listen to radio programs during the mid-day lunch break, especially radio *Los Andes*. Roughly half of men stated they completely trust in the information they hear on the radio, as compared to 100% of women. The information gathered was put to excellent use by REDESS to develop a varied and creative set of community education methods.

The most important lessons learned relating to behavior change were:
Having a broad base of support at all levels is vital; within the communities both with leaders, men and women, and within all levels of governmental structures. This means that all actors should receive basic education in health issues, depending on their level of need and once the desired behavior is identified, the decision makers who influence that behavior needs to be included in educational activities.

To achieve behavior change it is important to use a variety of media and techniques, each with the same standardized message.

"Learning by Doing" using locally available resources, leads to better understanding by CHAs and community members.

When one of the Consensus Building Committees was asked what they would have done differently if they could repeat the project they mentioned the importance of; Having a greater understanding and sensitivity to the local culture makes communication more effective. The REDESS project addressed cultural sensitivity, and good examples of changes made due to this emphasis were seen, but more could have been done to enhance cultural understanding.

d. CAPACITY BUILDING APPROACH

The following objectives and indicators of capacity building were presented in the DIP:

Indicators	Accomplishment	Comments
1. Capacity Building of CHA Associations and Community Organizations: Improve capacities of CHA Association members and community leaders to provide leadership and to plan, manage, and evaluate their organizations		
1. 5 CHA Associations will complete 80% or more of their annual operating plan objectives and activities.	1. 5 CHA Associations completed approximately 50% of activities in AOP	1.5 associations were established due to combining CHAs from the hospital with another mirco-network. In addition, 24 CHA committees were formed, completing approximately 70% of their planned activities
2. 80% of CHAs receive quarterly supervisory visits and feedback from CHA Committee members.	2. 29% of CHAs are supervised annually	2. Most supervision visits are done in conjunction with MOH staff, using supervision checklist and feedback mechanism. All CHA association leaders and some MOH staff have been trained in supervision.
3. 50% of CHA Associations have representatives in local government working groups (consensus building committees)	3. 60% of CHA associations are participating in roundtable discussions and/or budgetary planning	3.The active participation in the workshops convened by local governments to define "Participatory Budgets" has been a major step forward. Acting in alliance with health personnel and CODECOs they have managed in some districts to earmark resources for CHA activities in the areas of health and training
4. 50% of communities have women leader representatives in consensus-building at the community and district level	4. 85% of communities (289 of 340) have been organized into CODECOs, all of these have women as part of board of directors	4. CODECOs are the principal organization promoting development and identifying community problems and needs addressed in AOPs. CODECO acts as a point of entry and an opportunity for women to gain prominence in district and provincial government forums as representatives of their communities.
2. Capacity Building of Local Health Unit Personnel: Improve and strengthen local health unit personnel capacities in the training and management of CHAs.		
1. 80% of CHAs receive sufficient supplies of essential medicines (cotrimoxazole and ORS).	1. 0% of CHAs have supply of essential medicines (cotrimoxazole and ORS).	1. MOH policy does not allow CHAs to distribute cotrimoxazole. Due to a shortage of supply of ORS, CHAs are taught to advise mothers to increase liquids during diarrhea and if danger signs are present, to refer the child to a HC
2. 80% of CHAs receive quarterly supervision and feedback from local health unit personnel	2. 29% of CHAs are supervised annually (see above in section 1 also)	2. Due to time constraints, focus on service provision, and lack of transport MOH staff are not able to fully supervise CHAs in the field
3. Capacity Building of CHAs: Improve CHAs leadership and organizational abilities for community development actions.		
1. 80% of CHAs conduct monthly health education activities and home visits.	66% of CHAs provide health education	1.Educational activities and home visits by CHAs have been conducted in the framework of the campaigns implemented by health personnel. It is necessary to strengthen Community Planning of Health Education which should be led by CHAs.
2. 50% of communities execute at least one health development project /year.	2. 70% of communities have health activities in their AOP	2. It is important to note the change in previously prioritizing only infrastructure projects to now including health promotion activities
4. Capacity Building of Local Government-Civil Society Structures: Assist local government-civil society groups to analyze community health problems and develop effective action plans		
1. 50% of local government-civil society groups develop annual action plans for community health.	1. 64% of local governments-civil society groups have action plans including health actions	1. All local governments (11 total) have began implementing a participatory budget process which allows CODECOs to present their AOP for inclusion in the municipal budget
2. 50% of communities have	2. 59% of community CODECOs have presented	2. At Encounters for Social Actors and CODECOs REDESS has been increasing the awareness of community

representatives engaging in advocacy efforts to promote their Annual Operating Plan with the local government	AOPs which include health activities to the local governments as part of the participatory budget process	representatives, local governments, MOH personnel, and representatives of other institutions with respect to co-responsibility for tackling the challenges of improving quality of life
5. Capacity Building for CARE Peru: Improve management and technical skills in child survival programs for REDESS Project staff		
1. 100% of REDESS staff design and train partners in innovative BCC strategy implementation 2. 100% of REDESS staff facilitate TOT workshops in CS technical interventions 3. 100% of REDESS staff demonstrate mediation skills in conflict resolution with MOH, CHA groups and local governments 4. 100% of REDESS staff assess capacity building needs of partners and design activities for continuing improvement	1. 100% trained in Support Groups, Adult Education, design of IEC campaigns and negotiation MOH staff has received TOT 2. 85% of staff facilitated TOT in technical areas 3. 75% received informal training in conflict resolution. All of the team practices mediation with civil society/governmental organizations 4.100% of staff were trained in, and utilize ANA, as a method for assessing needs and designing capacity building activities	1. CARE International, in particular the Child Health Unit has provided the team with opportunities to update their knowledge of innovative BCC strategies. 50% of the technical team has attended international workshops on these issues. This has allowed the team to transfer this learning to partners and CARE Peru, to strengthen the facilitators network the capacity of CARE Peru 2. 75% of team received training in MNC, 100% in IMCI and LQAS 3. Technical assistance in conflict resolution was not obtained but informal training was provided through sharing of experiences within the REDESS team but this is clearly a need in CARE programs. 4. The ANA methodology was an effective way to define training needs and was used with CHAs, as well as MOH staff.

i. Strengthening the PVO Organization

Participation in the USAID Child Survival program has greatly benefited CARE as an organization. Specific examples include the institutionalization of monitoring and evaluation including information systems and survey methods, standards for project design and grant writing, and the development of a highly qualified technical Health Unit at HQ. CARE HQ capacity in Child Survival programming has increased during the life of this project through multiple opportunities provided through CORE and/or CSTS sponsored learning opportunities. HQ technical staff have attended workshops on the following topics and have disseminated this information to field staff during annual site visits:

- Adult Learning Methodologies
- BEHAVE framework for Behavior Change Communication
- Child Survival Sustainability Assessment
- Networking and Leadership

CARE was one of the first CS-implementing PVOs to incorporate the Child Survival Sustainability Assessment framework into the DIP phase of their CSXIX Project in Sierra Leone. In addition, CORE annual meetings and CARE participation in CORE Working Groups, along with the mini-university

DIP presentation approach, have provided opportunities to share with and learn from other implementing PVOs.

One of the principal capacity building effects for CARE Peru has been an improvement in the documentation and application of lessons learned through Child Survival projects. One of the criticisms of the ENLACE project was the lack of adequate documentation of the experience. The REDESS project has corrected this mistake and documented most of the key project strategies. One suggestion to improve the quality of the documentation is: All project documents should include the date they were produced and a brief two page summary of the document. A summary of key points, critical steps, etc. is necessary to truly enable these documents to function as tools to disseminate techniques and strategies.

As CARE country offices move from a project to a program focus, the successful strategies, approaches and methodologies, as well as staff expertise, need to be transferred from individual projects to other programmatic and geographic areas, and funding sought to scale-up lessons learned to continue to work towards the goal of improved health. The experience gained during REDESS has been documented and will be presented and discussed within and outside CARE (MOH, NGOs) during workshops and conferences. Project summaries will also be published and distributed to MOH and NGO representatives and health workers. Based on the REDESS experience, CARE Peru will be able to propose better designed health and development programs to national and international institutions for implementation, partnership and financial support.

The CSP has worked closely with CARE Peru Title II project, as there is overlap between approximately 17% of the CSP communities. The Title II project will continue working for an additional two years in Cajamarca and Sanchez Carrion at the municipal level and with CODECOs. Their focus includes micro credit and agricultural activities which will further serve to motivate and strengthen institutional structures.

REDESS and the Title II program have been working closely in the analysis of program strategies to ensure they complement each other, with a view to benefiting from a mutual learning process, focusing on already validated methods. For example, Title II has adopted the Strategic Communication

Campaigns methodology developed by REDESS. Likewise REDESS has applied to their capacity building activities for MOH personnel and CHAs the Title II training framework. They also shared learning opportunities for CARE staff in the areas of strengthening civil society organizations and working with local governments, where, in addition to pooling the experience acquired from organizing CODECOs they implemented a territorial division aimed at improving institutional impact.

Other ways in which capacity has been improved in CARE Peru is through strengthening skills in facilitating community participation and empowerment, in training trainers, in supervision, use of participatory education methods and conceptual frameworks to achieve behavior changes, and in monitoring changes in partner or community capacity. This capacity was vital in assisting communities and municipalities assume the responsibility of administration of health services within decentralization.

Lessons learned for CARE Peru during this CS project include:
Advocacy and diffusion of project experiences is needed at local, regional and central levels to ensure sustainability of project achievements.

CARE can play a role in encouraging media to highlight local health service successes, as a balance to the occasionally sensationalistic focus on problem areas. This will help civil society have a more balanced view of health service strengths and weaknesses as they begin to be more involved in local government-health action. The establishment of strategic alliances with the communication media helps to involve them as watchdogs of the political process of health implementation and in the promotion of actions for the social well-being of the population.

ii. Strengthening Local Partner Organizations

The principal partner in the implementation of REDESS was the MOH at regional and local levels. Other partners include the CHAs, CHA organizations and local governments. Project impact on these partners was discussed in Sub-sections A & B of 3. B Cross-Cutting Approaches. The primary capacity strengthening activities for the MOH are Strengthening Health Facilities and Health Staff which are included in the next two points of this document.

The SWOT (Strengths, Weaknesses, Opportunities and Threats) methodology was used to assess the management and service delivery capacity of the La Libertad and Cajamarca Regional MOH offices, the Health Networks, and Micro-Networks during 2001. This assessment was not repeated at the conclusion of the project.

The MOH has been a particularly strong partner in the REDESS project. The participation by the MOH in the FE was exemplary of the commitment at all levels. The Network Health Director in Huamachuco was a particularly strong advocate and supporter of project activities as was the Network level team, almost 100% of who were the same people since the start of the project, which was very beneficial for project implementation.

At the beginning of the project the roles and responsibilities of each partner were clearly defined as part of the DIP development process. In general the commitments made by all partners were fulfilled. In the agreement, the MOH was responsible for facilitating the availability of human resources at the project implementation level. The permanence of human resources at health centers has been an ongoing problem during project implementation. The barrier to implementation which was most often mentioned during FE interviews was the frequent rotation of MOH staff at HCs. There are a number of reasons for the turnover, but this issue is not new, nor will it go away in the short term. REDESS was able to partially confront this situation through annual repeat training workshops and helping to develop a plan for orienting and mentoring new staff in key project activities. Advocacy at the central and regional levels of the MOH is vital, but projects need to accept that this situation has existed for years and design project based on the Peruvian reality. Projects should be designed based on local realities; this includes frequent MOH staff rotation.

Much of the positive coordination which has been developed has taken place over years of working together so that when changes occur, new relationship have to be built. This underscores the importance of institutionalization of project activities within the MOH structure. REDESS has been documenting all project strategies so modules on all major initiatives are available at HCs to be used in training new staff. The problem of not having a clear plan for the orientation of new staff was discussed by the Health Promotion

representatives of each HC. A plan for the orientation of new staff needs to include the incorporation of health promotion activities.

Another limitation to implementation of activities, exacerbated by MOH policy, is that personnel evaluation and supervision is based on health care coverage indicators but no indicators are used to measure health promotion work and reflect the efforts of CHAs. The result is that the Regional MOH puts pressure on health personnel to target health care activities, even though the latter recognize that community work is valuable and important for bringing about an improvement in the health of the population. The evaluation and supervision systems of the MOH would be more coherent with current policy if they included health promotion activities.

iii. Health Facilities Strengthening

The project has had an impact on both the demand for services and the supply of quality services. The implementation of the referral system, community support groups, and emergency evacuation plan have increased demand for services by motivating use of health facilities, as well as dispelling fears of use of services. Implementation on a national level of free health services for priority groups has simultaneously had a positive impact on increasing demand for services.

A number of activities were carried out to improve the quality of services offered at MOH facilities. Staff were trained in both technical and managerial topics, some work was done on cultural sensitivity, model health centers were established, and efforts to make the HCs more client focused were implemented such as; a suggestion box with smiling, neutral and frowning faces, traffic light for privacy- red for do not enter or green for enter, signage on services available and costs, visual maps explaining the steps to follow to receive services, children's room with colored cartoons, and delivery rooms which offer the option of birthing positions.

A great deal of effort went into improving the organization of the HCs in order to improve efficiency and effectiveness of services, examples are;

- Sectorization maps to define zones of responsibility
- Monitoring of CHAs annual plans

- Family files were implemented so that all members of the same family are included in one chart, when any member of the family is seen, the records for the entire family are reviewed
- Follow-up cards are maintained for prenatal visits, vaccinations, etc., if the person does not come for their appointment, the CHA is contacted to visit the home and encourage them to visit the HC for the needed service.
- Human resource map that showed CHAs, CODECOs, other organizations
- Improved documentation of activities and use of information for decision making such as BABIES analysis charts
- Radios were provided in HCs which did not previously have them that have provided improved communication during emergencies

An important project strategy was to strengthen the linkages between HCs and communities by improving MOH staff skills (see more information below), providing opportunities for coordination through monthly meeting of MOH and CHAs, establishment of COACS at each HC to assist MOH staff in supporting and motivating CHAs, and defining the micro-network structure of health facilities. The link between HCs and CODECOs was also strengthened, which is a seminal effort to develop local citizens committees at each HC to involve civil society in the functioning of health facilities.

iv. Strengthening Health Worker Performance

The focus of this project was not so much on improving the technical capacity of the MOH, rather on improving their community outreach and management skills. Technical training was provided in maternal health, obstetric emergencies, and IMCI, but a formal assessment of technical skills and knowledge was not carried out. Exit interviews with MOH clients would be an effective way to further contribute to building capacity for civil society participation to improve health service quality and as a measure of health worker performance.

MOH personnel at HCs interviewed as part of the FE mentioned the following as the most important aspects of REDESS:

- Improving the relationship between HCs and the communities
- Increasing demand for services, especially in pregnant women
- Strengthening CHAs and their linkage to the HC
- Educational materials made training more effective
- Training for HC staff, especially in Adult Education Methodologies

The MOH staff clearly sees their role in REDESS as direct implementers. CARE has done a very good job of facilitating a process, not just implementing a project.

The entire HC teams were involved in training the CHAs initially, but after the central MOH restructured and formed the health promotion division, each HC has one person assigned to health promotion and another to training. The Health Promotion In-charge directly works with the CHAs. At Network level REDESS worked closely with the Human Resources development office and the training team. The entire HC team should be involved in supervising and coordinating with CHAs, not just the health promotion person.

The supervision of CHAs ideally is being done by COACS and MOH together. A supervision checklist is being used, which includes identifying what is being done correctly, before focusing on problems. There are a number of shortcomings in the system, mainly having to do with the sustainability of the process. As was previously discussed, indirect supervision through monthly reports and meetings may be more sustainable than direct supervision visits, due to transportation limitations. The supervision visits made with an integrated focus and team are most effective. The supervision checklist is cumbersome to use, contains unnecessary information, and should be simplified.

Other important steps taken by REDESS include:

1. Assisted MOH personnel through the ANA (Analysis of Training Needs) process utilizing a results-based outcome to define training needs. ANA is most effective when used with all groups involved in the project, from the beginning.
2. Increased MOH personnel capacity to train and supervise CHAs through TOT activities in technical interventions. A mechanism needs to exist to generate new institutional trainers to ensure sustainability of project strategies.
3. Introduced aspects of the MOH human resource development package, but the evaluation module was not fully implemented.
4. Provided training for HC personnel in skills for management of CHAs, including use of SIVICS as a management tool

5. Developed health education materials jointly with MOH and based on IMCI norms and protocols
6. A very positive change has been the improved coordination with local authorities MOH staff works with CHAs and CODECOs to develop community AOP and also has a positive working relationship with COACS
7. Some improvements were made in enhanced cultural understanding but this needs to continue to be included in all projects.

v. Training

The majority of training objectives presented in the DIP were met, or show a positive trend.

Objectives	Indicators	Achievement	Comments
1. Improved MOH Capacity for Community Outreach	At the end of the training program 80% of MOH personnel in the project area will be able to: 1. Provide on-going training and supervision to CHAs 2. Use community HIS information as a management tool 3. Give educational sessions to CHAs and CHA committees/associations	80% of MOH staff provide on-going training and use SIVICS Only 25% of MOH staff provide ongoing supervision	In all HCs, one person is designated as in charge of health promotion and another in charge of training. For this reason, not all HC staff are involved in training and supervision
2. Increased Community Responsibility for Improved Personal Health	At the end of the training program 50% of communities in project area will be able to: 1. Provide peer health education and support 2. Participate in health advocacy to local government 3. Execute at least one health development project annually 4. Diffuse health education messages 5. Develop emergency evacuation plans and systems	318 Support Group Facilitator were trained in nutrition and 170 in MNC . Only one HC did not train Facilitators 14 Health campaigns were carried out by communities 73% (255) communities have emergency plans	
3. Sustained Provision of Front Line Services by Community Health Agents	At the end of the training program 80% of CHAs in the project area will be able to: 1. Develop community health education plans 2. Determine criteria for referral regarding CDD,	50% of CHAs implement and report on health activities 60% of CHAs are referring patients	CHAs are not developing health education plans, rather they present topics according to programmed campaigns For more information on the referral/counter-referral

	PCM, nutrition and maternal care to local health unit service 3. Make the appropriate referrals to health centers 4. Follow-up of counter referrals 5. Conduct monthly health education activities and 6. Follow a protocol for home visits based on risk factors	based on pre-determined criteria 77% (2645) of referrals were counter-referred. No information is available on follow-up 66% of CHAs make home visits	system, see Section E. Project Highlight The protocol for prioritizing home visits was pregnant women, children under 1 and follow-up on cases seen or referred
4. Sustained participation of six local governments in health management	At the end of the training program 50% of local governments in the project area will be able to: 1. Execute annual action plans for rural community health 2. Engage in problem analysis and action planning for improved maternal-child health in their communities 3. Prepare a budget for health activities	64% of local governments develop AOP and budget for health	Approximately $35,000 has been designated in the Sanchez Carrion province for health activities such as CHA organizations and BCC activities

The following people were trained during the REDESS project:

CHAs in 347 communities with a total of 840 CHAs

	Promoter men	**Promoter women**	**TBA men**	**TBA women**	**CHA Total**	**W/ pre-post test**	**Certified**
HH/C IMCI module 1	411	116	4	163	694	35%	32%
HH/C IMCI module 2	397	112	4	161	674	325	29%
MNC	422	118	4	165	709	53%	51%
Adult Learning	425	115	4	166	710	38%	29%
Nutrition	184	41	4	76	305	16%	16%
SIVICS	404	116	4	162	686	36%	36%
Environmental Sanitation	397	112	4	161	674	31%	25%
Bartonelosis	28	11	0	3	42	3%	2%
First Aid	411	118	4	162	695	23%	23%

CODECOs 348 communities with a total of 820 members

Topic	**Number Trained**	**Percent**
Situational analysis	471	57%

SIVICS	312	38%
Development Plans	471	57%
Community Empowerment	312	38%
Community projects	22	3%
Leadership	17	2%
Management	144	18%

MOH Staff 17 HC within the project area with 104 professional staff

Topic	**Number Trained**	**Percent**
Adult Education	83	80%
SIVICS	51	49%
MNC	28	27%
HH/C IMCI	71	68%
Clinical IMCI	70	67%
Support group facilitators	28	27%
Sectorization	55	53%
Environmental Sanitation	16	15%
Bartonelosis	5	5%
HIV/AIDS and STI	12	12%
BABIES	4	4%

Some of the more important lessons learned in training were:
The identification and development of Learning Centers (model centers where staff could visit to learn new ways of working) is a positive method for exchanging experiences and motivating staff, but they need to be developed in a timely fashion.

Training should never be held alone, without a follow-up plan monitoring and supervision, particularly in IMCI

It is more effective to work with a Training System (systematic methodology for determining training needs and monitoring implementation), rather than a Training Plan (pre-determined plan for training staff).

Adult Education Methodologies should be used in all training events to increase effectiveness of changing behaviors

The availability of detailed lesson plans and curriculum for all training events increases consistency and quality

e. SUSTAINABILITY STRATEGY

The following sustainability objectives and indicators were presented in the DIP. The majority have been reached by the REDESS project, of particular note is the system for CHA certification, the referral/counter referral system, the involvement of women in leadership roles, and local governments assigning funds for health.

Indicators	Accomplishments
1. Sustainability of Community Health Association/MOH Linkage: Assist CHAs, within an institutionalized structure, to becoming active health change agents that create demand for and access to quality health care by at-risk groups within their communities**.**	
1. 6 health micro-networks institutionalize the community health information system. 2. 80% of CHAs certified by MOH 3. 80% of CHA's refer WRA and children age 0 to 59 months to local health unit services 4. 80% of referrals are counter referred to the CHA	4 micro-networks and 1 network are finalizing the institutionalization of SIVICS 2. 66 % of CHAs certified 3. 60% of CHAs are referring cases 4. 77% of referrals are counter-referred to the CHA
2. Sustainability of CHA/CHA Association/Local Government Linkage: Assist CHA Associations and other community leaders in becoming effective agents of community health advocacy for health administration	
1. 80% of CHAs are incorporated as members in CHA committees and/or associations 2. 5 CHA Associations have with sustainability strategies defined in annual operating plans 3. 50% of local governments assign funds to community health activities 4. 50% of communities have women leaders actively working on health issues: health surveillance, BCC	1. 100% of CHAs are members of COACSs 840 CHAs were trained by the project, of these 554 (66%) are active 2. All ASOACS have sustainability activities included in their AOP, including income generation and supervision 3. 64 % (7 of 11) of local governments assign funds for health 4. 48% of communities have women in active leadership roles

Sustainability can be viewed based on four principles- permanent behavior change, supportive structures, links with permanent institutions, and financial support.

Behavior change- KPC survey results show an increase in knowledge, practices, and coverage. These improvements can be sustained through the use of effective BCC strategies, a focus on adult learning, and neighbor-to-neighbor learning i.e. support groups. The project lacked a clear focus on inter-generational and family decision-making. An important behavior to change is the use of health services. Demand for services has increased (e.g. prenatal care, immunizations) through implementation of the referral system, emergency evacuation and improved quality of attention (improved

organization of HC, IMCI, training for HC staff). Community members and MOH staff interviewed during the FE were very motivated to continue working towards improving services, as quality of attention is still a barrier to access, and increased use institutional health care.

Supportive structure- the weaving together of a structure to support health activities

- Community structure-excellent progress has been made in forming and training CODECOs which represent, not just health, but education and community development.
- Local Governments- remains a challenging area as decentralization is bringing about many new changes and adaptations of former paradigms but many advances have been made in this area by building capacities and achieving results that were visible to communities within the life of the project.
- ASOACS/COACS- have the potential to improve retention of volunteers, as well as maintain the quality of their activities. Additional support will be necessary to provide them with the political base they need to survive in the future.
- MOH HC, Micro-Networks and Networks- the work completed by REDESS, with a focus on planning and organization, will provide a stronger organizational structure, if changes are institutionalized.

Links with permanent institutions - MOH and governmental agencies
The strength of this project has been the focus in this area that is very much in step with current national political restructuring; there are a number of positive examples of newly formed and/or strengthened links:

- Monthly meetings with MOH and CHAs for in-direct supervision and continuous training,
- SIVICS to collect and use information at all levels.
- Referral system improves communication and creates demand
- Emphasis on political advocacy at multiple levels
- Consensus building forums for sharing ideas and coordinating activities

Financial Support- REDESS has encouraged financial sustainability at various levels:
Community-the self-financing of community activities on a small but important scale; raffles, bingo, selling food at sporting events, has

represented a proactive community contribution and an important lesson for communities that they are capable of self-financing health activities.
CODECO- some are creating emergency funds which can be loaned to families during an emergency but the most important step has been in developing AOPs for presentation as part of the participatory budget process.
COACS/ASOACS- have been able to raise money to help pay for training activities, received office space from local health units or local governments, and established small scale income-generating activities to support some operational costs, coordinating with the Economic Development Unit of the provincial municipality to obtain technical assistance in the design and presentation of projects.
Local Governments- Participatory Budget provides a mechanism for financing health activities in the future. Seven of the 11 municipalities have included health activities within their 2005 budget. The provincial government has designated $35,000 for improvements in the Hospital Leoncio Prado and activities of SIVICS and BCC.

The key program "devolution strategy" is to inherently avoid the need for "devolution" of program activities by incorporating partners in the design, implementation, and monitoring and evaluation throughout the life of the project. All partners are committed to the institutionalization of strategies, activities, and tools.

What is lacking is the institutionalization of positive project strategies. There is a proposal developed by La Libertad Region to incorporate the SIVICS system throughout the region, but lack funds to do this. CARE Peru and the MOH continue to seek funds to expand project strategies to other regions of the country. ENLACE and REDESS have both left excellent models for decentralization and increased citizen participation, but these models need to be systematized and replicated in other areas, including within other sectors as a model for grassroots development.

C. Program Management

1. Planning

The initial planning of REDESS was very inclusive. During the FE, community members in two different communities mentioned that they had been involved in the original design of the project, and were now involved in the final evaluation. This inclusion throughout the entire process foments excellent community ownership and pride in the work accomplished. It is a wonderful comment on the entire process when community members can clearly articulate the process of project design, implementation and evaluation.

The work plan developed as part of the DIP process was well thought out and provided good guidance to project staff in implementing the project. Staff was able to make adjustments to the project based on input from the LQAS, MTE, and other studies to adapt to changing needs.

2. Staff Training

No formal assessment of staff skills was carried out, but an assessment of training needs is incorporated in CARE's annual staff evaluations. Initial planned training included in the DIP were:

1. Development of BCC strategies
2. TOT facilitation skills
3. Conflict Resolution
4. Needs assessments

The majority of the CARE staff also were employed in the ENLACE project and brought substantial experience with them to this project. Sufficient funds were available for training and details on technical assistance provided to staff are included under number 8. Technical and Administrative Support in this section.

3. Supervision of Program Staff

CARE endorses the concept of "supportive supervision", in which staff are active partners in assessing project progress. Staff are adequately supervised and have ample opportunities for exchanging ideas and experiences within a supportive environment.

4. Human Resources and Staff Management

As an international PVO working in Peru for more than 20 years, CARE Peru has well-defined personnel policies and procedures, including detailed job descriptions for each project position. Annual performance evaluations, based on CARE's human resource management system, are conducted. The Project Coordinator reports to the CARE Peru Regional Director in Cajamarca, who reports to the Assistant Country Director for Programming.

After the MTE the staff structure changed from geographical assignments with five Technical Assistants and one Team Leader to five Technical Specialists in different lines of action: Organization of CHAs, Capacity Building, Organization of Health Care, Local Government Strengthening, Nutrition and Communication Strategies. They were each assigned a given zone of the target area. The structure later changed to four Specialists and two Technical Assistants. At the time of the FE there were three Specialists remaining, one person had left CARE and the two Technical Assistants had been hired by the Title II project. CARE attempts to retain staff whenever possible, as the institution invests a great deal in training and supporting staff and regards their trained human resources as one of their most valued assets.

Except for the changes based on structural readjustments, there has been very little turnover of project staff. REDESS staff are a tight-knit group that actively support one another in work planning, project implementation and problem-solving.

5. Financial Management

The financial management of the project was carried out at three levels; CARE Peru's regional office in Cajamarca; CARE Peru's central office in Lima, and CARE USA HQ in Atlanta. Each of these levels has clearly defined responsibilities and the links between offices has functioned efficiently with good communication and joint problem solving, when needed. CARE Peru has years of experience in managing USAID funded projects, including the previous CS project, ENLACE.

Since 2001, CARE Peru has used the financial management system *SCALA*, developed by CARE USA headquarters. The Project Coordinator, with accounting support from the project Administrative Assistant, manages the

program budget. Accounting reports are submitted to the CARE Peru financial administration unit. Costs are tracked quarterly and financial reports are formulated in accordance with the approved budget line items and headings. The CARE Peru financial administration unit submits financial reports to CARE HQ for review by the Child Health Unit and the Financial Officer.

The project administration has been audited through both internal CARE audits, as well as an external audit, conducted by Price Waterhouse in 2002.

As of the projected end date of this funding (September 2004), there was a sum of approximately $ 65,000 remaining in the project budget. Anticipating this overage, a no-cost extension was requested and granted for an additional four months (October 2004 to January 2005). The main activities during the extension will be systematization and dissemination of project strategies, provision of additional technical and managerial support and strengthening of linkages.

6. Logistics

There have been no problems with logistics management during the life of the project which adversely effected project implementation. The principal purchases made during the project were radios to improve communication at MOH HCs and litters for communities to use for emergency evacuations.

7. Information Management

The data collection system of REDESS is based on a simplified version of a system designed by ENLACE called SIVICS (Sistema de Vigilancia Comunal de Salud) or Community Monitoring System. The system has the following components:

- **Sectorization** – Geographical mapping of the jurisdiction of a health facility into sectors, each of which is assigned to a health provider who is then responsible for all outreach in that sector.
- **Community census** – a house-to-house survey is conducted by CHAs and is updated on a continual basis on "family cards", with information that is reported on a monthly basis to the MOH facility on population size by age groups, including monthly birth and death data. According to project documentation there are 348 communities, 250 have a community census; of these, 157 (63%) are current.

- **Community maps** – each CHA creates a map of all houses for which s/he is responsible, numbering the houses, and identifying those which have "high risk" members, i.e. under one year of age, pregnant woman, or woman of reproductive age. According to project documentation there are 348 communities 215 have a community map, but only 108 (50%) of these are current .
- **Home visits** – monthly visits are made to all "high risk" households to monitor health and provide health education, and make referrals if necessary for preventive or curative care at the HC.
- **Monthly reports** – each CHA turns in a monthly report on number of high risk persons in the community, number of cases of illness identified by type, number of cases referred, number of educational activities completed, population, etc.
- **Outreach visits by health providers** – based on monthly CHA reports, health personnel can make follow-up visits to high risk patients in the community, accompanied by the CHA in each sector, thus making outreach work more efficient and effective.
- **Supervision –** Conducted by ASOACS/COACS with MOH staff using a supervision checklist. Checklist needs to be simplified.
- **Birth plan –** all pregnant women are encouraged to fill out a birth plan prior to delivery. The plan includes monitoring for TT, prenatal visits, postpartum family planning, who will attend birth, where the birth will be , who will go with the woman, what position preferred for the birth, who will watch the other children, plus educational messages on the four types of danger signs, saving for emergency and things to prepare for the newborn and the mother.
- **Referral System** – CHAs have a three part form for referring patients to HCs. The first section of the form is retained by the CHA as a permanent record of their referral, the second part is retained by the HC staff, and the third section is returned to the CHA by the patient with follow-up instructions. A register in the HC of referrals provides the ability to verify the validity of the diagnosis of the CHA.
- **Emergency Evacuation System -** REDESS worked with CODECO and CHAs to organize a community committee for emergency evacuation and this has perhaps been one of the most successful strategies for contributing to efforts to reduce maternal mortality (see F. Highlight). Every family in each community knows what its role is in case of a medical emergency which needs to be evacuated to a HC. To

evacuate patients, each community has a litter made of a long canvas cloth with tubular slots sewn in on each side (provided by REDESS) into which two long poles or branches (provided by the community) are slid to form a stretcher. The litter is stored at the house of the CHA or a community leader; whichever was more centrally located in the community. The litter is carried on foot, sometimes at great distance, to the closest point where a vehicle can be found to transport the patient to an appropriate HC. The radio system installed by REDESS is used to call centers to send an ambulance to pick up the patient. According to project documentation there are 348 communities, 208 (60%) communities have emergency evacuation teams and 301 (86%) have emergency litters. The final KPC survey showed that 73% of women surveyed knew the community had an emergency evacuation system. To complement the emergency evacuation system, CARE promoted family savings for health expenses. This aspect did not appear to be as strong and may be a reflection on the worsening economic and security situation in the area. As one CHA put it "people do not want everyone to know they have money in their house".

- **Family files -** are ideally kept by CHAs and updated monthly at the HC family file. This includes a system for identifying families which practice certain health behaviors as "Model Families" This did not really work out as it is too time consuming for CHAs and while identifying model families can be motivating, it can also cause social problems if publicly identified as such.

Cajabamba has a similar system but with more emphasis on epidemiological surveillance (reporting of infection diseases) and environmental risks (presence of vectors). The role of COACS in monitoring the monthly reporting system helps to ensure that CHAs adhere to the system, and provides sustainability to SIVICS.

SIVICS was a major development of ENLACE that had drawn the interest of MOH officials in the region of La Libertad, in other regions, and in the central level MOH, including the development a series of videos on SIVICS to facilitate dissemination of the methodology to other areas. With REDESS the regional Director in La Libertad has expressed interest in expanding SIVICS to all provinces in the region. SIVICS is a model system, but CARE will need to market SIVICS at local, regional, national and

international levels. The documentation and marketing of successful models is a long term challenge for CARE and its partners.

Systems need to be as simple as possible, with a direct relationship between information collected and actions that can be taken based on the information. Simplification should be the goal to decrease time spent by volunteers on record keeping.

Implement principal activities during the first two years of the project, and use the last two tears for monitoring and supervision

Other Methods of Information Collection and Use

A MOH quality care assessment and a CHA quality care assessment were slated to be a principal tools for measuring change in project indicators at midterm and final. There was no provision made to conduct these assessments, only to rely on measurement through a limited final evaluation process (see Annex B for methodology of final evaluation). All measurements methods outlined in the M&E plan should have a clear plan for conducting them.

Qualitative studies were conducted on effectiveness of interventions with CODECO leaders and Support Group facilitators. Insight gained by these studies helped to shape ongoing activities. A qualitative investigation on preferences for communications methods was conducted by students from the Communications Sciences Department at the Private University Antenor Orrega with the goal of developing an appropriate and effective IEC strategy.

A 30-cluster KPC survey was conducted in 2000 and 2004 as baseline and final measurements of primary project indicators. See Annex D for the complete KPC Report. Consultants were hired to conduct both KPC surveys. The final survey was of particularly good quality but it was observed in their bibliography that they utilized the Johns Hopkins University 1995 guide to completing the KPC. Updated information on use of KPC 2000+ should have been provided to the consultants.

REDESS staff was trained in the LQAS (Lot Quality Assurance Sampling) methodology and an additional KPC was conducted in April 2003. The survey

lost some of its value as a monitoring tool by the inclusion of all indicators, rather than a selected sub-set of critical indicators. Results were used to identify priority zones.

Two weaknesses in the information system of REDESS are; lack of adequate follow-up and monitoring of training activities and institutional capacity building, and lack of a clear focus on use of information. Information collection is not a valid activity unless that information is used for decision making. All projects need to create a culture of information use.

8. Technical and Administrative Support

Technical assistance visits were received from CARE USA Headquarters on the following occasions:

- Proposal development (Judiann McNulty)
- BABIES training (Namita Kukreja, Susan Ross)
- Midterm Evaluation (Elena McEwan, Joan Jennings)
- Preparation of Third Annual Report (Elena McEwan)
- Final Evaluation (Joan Jennings)

REDESS staff had the opportunity to attend CARE's Annual Child Survival Conferences which included the following topics:

2001 in India: Community Information Systems
2002 in Kenya: Adult Learning
2003 in Nicaragua: BCC
2004 in Baltimore: CORE Group meeting

Additional visits were made to Atlanta to participate in Maternal Health activities.

Other external technical assistance was received in:

- DIP Preparation (Lynn Johnson, Consultant)
- Community IMCI (NicaSalud, BASICS)
- IMCI Materials (Red Cross)
- Support Groups (Josefina, Consultant)
- Adult Education Methods (Bonnie Kittle, Consultant)
- LQAS (NicaSalud)

In addition to technical support visits, a supportive system of communication exists via email and phone conversations, CARE HQ backstop staff regularly

disseminate state-of-the-art technical materials to child survival project staff. For example, the CARE-developed tools for promoting Quality Maternal and Newborn Care (developed in partnership with Centers for Disease Control) were widely disseminated among CARE health project staff. Sufficient and timely technical assistance was provided to REDESS staff. Training in conflict management by CARE USA was planned but never implemented.

9. Management Lessons Learned

USAID/DCHA/PVC Child Survival Grants Program

Several suggestions for modifying indicators were made in the 3rd annual report, but these changes were never officially incorporated in project documents. For example; originally 6 CHA associations were planned, but during project implementation it became clear that the most logical configuration would be to combine CHAs from the hospital in Huamachuco with CHAs from one of the mirco-networks, making the total number of associations 5. A lack of clarity exists for exactly how to make this type of adjustments during project implementation.

A clear mechanism for modifying indicators throughout the life of the project would make implementation better adapted to changing needs and local realities.

D. Conclusions and Lessons Learned

REDESS has been able to successfully meet all intermediate results, or make substantial progress in completing them. The project objectives were very ambitious for a four year project and concerns exist as to the sustainability of some activities, such as the COACS/ASOACS organizations, however, within the limits of the life of this project, much has been achieved to promote potential for sustainability. The project results will be shown with time, whether sustainable provision of services and sustainable participation of local governments are the final outcome of project activities.

Result 1	**Result 2**	**Result 3**	**Result 4**
Improved MOH capacity for community outreach.	Increased community responsibility for improved personal health.	Sustained provision of front line services by CHAs.	Sustained participation of local governments in health management.
Intermediate Result 1	**Intermediate Result 2**	**Intermediate Result 3**	**Intermediate Result 4**
Improved coverage and quality of services provided by local health networks	Increased caretaker knowledge and practice	Improved quality and coverage of care provided by CHAs.	Strengthened relationships between CHA associations and local municipal governments and civil society.

The project took on the very difficult task of weaving together a structure capable of sustaining improved health practices and services. The improvements seen to date are the results of the sum of training at various levels. The fabric that has been woven is still fragile, but the project has been able to successfully improve capacity, leaving human resources capable of continuing, and improving upon, health activities.

The most outstanding achievements of this project have been:

- Health facility strengthening through improved organization and training of health staff, including IMCI training
- Strengthening of community development committees (CODECO), CHA committees and associations, and local government structures and the linkages united them.
- Referral system and emergency evacuation which have a very important role in decreasing maternal mortality

- SIVICS system which brings together multiple elements for monitoring activities
- The MOH staff clearly sees their role in REDESS as direct implementers. CARE has done a very good job of facilitating a process, not just implementing a project.
- Focus on identifying positive aspects, not just weaknesses this was evident in the CHA supervision checklist, in steps for effective counseling, and in steps for making home visits
- This inclusion of project partners and communities throughout the entire process of design, implementation and evaluation foments excellent community ownership and pride in the work accomplished
- Focus on planning and organization which provides an important cross cutting skill: at the family level-birth plan; at the community level- AOP; and at the HCs-organization of activities and evaluation of efforts

Constraints affecting program performance:

- Lack of institutionalizing health promotion activities so that MOH staff are rewarded for these preventative services
- Problems of quality of care in some HCs, including lack of cultural sensitivity
- Late implementation of some key activities, not allowing sufficient time for gaining experience.

Summary of Lessons Learned:

- CARE should increase training on the use of KPC 2000+, including the Rapid CATCH indicators, to ensure correct interpretation and data collection.
- Work with MOH at all levels to advocate for changes in policy which limit child survival activities e.g. distribution of cotrimoxazole and ORS.
- An increase in all liquids, including breastmilk, should be the emphasis for children with diarrhea, not the preparation of a homemade sugar and salt solution or ORS, if not readily available.
- The certification of CHAs can be an effective method for motivating CHAs and ensuring good quality work if the process is carried out in a timely fashion.
- The dissemination of project objectives and strategies from the beginning to all communities would clarify expectations and attract CHAs who are more dedicated, and serve to motivate communities

- The establishment of organizations such as COACS/ASOACS and CODECO needs to be started early in the project cycle to allow sufficient time to acquire experience and to gain political support.
- Begin community mobilization by organizing the development committee, this provides support for the CHAs and the early implementation of project activities such as SIVICS,
- An equal amount of effort should be dedicated to community organization and the training of CODECOs as is dedicated to forming CHAs, to provide them with sustainable support.
- Continued effort is needed to maintain the Consensus Building Committees as an active body which is inclusive of all social actors.
- Having a broad base of support at all levels is vital; within the communities both with leaders, men and women, and within all levels of governmental structures. This means that all actors should receive basic education in health issues, depending on their level of need and once the desired behavior is identified, the decision makers who influence that behavior needs to be included in educational activities.
- To achieve behavior change it is important to use a variety of media and techniques, each with the same standardized message.
- "Learning by Doing" using locally available resources, leads to better understanding by CHAs and community members.
- Having a greater understanding and sensitivity to the local culture makes communication more effective.
- All project documents should include the date they were produced and a brief two page summary of the document
- Advocacy and diffusion of project experiences is needed at local, regional and central levels.
- The establishment of strategic alliances with the communication media helps to involve them as watchdogs of the political process of health implementation and in the promotion of actions for the social well-being of the population.
- Projects should be designed based on local realities; this includes frequent MOH staff rotation.
- A plan for the orientation of new staff needs to include the incorporation of health promotion activities
- The evaluation and supervision systems of the MOH would be more coherent with current policy if they included health promotion activities.

- The entire HC team should be involved in supervising and coordinating with CHAs, not just the health promotion person.
- The supervision visits made with an integrated focus and team are most effective
- ANA is most effective when used with all groups involved in the project, from the beginning.
- A mechanism needs to exist to generate new institutional trainers to ensure sustainability of project strategies.
- The identification and development of Learning Centers is a positive method for exchanging experiences and motivating staff, but they need to be developed in a timely fashion.
- Training should never be held alone, without a follow-up plan monitoring and supervision, particularly in IMCI
- It is more effective to work with a Training System, rather than a Training Plan
- Adult Education Methodologies should be used in all training events to increase effectiveness of changing behaviors
- The availability of detailed lesson plans and curriculum for all training events increases consistency and quality
- . The documentation and marketing of successful models is a long term challenge for CARE and its partners.
- Systems need to be as simple as possible, with a direct relationship between information collected and actions that can be taken based on the information. Simplification should be the goal to decrease time spent by volunteers on record keeping.
- Implement principal activities during the first two years of the project, and use the last two tears for monitoring and supervision
- All measurements methods outlined in the M&E plan should have a clear plan for conducting them.
- Information collection is not a valid activity unless that information is used for decision making. All projects need to create a culture of information use.
- A clear mechanism for modifying indicators throughout the life of the project would make implementation better adapted to changing needs and local realities.

Plans for the sharing best practices to the development community: CARE strives to utilize best practices based on lessons learned from its own programs and by improving models from other programs. REDESS has developed several materials, including a videotape in English and Spanish and supporting print literature, that explain the steps and elements necessary for successful implementation of a community information system (SIVICS). These materials have been distributed to CARE country offices and shared with other PVOs during CORE meetings. Recently, a CARE Peru CS staff member presented these and other best practices (strengthening civil society capacity for social management of health issues at the municipal level) at the American Public Health Association meeting. A presentation on the support group experience was presented during the La Leche League International conference in 2003. In the last month of the project extension, a "package" of best practices documentation will be finalized with the assistance of a local consultant. This package will then be shared with all CARE Spanish-speaking (Latin America) or reading (for example, Mozambique and Angola) country offices.

Highlights on best practices are also regularly shared among all CARE country offices through the Health Unit Quarterly Newsletter. The newsletter ensures staff are aware of available materials and have the chance to request additional copies and/or technical assistance, cross-visits, etc. as relevant.

CARE Peru also plans to "market" these best practices throughout Peru, specifically and primarily to Regional Directorates of the MOH. The new central MOH division for Health Promotion has recently received USAID funding and local level MOH management is being encouraged to seek assistance in accessing and utilizing these available funds. The Regional Directorate for La Libertad has made minor adaptations to SIVICS and is discussing plans to scale-up and utilize this system throughout the region. They have officially requested CARE Peru assistance with this strategy and CARE Peru is actively seeking funding to support the scale up of this element within a series of best practices ready to go to scale (including supportive supervision tools, efficient organization to optimize the IMCI approach, quality of care actions and tools, and more).

F. Results Highlight

The CARE *REDESS* (*Networks for Health*) Child Survival Project (October 2001 to January 2005) has built upon previous CARE experience in Community Health Surveillance Systems. The ready acceptance by Ministry of Health personnel of the central elements of the system -- such as community mapping of vulnerable population groups, community census and documented referral system between Community Health Volunteers and local health units -- has enabled it to flourish and develop into a key tool for strengthening the link between communities and the health sector.

During final evaluation, a review of documented referrals tabulated by the municipal-level Ministry of Health Management Team showed that, among a population of roughly 44,000 women of reproductive age and 22,000 children under age five, there had been 9,723 referrals in 2003 and 2004 (15% of the target population). The majority of the referrals were for preventive health services. Referral for prenatal care for pregnant women accounted for 22% of referrals, while children benefited from 13% of referrals for the third dose of DPT immunization or measles vaccine and 16% for growth monitoring. Referrals for treatment amounted to roughly 25%, including referral for treatment of pneumonia and diarrheal disease, and management of danger signs during pregnancy.

Delay in seeking care from the health establishment is often cited as a key contributing factor to high rates of child or maternal mortality in the project area. Clearly, the CARE REDESS project has had a positive impact in changing care-seeking behavior, thanks to the ability of Community Health Volunteers to convince their peers of the necessity and the benefit of early care-seeking.

The Community Health Volunteers, with the support of the Community Development Councils of which they are members, have also had noticeable success in addressing health care emergencies. More than 95% of communities have established Emergency Evacuation Committees which have developed a rotating plan of responsibility among 3-4 members for carrying patients on a litter provided through CARE, from the village to the nearest place in which motorized transportation can be obtained (health unit ambulance or, more often, local transport).

Witnessing the dedicated efforts of community members and local staff to address the problems present in a remote and rugged area of the country, the municipal-level Ministry of Health Management Team saw the importance of balancing the emphasis on the negative (number of deaths) with recognition of the positive. They decided to track the number of *deaths averted* through emergency evacuation and successful treatment. In 2003 and 2004, more than 79 maternal and 47 infant deaths have been averted due to the enthusiastic efforts of communities motivated by the CARE REDESS Project. During visits to communities during final evaluation, more than one moving testimony was given by families benefiting from these new practices. For example, in one village in the past month alone, two women had been evacuated during problematic childbirth (*placenta previa* and a primigravida with prolonged labor). Both were successfully evacuated, treated and are doing well, along with their babies.

ATTACHMENTS:

A. Evaluation Team Members

B. Evaluation Assessment Methodology

C. List of persons interviewed and contacted

D. CARE Peru CS Project REDESS Final KPC Evaluation Report

E. Project Data Sheet form – updated version

A. Evaluation Team Members

NAME	TITLE	ORGANIZATION
Carmen Parra Gallegos	Community Participat Coordinator	MOH Central
Regina Sánchez Sato	Director of Health Services	La Libertad Region MOH
Imelda Medina Hoyos	Mental Health Promotion Coordinator	La Libertad Region MOH
Celina Machuca Vilchez	Community Participat. Coordinator	Cajamarca Region MOH
Luis César Alayo Chavez	Manager of Health Network	Health Network Sánchez Carrión
Carmen Yolanda Paiva Heredia	Women's Issues Coordinator	Health Network Sánchez Carrión
María Lucila Arteaga Vásquez	Health Promotion In-charge	Health Network Sánchez Carrión
Francisca Rodríguez Rodríguez	Nutritionist	Health Network Sánchez Carrión
Gloria Arcos Paredes	Project REDESS Coordinator	CARE PERU
Luz Elena Mendoza Navarro	Project REDESS Specialist	CARE PERU
Rosario Vargas Lucar	Project REDESS Specialist	CARE PERU
Silvia Valderrama Sánchez	Project REDESS Specialist	CARE PERU
Renee Charleston	Team Leader	Consultant
Joan Jennings	Senior Technical Advisor	CARE USA

B. Evaluation Assessment methodology

I. OBJECTIVES OF THE EVALUATION

The purpose of the Final Evaluation was to;

(a) assess if the program met the stated goals and objectives
(b) measure the effectiveness of the technical approach
(c) develop lessons learned from the project
(d) develop a strategy for use or communication of these lessons both within the organization and to partners.

The evaluation was carried out in accordance with USAID/DCHA/PVC Child Survival Grants Program Final Evaluation (FE) guidelines for August 2004 and the evaluation report follows the suggested format.

II. COMPOSITION OF EVALUATION TEAM

The team was composed of representatives from CARE Peru, CARE USA Headquarters, MOH local network, district and central levels, and an external evaluator who served as team leader. Additional resource people participated in the Analysis Workshop including representatives from CHA Associations and committees, local government officials and additional MOH staff.

The team leader was responsible for coordinating all evaluation activities, supervision of the team, meeting all specified objectives, collaborating with CARE and MOH, and submitting a draft and a final report according to a defined timeline.

III. EVALUATION PLAN

The evaluation was divided into four phases:

Phase I Planning

- Preplanning (Formation of team, logistics, document review, selection of communities)
- 1 day Planning Workshop (KPC analysis, methodologies, design of instruments)

Phase II Data Collection

- Field Work visits
- Other interviews
- Document review

Phase III Data Analysis

- Summarize data
- Analysis of data by the evaluation team (1 day Analysis Workshop)
- Analysis of data by other partners (1 day Analysis Workshop)

Phase IV Presentation

- Written report
- Formal presentations to CARE Peru staff and to other stakeholders (MOH, USAID, other NGOs).

The evaluation team was divided into 2 small groups to collect information from the field. Each team consisted of 6-7 people. The teams were in the field for 4 days to visit four communities and two health facilities previously selected for visits, and interview project stakeholders.

A Planning Workshop was held for all team members to review the results of the KPC and to develop methodologies for defining lessons learned through interactive field visits to communities and MOH health centers.

An Analysis Workshop was held for all team members and other resource people to review the results of the field work and other information collected during the evaluation, and to formulate lessons learned during the four years of project implementation.

IV. METHODOLOGY

Using both a participatory approach and participatory methodologies, a multi-disciplinary term of key project stakeholders examined the implementation of CS activities using a variety of qualitative methodologies. Field visits allowed project participants and community volunteers to provide their inputs and suggestions to the evaluation process. The evaluation focused on the impact of project strategies including; capacity building of the MOH, community health agents and community health committees, implementation of IMCI, supervision, coordination with municipalities and the MOH, and CHA associations. The methodologies used to obtain information for the evaluation included:

Document Review
Key Informant Interviews
Group interviews

Feedback of selected results from the KPC followed by a group analysis
Inventory of supplies/equipment of CHAs
Observations of Supervision visits, Support Groups, and Demonstrations

Questionnaires were designed during the Planning Workshop for use in group and individual interviews. The following activities were completed:

Date/Group	Group	Responsible	Instruments
24 Wednesday			
	Health Promotion In-Charges	Facilitator: Regina Notes: Ma Carmen, Imelda	Guide # 1 KPC
	Management Team-Health Network	Facilitator: Renee Notes: Ma Carmen, Regina	Guide # 1 KPC
	Round Table Sub-Committee	Facilitator: Imelda Notes:Celina, Sylvia	Guide # 2 KPC
25 Thursday			
Group 1	Women	Paquita Facilitator: Luz	KPC
	CHAs	Imelda	Guide # 4
	APROMSA PAT	Gloria Facilitator: Carmen	Guide # 6 KPC
Group 2	Women	Mary	KPC
	CHAs	Renee	Guide # 4
	Health Center	Sylvia	Guide # 3
26 Friday			
	CODECOs	Sylvia	Guide # 5 KPC
	CHA Organization	Caro	Guide # 6 KPC
	Local Governments	Joan/Gloria	Guide # 2 KPC

	Support Group Facilitators	Renee	Guide # 7 KPC
27 Saturday			
Group 1	Women	Paquita Facilitator: Luz Elena	KPC
	CHAs	Imelda	Guide # 4
	CODECO	Luz Facilitator: Paquita	Guide # 5
	Health Center	Imelda Facilitator: Gloria	Guide # 3
Group 2	Women	Mary	KPC
	CHAs	Renee	Guide # 4
	ASOACS	Caro	Guide # 6 KPC

V. EVALUATION SCHEDULE

November-December 2004

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
			18 Preparation	19 Preparation	20 Travel	21 Evaluation Planning
22 Evaluation Planning-Document Review	23 Workshop for Evaluation Team	24 Interview/ Meetings with partners	25 Community Visits	26 Community Visits	27 Interview/ Meetings with partners	28 Preparation of information
29 Preparation of information	30 Analysis Workshop for Evaluation Team	Dec. 1 Analysis Workshop for Project Partners	2 Presentation of Evaluation Results CARE Peru	3 Presentation of Evaluation Results: MOH, USAID, other NGOs	4 Travel	

Evaluation of the Process

Six team members completed an evaluation of the FE process, during the Analysis Workshop. The results from the questionnaires were:

- 4/6 (67%) of participants felt that the process used was very effective, and 2/6 (33%) that it was effective.
- Most participants felt that nothing was lacking from the process but three people mentioned not including members of ASOACS or the community in the evaluation process.
- What people liked most about the evaluation were the process of analyzing the information collected and the use of the FE as an opportunity to share results of the KPC survey. Other aspects people found positive were the high level of participation, the gallery walk and five stars methodologies, and the involvement of local government officials.
- Most people said there was nothing they disliked about the evaluation, but one point mentioned was the short amount of time devoted to the evaluation. Other negative aspects were conducting simultaneous activities so everyone did not get to participate in all activities and that communities were not randomly selected for visits.
- Several people mentioned they liked the process because it allowed them to learn new evaluation techniques and to analyze information .

C. List of persons interviewed and contacted

Interviews conducted during four days of field work included:

16 MOH staff in charge of Health Promotion at Health Facilities

10 members of the MOH Network Management Team

9 members of the health sub-committee of the Sanchez Carrion Roundtable

12 members of APROMSAPAT (the ASOACS in Cajabamba)

4 CHAs

15 Support Group Facilitators

11 members of COACS and ASOACS (18% women)

10 MOH staff at three Health Centers

22 CODECO leaders

11 local government officials (18% women)

37 women in four communities

The following people participated in the Analysis Workshop on December 1st

NAME	TITLE	ORGANIZATION
Imelda Medina Hoyos	Mental Health Promotion Coordinator	La Libertad Region MOH
Celina Machuca Vilchez	Community Participat. Coordinator	Cajamarca Region MOH
Luis César Alayo Chavez	Manager of Health Network	Health Network Sánchez Carrión
Carmen Yolanda Paiva Heredia	Women's Issues Coordinator	Health Network Sánchez Carrión
María Lucila Arteaga Vásquez	Health Promotion In-charge	Health Network Sánchez Carrión
Francisca Rodríguez Rodríguez	Nutritionist	Health Network Sánchez Carrión
Gloria Arcos Paredes	Project REDESS Coordinator	CARE PERU
Luz Elena Mendoza Navarro	Project REDESS Specialist	CARE PERU
Rosario Vargas Lucar	Project REDESS Specialist	CARE PERU
Silvia Valderrama Sánchez	Project REDESS Specialist	CARE PERU
Roxana Raimundo	Manager of Mirco-Network Curgos	Health Network Sánchez Carrión
Mario Oblitas	Mirco-Network Markahuamachuco	Health Network Sánchez Carrión

Mario Riveros	Manager of Mirco-Network El Pallar	Health Network Sánchez Carrión
Elsa Palomino	Manager of Mirco-Network CHAS	Health Network Sánchez Carrión
Hector Rodríguez Barboza	Mayor	Provincial Municipality Sánchez Carrión
Pedro Carranza Malqui	Mayor	District Municipality Curgos
Luis Rebaza	Mayor	District Municipality Cochorco
Oscar Fuentes	Municipal Manager	Provincial Municipality Sánchez Carrión
Alexis Rebaza Lopez	Council Member	Provincial Municipality Sánchez Carrión
Cecilia Gastañadui	Council Member	Provincial Municipality Sánchez Carrión
Napoleón Morales	Council Member	Provincial Municipality Sánchez Carrión
Rosa de la Cruz Aranda	President	ASOACS EL Pallar
Roger Serín	President	ASOACS Curgos
Jorge Quezada	President	ASOACS Markahuamchuco
Santos Gastañadui		Education Management Unit UGEL
Zoila Morales		Micro-region
Joan Jennings	Senior Technical Advisor	CARE - USA

Other interviews were conducted with:

Gloria Arcos	REDESS Coordinator	CARE Peru
Luz Elena Mendoza	Project REDESS Specialist	CARE Peru
Rosario Vargas	Project REDESS Specialist	CARE Peru
Silvia Valderrama	Project REDESS Specialist	CARE Peru
Lourdes Huamani	Administrative Assistant	CARE Peru
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Gladys Soto	Finance Director	CARE Peru
Carmen Rosa Calvo	Health Program Analyst	CARE Peru

D. CARE Peru CS Project REDESS Final KPC Evaluation Report

Universidad Nacional Agraria La Molina

Instituto de Seguridad Alimentaria Nutricional

Cooperación Alemana al Desarrollo

FINAL QUANTITATIVE EVALUATION OF THE CARE PERU

Cooperative Agreement No. FAO-A-00-00-00030-00

October 1, 2000 – September 30, 2005

XVI CHILD SURVIVAL PROGRAM *"REDESS"*

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2.	Maria Lucila Arteaga Vásquez	Sánchez Carrión Network
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14.	Rosa Alvina Carril Flores	Uchubamba Health Post
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20.	Luz Dalila Alcántara Ruiz	Curgos Health Post
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23.	Jorge Antonio Chiguala Díaz	Ventanas Health Post
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1.	Margarita Flor Sáenz Córdova	Cajabamba Network V
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12.	Teofila Flor Lezama Risco	Chuquibamba Health Post
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CARE PERU *REDESS* Project

1. Gloria Arcos Paredes
2. Erika Jeanice Aguilera Rodríguez
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6. Silvia Valderrama Sánchez
7. Lourdes Huamaní Medina

TABLE OF CONTENTS

LIST OF TABLES **Page**

LIST OF GRAPHS **Page**

EXECUTIVE SUMMARY

In Peru, especially in the rural zones, there are high rates of maternal and child mortality. The non-governmental organizations thus make a very important contribution to the efforts of the State and civil society sectors.

The objectives of the REDESS Project of CARE PERU were a) to improve the management of cases of pneumonia and b) reduce the prevalence of diarrhea in children under 2 years old; as well as c) improve the practices of child feeding by mothers and d) improve prenatal care, early detection of warning signs and post-birthing practices of women in their fertile years who live in the rural communities in the provinces of Sánchez Carrión and Cajabamba in the Departments of La Libertad and Cajamarca.

The evaluation was a transversal type, and the sampling technique was random with a confidence level of 95% and a 10% margin of error. The anthropometric evaluation was conducted on children under 2 years of age, and a survey of practical knowledge and health coverage was given to mothers of children under 2 years of age. To determine malnutrition in children, the referenced population of WHO/NCHS is used, and those with a z score of <than –2 standard deviations were considered malnourished. To analyze the variables, frequencies, homogeneity tests, analysis of variance and tests of normality were employed.

The results show an improvement in the levels of knowledge and practices of the mothers with respect to maternal and child health and child nutrition, an increase in coverage of maternal and child facilities, an improved ability of the community organization to resolve health problems and deal with emergencies, and improved abilities to seek Ministry of Health facilities.

With respect to the evaluation indicators, 84.6% of them have showed improvement, while 33.3% have achieved the proposed targets. There was particular difficulty to achieve the targets set for the indicators for prevention and control of diarrhea and for nutritional improvement. Of the Rapid Catch indicators that are comparable between the initial and

final evaluations, 91% have shown improvement. With respect to nutritional indicators, there has been improvement in chronic malnutrition ($p=0.055$), but acute malnutrition ($p=0.009$) and overall ($p=0.023$) are more prevalent that at the beginning of the Project.

Thus we can say that, on balance, there has been a positive improvement in the maternal and child health conditions during the Project implementation period (October 2000 to September 2004).

1. BACKGROUND OF THE REDESS PROJECT

The REDESS Project of CARE PERU was developed in the provinces of Sánchez Carrión and Cajabamba, in the departments of La Libertad and Cajamarca in the Republic of Peru. It is a Project implemented in association with the Ministry of Health, the Organization of Community Health Agents and the local governments, and it has been implemented from October 2000 until September of the present year.

Its area of intervention encompasses a total of 348 population groupings (in their majority rural) with a total population of 123,670 people in 23,554 families. 73.5% of this population is in the province of Sánchez Carrión, with the remainder in the province of Cajabamba.

Table No. 1: Population information by Province and Department in REDESS Project areas.

Department	Province	Population	Families
La Libertad	Sánchez Carrión	90,850	17,439
Cajamarca	Cajabamba	32,820	6,115
Total		123,670	23,554

The departments of La Libertad and Cajamarca are in the north of Peru and the provinces of the intervention are in the Andean region. Each department is composed of provinces and each province, of districts. The REDESS Project covers the entire province of Sánchez Carrión, which is composed of 8 districts, and three of the four districts in the province of Cajabamba.

1.1. Health situation in Peru and in the Project area.

1.1.1. Relevant socio-economic aspects in the REDESS Project area.

The population is 80% rural and lives in peasant farmer communities surrounding the capital cities in each of the districts. The population is predominantly Catholic, although

there are a variety of Protestant churches in the area. The local language is Spanish, and in this part of Peru, people don't speak indigenous languages (Quechua, Aymara, etc.). The provinces of Cajabamba and Sánchez Carrión have been categorized as areas of extreme poverty by the Peruvian government. Several districts of these two provinces have as high as 88% of the households with their necessities not satisfied in food, housing, basic services, health and education (CARE, 2001).

More than 40% of the households lack access to potable water systems, in both the rural and urban areas in Sánchez Carrión, while in one rural district of Cajabamba, less than 25% of the communities have access to potable water (URMEI 1999). Thirty percent of the children don't attend primary school (INEI 1994). The population depends economically on the sale of its agricultural and livestock production, principally composed of potato, wool and grains. The illiteracy rate in Sánchez Carrión shows that more than half (55.3%) of the women don't know how to read or write (Epidemiology Unit, MOH, La Libertad, 1998). The Baseline Evaluation of REDESS showed that 46.7% of the mothers of children under two years of age are illiterate (CARE, 2000a).

Difficult climatic conditions prevail in the area, especially during the months of June to September, with very low temperatures that oscillate between 0 and 5º C. The months of October to March are characterized by frequent rain, and are associated with the period of sowing agricultural crops on a small scale for self-consumption.

The majority of the communities are small and dispersed through the Andean highlands, and an important number of them have difficult geographical accessibility. Road access is good to the provincial capitals (Huamachuco and Cajabamba); nonetheless, access to the communities is difficult, especially during the rainy season. There are neither highways nor mechanized means of transport into the majority of the communities. Therefore, the majority of patients are transported on foot (55.3%) and a small portion, by public transportation (11.2%).

1.1.2. Policy guidelines of the Peruvian Ministry of Health.

Beginning with an analysis of the principal health problems, the Peruvian Ministry of Health has proposed a series of Policy Guidelines to orient its activities until the year 2012. Included among these guidelines are the following:

The promotion of health and the prevention of illnesses seeks the promotion of healthy life styles through actions that are coordinated and concerted with the education sector, local governments, civil society organizations and the family. This process will have to recognize and take into consideration the health concepts of the population and the interaction between the health system and the community.

The thrust is for a model of integrated health attention and extension and universalized health protection. First, it is centered in the satisfaction of the health necessities, whether or not they are perceived, by individuals, families and the community. Secondly, is a state insurance mechanism, oriented to the poor and extremely poor population that lacks free access to the health facilities and medicines. With integral health insurance, mothers have access to prenatal and postnatal care, childbirth facilities and treatment of obstetric and neo-natal complications. Children are offered free preventative and curative services, such as checkups for growth and development, immunizations, attention in cases of acute respiratory infections, acute diarrhea, etc. Thus, the MOH seeks to increase access to health facilities and to prevent the lack of attention to families with health problems.

Human resource development is also promoted via policies of training that is permanent and open to all professionals and non-professionals, the planned growth of the formation of health personnel, the protection of the career public functionary, the generation of a policy of incentives, etc.

The rest of the guidelines seek to strengthen the supply and rational use of medication, the role of sectoral management, and the internal and external financing that is geared toward populations with high indices of poverty.

1.1.3. Availability of health facilities in the REDESS Project area.

In the province of Sánchez Carrión, health facilities are organized in a Health Network, made up of the "Leoncio Prado" Support Hospital and 16 peripheral health facilities. These facilities, in turn, are forming 4 micro health networks that are units for health organization and management.

Table Nº 2: Health facilities by micro networks in the Sánchez Carrión Health Network, Department of La Libertad.

Network	Micro Network	Health facility
Sánchez Carrión	Markahuamachuco	Choquizonguillo Health Post Puente Piedra Health Post Marcabalito Health Post Ventanas Health Post
	El Pallar	El Pallar Health Post Cochabamba Health Post Uchubamba Health Post Marcabal Grande Health Post San Alfonso Health Post
	CHAS	Aricapampa Health Post Chugay Health Post Sartimbamba Health Post
	Curgos	Curgos Health Post Orogolday Health Post Sarín Health Post
	_____	Leoncio Prado Hospital

In the province of Cajabamba, the health facilities are organized into a Health Network, organized in the Cajabamba Support Hospital and a total of 20 peripheral health facilities that are forming 3 micro networks. The REDESS Project has only been implemented in the jurisdiction of the Cajabamba micro network, which has 7 health facilities.

Table Nº 3: Health facilities in the Cajabamba micro network of the Cajabamba Health Network, Department of Cajamarca.

Network	Micro Network	Health facility
Cajabamba	Cajabamba	Cajabamba Health Center Algamarca Health Post Araqueda Health Post Chuquibamba Health Post Cauday Health Post Otuto Health Post Huañimba Health Post

1.1.4. Situation of maternal and child health.

Children under five years old and women at fertile age (15 to 49 years old) are considered by the Ministry of Health (MOH) as groups at high risk of death. Nonetheless, the most vulnerable are children under one year old and pregnant women.

According to ENDES 2000, in rural areas, infant mortality (children under 1 year old) is estimated at 60 per 1000 live births, while mortality in children under 5 years old is estimated at 85.0 per 1000 live births. At the national level, there is a clear tendency downward during the last 30 years for both indicators. With respect to maternal mortality at the national level, during the last decades there has also been a progressive reduction in the Maternal Mortality Rate, from 400 per 100,000 between the years 1955 and 1969, to 185 per 100,000 live births in the years 1993 to 2000.

Among the factors that have contributed to these tendencies, we can mention the process of concentration of the population into the large cities, which favors more families being closer to health facilities. Other factors were the implementation of two important initiatives in public health -- the Project to Strengthen Health facilities financed by the Inter-American Development Bank and "Basic Health for All," a program sponsored by the Peruvian government that increased the number of personnel in the health facilities and the number of hours they attend to the public and offered training in basic health and

management. Together with the universalization of health insurance, which has helped poor children and women gain free access to health care.

In spite of this, it is worth mentioning that the infant mortality rate in Peru is still among the highest in Latin America, only superceded by the Dominican Republic, Nicaragua, Bolivia and Haiti, which are all countries where per capita income is lower than in Peru. The Maternal Mortality Rate is also one of the highest in Latin America (MOH, 2002).

According to ENDES 2000, 25.4% of children under 5 years old suffer from chronic malnutrition, and 13.2% of mothers are malnourished (Cajamarca = 18.2%; La Libertad = 15.3%). Likewise, anemia represents a public nutrition problem, being prevalent in 49.6% of children under 5 years old (Cajamarca = 52.7%; La Libertad = 38.0%) and 31.6% of women of child-bearing age (Cajamarca = 35.5%; La Libertad = 27.2%) (INEI, 2001). The last evaluation of the level of hemoglobin in the blood (gr Hb/dl) conducted by the Center for Feeding and Nutrition (2003) in women of child-bearing age reported a prevalence of anemia of 32.9%, similar to the level obtained by ENDES 2000; nonetheless, it shows that the prevalence in Cajamarca fell from 35.5 to 30.4% and in La Libertad, it increased from 27.2 to 36.9% (INS, 2003).

In recent years in Peru, we can observe an epidemiological pattern that shows a prevalence of chronic and degenerative diseases in the wealthiest quintile of the population and a prevalence of infectious diseases in the poorest quintile, although at the present time we are experiencing a process of epidemiological transition, with an increase in non-infectious diseases among the poor.

In the last two decades, there have been improvements in maternal and child health care and in the control of diseases that are preventable by use of vaccines (polio, measles) as well as in the control of some transmissible diseases (TB), all of which have had a positive impact on mortality. Nonetheless, these improvements have not been homogeneous, as the zones that have evolved positively are preponderantly those that are more developed. In zones of extreme poverty, problems of maternal mortality persist; and in general, there

were increases in malaria, dengue, multi-drug resistant TB, AIDS, Bartonellosis, accidents, injuries and violent deaths from different causes (CARE, 2001; MOH 2002).

In the Project area, the principal causes of mortality in children are diarrhea, pneumonia, nutritional deficiencies and problems during birth. The principal causes of death in children less than one year old include malnutrition, respiratory infections (including bronchitis and pneumonia) and diarrhea (CARE, 2001). The prevalence of acute diarrhea, in the last 15 days, in children under 2 years old was 35%, while the prevalence of acute respiratory infections was 50.1% (REDESS, 2000). According to ENDES 2000, the prevalence of acute respiratory infections in children under five years old in rural zones is 20.6%, while the prevalence of diarrhea is 17.6%. The initial evaluation of the Project reported a prevalence of chronic malnutrition of 41.4% and of overall malnutrition, 15.1% (CARE, 2000). According to ENDES 2000, 40.2% of children under five years old who live in rural areas suffer from chronic malnutrition and 11.8%, from overall malnutrition (INEI, 2001). With respect to immunization coverage, in the year 2000, it was 64.1%, 56.3%, 56.9%, 47.8%, respectively, for the vaccines BCG, Anti-polio, DPT and Measles (CARE, 2000a). Other factors that contribute to the high rates of mortality include low education levels, short periods between pregnancies, inadequate pre- and post-natal care by the providers, as well as low birth weight (CARE, 2001).

High maternal mortality remains a serious problem in rural Peru. According to the INEI (1996), the Maternal Mortality Rate in highland regions of Peru is estimated at 379 per 100,000 live births. Its direct causes include hemorrhage, sepsis and eclampsia. Among the factors that may be contributing in the Project area are the high proportion of home deliveries (81.4%, CARE 2000a) and the fact that, when there is an obstetric emergency, women let the husband make the decision on seeking treatment, that emergencies occur at great distances from health centers, and the response capacity of rural health facilities remains limited.

ENDES 2000 shows that, while 69.6% of women in the countryside received prenatal care, only 26.2% of the births were attended by health professionals. It also indicates that

fertility rates in rural areas have decreased from 5.6 in 1996 to 4.3 in 2000, principally due to the use of family planning methods. Nonetheless, while 72.3% of the women who live with a partner in rural Peru don't wish to have more children, only 40% declare that they use modern contraceptive methods (INEI, 2001).

There has been an ongoing Bartonellosis epidemic in Sánchez Carrión Province since the first case was detected there in May 2002. Since the end of 1993 more than 700 cases of Bartonellosis have been reported, and 99.5% of these have evolved favorably. The population group most affected is children under 15 years old, which account for 56% of the cases, the 5 to 9 year-olds group being most vulnerable (OGE, 2003).

In another area of concern, the occurrence of intervals between births of less than 24 months is 25.8% in Cajamarca, while in La Libertad, it is 18.4%. The results of ENDES 2000 confirm that the risk of child death is greater when the period between pregnancies is less than 24 months, the child mortality rate is elevated to 78 per 1000 live births; there is also almost three times less risk of death when the period between pregnancies is 48 months or more (mortality rate: 28 per 1000). It should be noted that in the rural areas, 23.4% of births occur with intervals of less than 24 months, and if we compare the ENDES 1966 with that in 2000, we observe a decrease from 24.2 to 20.3% (INEI, 2001).

In Cajamarca, 27.8% of women know one or more ways to avoid contracting AIDS, while in La Libertad, 54.7% have this knowledge. The average in rural zones in Peru is 35.4% (INEI, 2001). The majority of them know only one valid form of avoiding infection.

The maternal and child health care offered by health facilities is being formalized according to norms emitted by the Ministry of Health. These protocols stipulate both technical and programmatic aspects. At present, the following are employed: Procedures and Protocols for Women's Health care (MOH, 1999), Procedures and Protocols for Child Health care in Health Centers and Posts (MOH, 1999), Norms for the Care of Children under 5 Years of Age (MOH, 1996), Norms for the Control of Diseases that are Preventable by Vaccination (MOH, 1995) and Guidelines for Child and Maternal Nutrition (MOH, 2003).

1.1.5. Role of community health agents

The rural communities in the Project area have such community health agents as health promoters, traditional midwives and female leaders. These community leaders enjoy the confidence and respect of the population. The Project has supported their organization and training and, at the same time, promoted their participation in different decision making spaces at the local, district and provincial levels.

The principal activities of health promoters include identification of groups at high risk from disease and death (children and mothers), education in maternal and child health and nutrition, case referrals and follow-up, evacuation of emergency cases, community organization, etc.

The midwives, identify women who are pregnant, participate in referring them to the health facility, organize the measures to be taken by the family with respect to the pregnancy, childbirth and post-pregnancy (Birth Plan), give advice to the mothers, and attend the childbirth together with the health personnel, among other tasks.

The women leaders are local leaders who support educational activities in health and nutrition, participate in the referral of cases, and help evacuate emergency cases to the nearest health facility.

1.2. Goals, objectives and main activities of the REDESS Project.

The project goal was to improve the health of children under five years of age and women of reproductive age, with an emphasis on the reduction of maternal, peri-natal and child morbid-mortality in rural communities of the provinces of Sánchez Carrión and Cajabamba in the departments of La Libertad and Cajamarca, respectively.

In order to achieve this goal, the Project has encouraged families to commit to taking responsibility for their health, through a group of systematic interventions by the Community Health Agents (CHA) in close coordination with the Ministry of Health (MOH) facilities, community organizations (Community Development Committees, Water and Sanitation Committees, Mothers' Clubs, etc.) and local institutions (Local Governments, Consensus-building Committees, etc.).

The Objectives of the REDESS Project were to:

- Improve the management of cases of pneumonia in children from 0 to 23 months old.
- Reduce the prevalence of diarrhea in children from 0 to 23 months old.
- Improve prenatal care, early detection of warning signs and post-natal practices.
- Improve child feeding practices of mothers with children from 0 to 23 months old.

Among the principal activities that have been implemented by REDESS are the following:

- Organization and Implementation of AIEPI/IMCI Workshops about health care protocols for healthy and sick children directed to MOH Personnel and CHA.
- Design and implementation of communication campaigns on health and nutrition and on prevention of acute respiratory infections and pneumonia, diarrhea and dehydration, and malnutrition and obstetric and peri-natal complications.
- Implementation of a community referral and counter-referral system.
- Design and provision of training materials in maternal and child health and nutrition for the volunteer health agents that have messages aimed at prevention, recommendations for healthy practices, identification of warning signs and recommended actions for treatment.
- Training Health Personnel and CHAs in adult education techniques.
- Design and implementation of Training Plans for Health Personnel and CHAs.
- Design of Training Curricula for Health Personnel and CHAs.
- Push forward the mapping of the communities by their community leaders in order to identify the population groups with the highest risk of illness and death (children under

1 year old, women of reproductive age and pregnant women), the numeration of houses and identification of risk zones (garbage dumps, potential landslide areas, etc.).

- Motivate the directors, leaders and communities members to improve hygiene in the community (construction of latrines and potable water projects, etc.).
- Support the CHAs to organize themselves into committees and associations.
- Develop the leadership capabilities of the CHAs to participate effectively in the various organizations of coordination and management (neighborhood associations, consensus-building groups, community development committees, etc.).
- Train the CHAs to support pregnant women to develop and implement a Childbirth Plan.
- Support the CHAs and the MOH to develop a community system to look after women of reproductive age for their prenatal and post-natal health care.
- Make two-way radios available for health care coordination in emergency cases and referrals to health care facilities with superior capacities.

2. FINAL QUANTITATIVE EVALUATION OF THE REDESS PROJECT: OBJECTIVES AND IMPLEMENTATION

In the context described earlier, and given the end of the period of Project implementation (October 2000 to September 2004), it was proposed that the quantitative final evaluation be conducted by the ISAN.

The objectives of the final evaluation were:

- Develop a Quantitative Final Evaluation of the REDESS Project, based on a Survey of Knowledge, Attitudes and Practices in maternal and child health and nutrition.

- Develop a Final Nutritional Evaluation of children under 2 years of age, based on anthropometric information.

The final evaluation of knowledge, practices and coverage, and the anthropometric evaluation involved the participation and commitment of the social actors who were Project associates, including MOH personnel, Community Health Agents and local government directors.

This process has the following phases: prior coordination, training of field personnel for the interviews and the anthropometric registration, the collection of the information and, finally, its analysis.

There was an active participation of the personnel from the health facilities of the Sánchez Carrión and Cajabamba Networks, from the planning of the evaluation, to the elaboration of instruments to collect information, and the collection and the analysis of the information. During this work, a group of questions were proposed and incorporated in order to examine the levels of recognition, knowledge and practices by the mothers in the face of cases of Bartonellosis in the zones of both Health Networks.

On the other hand, the CHA also played an important role in the identification and location of the families that were selected for the interview through random sampling procedures. The local governments provided the facilities necessary in order that the teams of survey takers and supervisors were able to transport themselves to the selected communities.

Some of the restrictions that made the evaluation process less participatory were the many activities programmed in the MOH that were associated with training activities for health personnel and coordination meetings and evaluation of the management at the level of the Regional Health Directorate.

3. EVALUATION METHODS

3.1. Survey of knowledge, practices and coverage (KPC).

The survey has 95 questions, divided in the following manner:

Section 1: Prevention of Illnesses

Section 1A: Breast feeding and Child Nutrition, with 16 questions

Section 1B: Immunizations, with 2 questions

Section 1C: Hand hygiene, with 1 question.

Section 1D: Malaria, with 3 questions

Section 1E: HIV / AIDS, with 2 questions

Section 2: Sick Child.

Section 2A: Diarrhea, with 15 questions

Section 2B: Acute Respiratory Infections, with 12 questions

Section 3: Maternal health

Section 3A: Prenatal care, with 15 questions.

Section 3B: Care at childbirth, with 4 questions.

Section 3C: Post-natal and newborn care, with 11 questions.

Section 4: Bartonellosis

Section 4A: Bartonellosis, with 4 questions.

Section 5: Community organization.

Section 5B: Community organization, with 10 questions.

I should be mentioned that the 1995 KPC Module survey (The John Hopkins University, 1995) served as the basis for the elaboration of the final KPC survey, and it was applied in the Initial evaluation in the year 2000.

A series of questions were incorporated in this evaluation, principally on health practices, that had been planted in the 2000 KPC Modules and revised by the Child Survival Technical Support Project (CSTS) and the CORE Monitoring and Evaluation Working

Group. Also, a series of questions on Bartonellosis were included at the request of the MOH.

3.2. Calculation of Indicators of Knowledge, Practices and Coverage.

The evaluation indicators of the REDESS Project total 13. The details of how the indicators were calculated are explained in Table Nº 4.

Table Nº 4: Description of the calculation of the indicators of the REDESS Project

Indicator	Numerator	Denominator
Management of cases of pneumonia.		
Increased number of mothers who recognize two signs of pneumonia (rapid breathing and difficulty breathing).	Number of mothers who know 2 or more warning signs of pneumonia	Total number of mothers
Increased number of mothers who seek adequate medical treatment for their children from 0 to 23 months old with signs of pneumonia.	Number of mothers of children who have had pneumonia and who seek treatment in a health facility	Total number of mothers whose children have pneumonia
Prevention and control of diarrhea.		
Increased number of mothers with children from 0 to 23 months old able to correctly identify at least two signs of dehydration and two signs of persistent diarrhea and dysentery	Number of mothers who know 2 or more signs of dehydration and also two or more signs of persistent diarrhea and dysentery	Total number of mothers
Increased number of mothers with children from 6 to 23 months old with diarrhea who administer the same or a larger amount of food during the episode.	Number of mothers with children older than 5 months with diarrhea and who administer the same or a larger amount of food during the diarrhea	Total number of mothers with children older than 5 months with diarrhea
Reduced number of children from 0 to 23 months old with diarrhea who receive antibiotics (self-medicated) during the episode	Number of mothers of children with diarrhea and who have received antibiotics without a prescription	Total number of mothers of children with diarrhea
Indicators of maternal health		
Increased number of women of reproductive age who recognize at least 2 danger signs of pregnancy, childbirth and post-childbirth.	Number of mothers who recognize 2 or more danger signs of pregnancy, childbirth and post-childbirth.	Total number of mothers
Increased number of women pregnant with 4 or more prenatal checkups.	Number of mothers who have 4 or more prenatal checkups during their last pregnancy	Number of mothers who have a card showing the checkups during their pregnancy

Increased number of women in reproductive age group who received 2 or more tetanus shots prior to their last childbirth.	Number of mothers who have received 2 or more tetanus shots prior to their last childbirth.	Total number of mothers
Increased number of women with obstetric complications who are treated by health professionals	Number of mothers who have had complications during pregnancy or childbirth and were treated by health professionals	Total number of mothers who had complications during pregnancy or childbirth
Increased number of mothers with children under 2 years old who can recognize 3 or more warning signs in newborn children	Number of mothers who recognize 3 or more warning signs in newborn children	Total number of mothers
Nutritional improvement		
Increased number of children from 0 to 5 months old with only maternal lactation.	Number of children from 0 to 5 months old who received only maternal milk the day before	Total number of children from 0 to 5 months of age
Increased children from 6 to 23 months old who are fed five times daily	Number of children from 6 to 23 months old who are fed at least 5 times the day before the survey	Total number of children from 6 to 23 months of age
Increased number of children from 12 to 23 months old who receive anti-parasite treatment every 6 months.	Number of children from 12 to 23 months old who receive medication for parasites.	Total number of children from 12 to 23 months of age

Also in this evaluation calculations were made for a group of indicators that wad been proposed by USAID. These indicators total 13, and principally measure practices in child health and nutrition. The details of how the indicators were calculated are explained in Table Nº 5.

Table Nº 5: Description of the calculation of the indicators proposed by USAID

Indicator	Numerator	Denominator
Indicator of overall malnutrition		
Percentage of children from 0 to 23 months old who have low weight (- 2 Standard Deviations from the median weight for their age according to WHO/NCHS for the referenced population)	Number of children from 0 to 23 months old whose weight is less than - 2 Standard Deviations from the median weight for their age according to WHO/NCHS	Total number of children from 0 to 23 months old were weighed

Prevention of illness and death			
Percentage of children from 0 to 23 months of age who have been born at least 24 months after the last live birth.		Number of children from 0 to 23 months old with brothers and sisters older than 24 months	Number of children from 0 to 23 months old who have brothers and sisters
Percentage of children from 0 to 23 months of age whose births were attended by trained health personnel		Number of children from 0 to 23 months old whose births were attended by doctor, obstetrician, nurse and sanitary technician.	Total number of children from 0 to 23 months old
Percentage of mothers with children from 0 to 23 months of age who received at least 2 doses of tetanus toxide prior to the birth of their last child		Number of mothers who have received 2 or more doses of tetanus vaccines prior to the birth of their last child	Number of mothers who have a tetanus vaccination card or a card showing the checkup of their pregnancy
Percentage of children from 0 to 5 months of age who have received only maternal lactation during the past 24 hours		Number of children from 0 to 5 months old who received only maternal milk the day before	Total number of children from 0 to 5 months of age
Percentage of children from 6 to 9 months of age who have received maternal milk and complementary feeding during the past 24 hours		Number of children from 6 to 9 months old who consumed maternal milk and complementary feeding	Total number of children from 6 to 9 months old
Percentage of children from 12 to 23 months of age who have been completely vaccinated against the five preventable diseases before their first birthday	BCG	Number of children from 12 to 23 months old who have been vaccinated for BCG	Total number of children from 12 to 23 months old
	DPT	Number of children from 12 to 23 months old who were vaccinated with the 3 doses of DPT	Total number of children from 12 to 23 months old
	Anti-polio	Number of children from 12 to 23 months old who were vaccinated with the 3 doses of polio vaccine	Total number of children from 12 to 23 months old
Percentage of children from 12 to 23 months of age who have been vaccinated against measles		Number of children from 12 to 23 months old who were vaccinated with measles or SPR vaccine	Total number of children from 12 to 23 months old
Percentage of children from 0 to 23 months of age who sleep under mosquito netting treated with insecticide.		(only in areas with risk of malaria)	
Percentage of mothers with children from 0 to 23 months of age who know at least 2 forms to reduce the risks of infection with AIDS.		Number of mothers who know 2 or more forms to reduce risks of infection from AIDS	Total number of mothers
Percentage of mothers with children from 0 to 23 months of age who have reported that they wash their hands with soap or ash prior to preparing food, prior to feeding the baby, after defecating, and after attending to a child who has defecated.		Number of mothers who wash their hands in all 4 situations	Total number of mothers

Management and treatment of illnesses			
Percentage of mothers with children from 0 to 23 months of age who know at least 2 signs of childhood diseases that indicate the need for treatment.	Pneumonia	Number of mothers who know 2 or more signs of pneumonia	Total number of mothers
	Diarrhea	Number of mothers who know 2 or more signs of dehydration during la diarrhea	Total number of mothers
Percentage of sick children from 0 to 23 months of age who have received continuously increased amounts of fluids and solid foods during an illness in the last 2 weeks.	EDA	Number of children from 0 to 23 months old with diarrhea and who have received more fluids and solid foods continuously	Number of children from 0 to 23 months old with diarrhea

3.3. Sampling.

3.3.1. Calculation of the size of the sample for the study of knowledge, attitudes and practices.

The technique of sampling by clusters recognized by WHO (The John Hopkins University, 1995), was employed. This technique was used in the Baseline Survey of the REDESS Project, and is known to permit obtaining precise information about the communities.

The sampling was realized in 2 stages: first, 30 clusters were randomly selected; secondly, 10 homes with children under 2 years old were randomly selected. This sample size provided an estimate with ± 10% level of precision and a confidence level of 95% (Sarriot E, Winch P, Weiss W, Wagman J, 1999).

It is worth noting that it was planned to survey additionally 2 homes per cluster in order to replace those homes that had incomplete information or a faulty registration.

The sampling method was by clusters. The number of clusters assigned to each province where the Project was implemented was proportional to the population in these areas. According to the population information that was given to us, around ¾ parts of the

population is located in the province of Sánchez Carrión (90,850 inhabitants) and ¼, in the province of Cajabamba (32,820 inhabitants).

Thus, 24 clusters were selected in the province of Sánchez Carrión, and 6 in the province of Cajabamba (See Annexes Nº 1 and 2).

In homes with 2 or more mothers with children under 2 years old, the concept of family was used according to which "a family is a group of persons who eat from the same family pot". Thus if the mothers prepare their food separately, both were surveyed. When mothers with 2 children under 2 years old were identified, the younger child was selected for the survey. In all cases, the mothers showed the birth certificate or checkup card of the child. In doing so, the birth date was verified and the age of the child was calculated. Also, the child's biological mother was always surveyed.

3.3.2. Calculation of the Sample Size for the Anthropometric Evaluation.

The following formula was used for the calculation of the sample size (Gross R, Kielmann A, Korte R, Schoeneberger H, Schultink W. 1997):

$$\mathbf{n} = \frac{\mathbf{c} \times \mathbf{p} \times (100 - \mathbf{p})}{26}$$

In which:

c = confidence level for the anthropometric study ($a_{0.95}$).

p = estimated prevalence of chronic malnutrition in the location of the evaluation.

For the calculation of the sample size, the prevalence of chronic malnutrition in rural zones will be considered to be 40.2%, as found in the 2000 National Demographic and Health Survey (INEI, 2001).

$$\mathbf{n} = \frac{\mathbf{(3.8416)} \times \mathbf{(40)} \times \mathbf{(60)}}{\mathbf{26}}$$

n = 354 children.

Thus it was planned to evaluate 354 children.

3.4. Training of Supervisors and Survey Takers.

3.4.1. Training and Standardization of Supervisors and Survey Takers.

A 3-day training workshop was held during the days prior to the survey and in the city of Huamachuco in the province of Sánchez Carrión. Sixty-one persons participated, among them personnel from the Sánchez Carrión and Cajabamba Health Networks. The workshop consisted of theoretical and practical sessions about the methodological and ethical aspects of the application of the survey. It also incorporated a revision of the technical contents of the survey. The program for the implementation of the training workshop is found in Annex Nº 3.

The methodology of anthropometric measurements for children under 2 years old was also reviewed, both in theory and in practice. A trial of the standardization of antropometrists (people who measure height and weight) was also conducted that consisted of an analysis of the variation in the weight and height measurements obtained by the antropometrists. The measurements of all the supervisors and survey takers were thus standardized prior to the collection of data.

3.5. Data Collection.

Instruments employed - KPC survey formats, anthropometric registration sheets, child measurement charts, scales, pencils, erasers and clipboards.

Work teams - Six work teams were formed for the survey in the Sánchez Carrión Network, with each one containing 2 supervisors and 4 survey takers. Each team was assigned 4 clusters, and was required to realize 1 cluster per day. The routes were planned in detail, as were the places to sleep in order to avoid major inconveniences. In the end, the 24 clusters were completed in 4 days.

Two work teams were formed for the collection of data in the Cajabamba Network; each was made up of 2 supervisors and 4 survey takers. Three clusters were assigned to each

team, which realized work in 1 cluster per day. In the end, 6 clusters were completed in 3 days.

Each team was made up of personnel from CARE and the Ministry of Health as well as nursing students.

Mobilization of the teams - The routes were established according to the locations of the selected clusters, the availability of vehicles and the places to spend the night.

Quality Control - Was realized in the KPC surveys and in the anthropometric registries. The birth date of the child was verified and his/her age was again calculated, also if the surveys were correct and filled out completely, if the instruction for answering the questions (mark one answer or more than one answer) were followed. Additionally, prior to the field work, all the antropometrists were submitted to standardization tests to assure the quality of the information.

The first control was conducted by the field supervisors; the second was conducted by themselves before turning the surveys into the team consultant and the last was conducted by the consulting team before its processing.

In the case of quality control of the anthropometric measurements and registration, the supervisors were in charge of verifying the correct application of the methodology of anthropometric measurement, in some instances they also weighed and measured to verify the measurements of the survey takers. They also verified the correct and complete filling out of the forms for the anthropometric registration.

3.6. Analysis of the Data.

A descriptive analysis of the variables of the study was undertaken. The Homogeneity Test was conducted for the comparison of categorical variables. The continuous data was subjected to an analysis of variance, for which first, their statistical assumptions must be demonstrated, including: normality of residuals and homogeneity of variances. In the case of the weight and height data, the Kolmogorof Smirnof Test was applied to prove the

normal distribution of the data. Statistical programs (SPSS Version 11.0, Epi Info 2000 and Epi Data 3.02) were used for the statistical analysis.

4. RESULTS

The field work was undertaken in 11 days, without inconveniences. Taking place between September 8 and 14 in the province of Sánchez Carrión and between September 15 and 18 in Cajabamba, a total of 356 mothers with children under two years old were interviewed. Their distribution, by location, was as follows:

Table Nº 6: Number of surveys taken, by REDESS Project area.

Department	Province	Number of Surveys
La Libertad	Sánchez Carrión	292
Cajamarca	Cajabamba	64
TOTAL		356

For the anthropometric evaluation of the children, the children of the mothers who responded to the surveys of knowledge, attitudes and practices were evaluated. As had been planned initially, a total of 354 children were evaluated.

4.1. Results of the KPC Survey

4.1.1. Socio-demographic data of the mother and the child

The age average of the mothers interviewed in the final evaluation was 28.5 ± 7.4 years, very close to the age of the mothers interviewed in the initial evaluation (27.3 ± 7.2 years).

Also, the largest percentage of mothers interviewed varied between 20 and 29 years old in the initial evaluation (52.7%) as well as in the final (46.7%).

Comparing the age groups in Table Nº 7, we see that among those interviewed, the percentage of adolescent mothers (15 to 19 years old) and those from 20 to 29 years old was slightly smaller the Final KPC than in the Baseline KPC, and the percentage of mothers 30 years and older was higher (from 36.1% to 43%).

Table Nº 7: Age groups of the mothers surveyed in the initial and final evaluations.

Age of Mothers (years)	*Baseline KPC*		*Final KPC*	
	No.	*%*	*No.*	*%*
15 to 19	39	11.2	36	10.2
20 to 29	184	52.7	165	46.7
30 to 34	57	16.3	75	21.2
35 to 39	47	13.5	47	13.3
40 to 49	22	6.3	30	8.5
Total	349	100.0	353	100.0

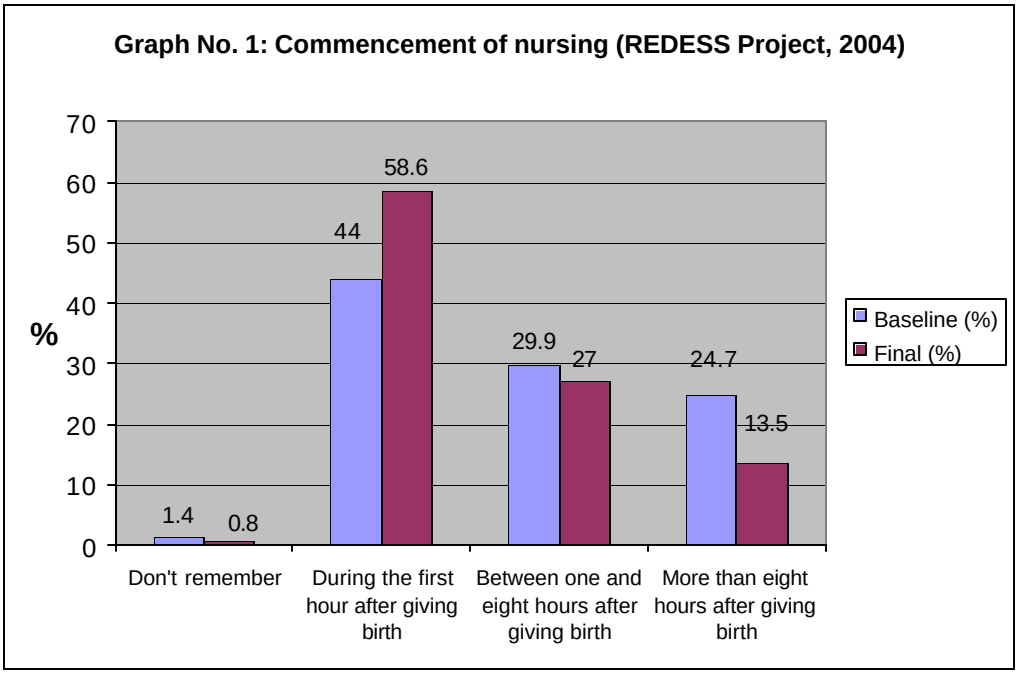
The average age of the children whose mothers were interviewed is 10.9 ± 6.6 months, similar to the average found in the initial evaluation (10.5 ± 6.5 months). 27.2% are under 6 months, 26.4% between 6 and 11 months, while the children 12 months or more represent 46.3%. This distribution is very similar to that found in the initial evaluation, when there were 27.4%, 27.4% and 45.3%, in the respective age groups.

Table Nº 8: Age Groups of the children participating in the initial and final evaluation.

Age of Children (months)	*Baseline KPC*		*Final KPC*	
	No.	*%*	*No.*	*%*
0 to 5	96	27.4	97	27.2
6 to 11	96	27.4	94	26.4
12 to 23	159	45.3	165	46.3
	351	100.0	356	100

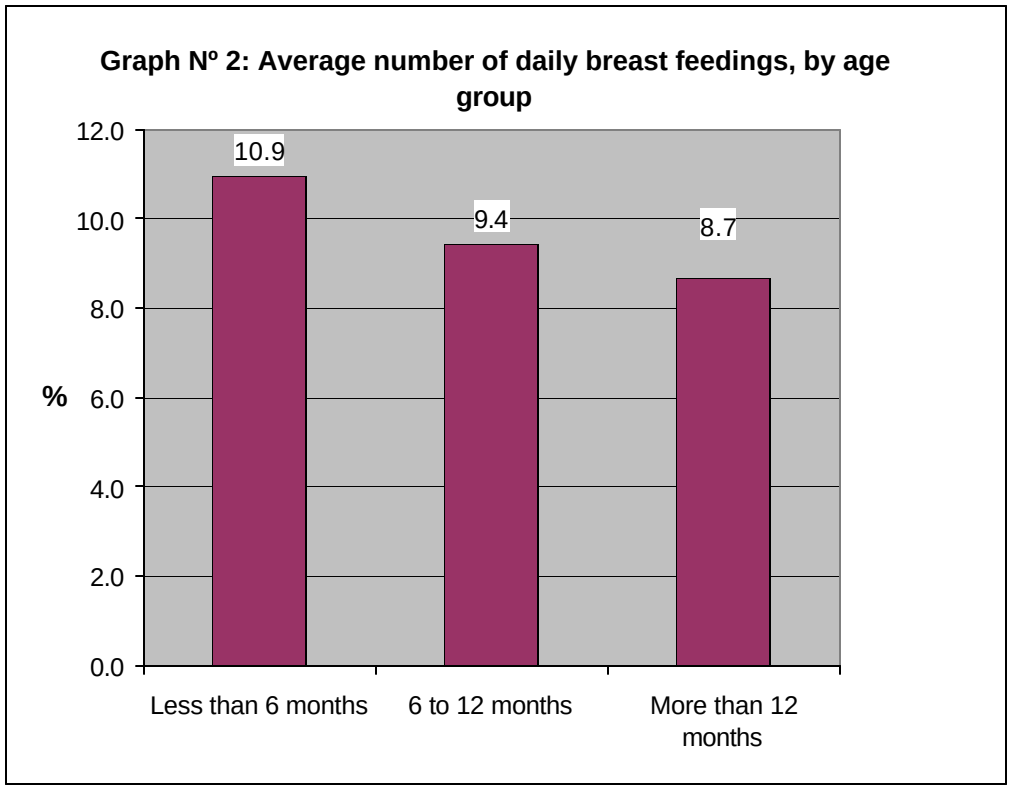
4.1.2. Knowledge and practices of breast feeding and nutrition.

We see that more than 99% of the children have received maternal milk, both in the initial survey (99.1) and in the final (99.7%). 58.6% of the mothers say they initiated breast feeding during the first hour after childbirth, a percentage that is slightly higher than the national average (54%) (INEI, 2001) and 14% higher than what was observed in the initial evaluation (44%).



The consumption of maternal milk during the first three days increased from 75.9%, in the initial evaluation, to 92.4% in the final evaluation.

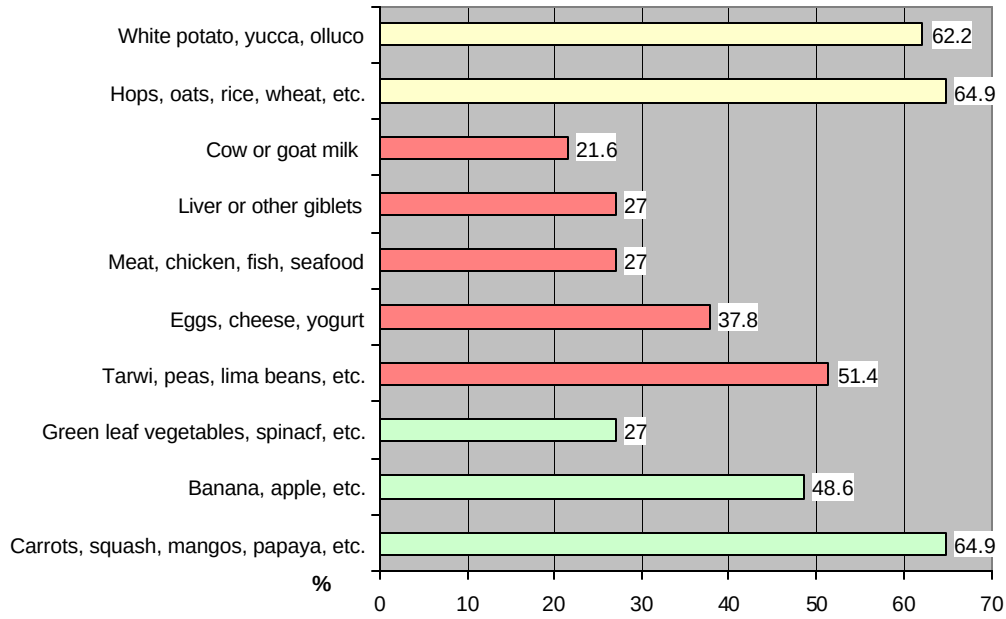
The average number of breast feedings received by children less than 2 years old was 9.7 ± 3.3 times per day, being larger in the group of children under 6 months old (10.9 times; n=95) than in those from 6 to 12 months old (9.4 times; n=111) and in those older than 12 months old (8.7 times; n=108).



To demonstrate the pattern of food consumption of the children under 2 years old, they were divided into 3 age groups: from 6 to 8 months, 9 to 11 months and 12 a more months. The food was also grouped into energizers, constructers and protectors, which provide energy, proteins and vitamins and minerals, respectively.

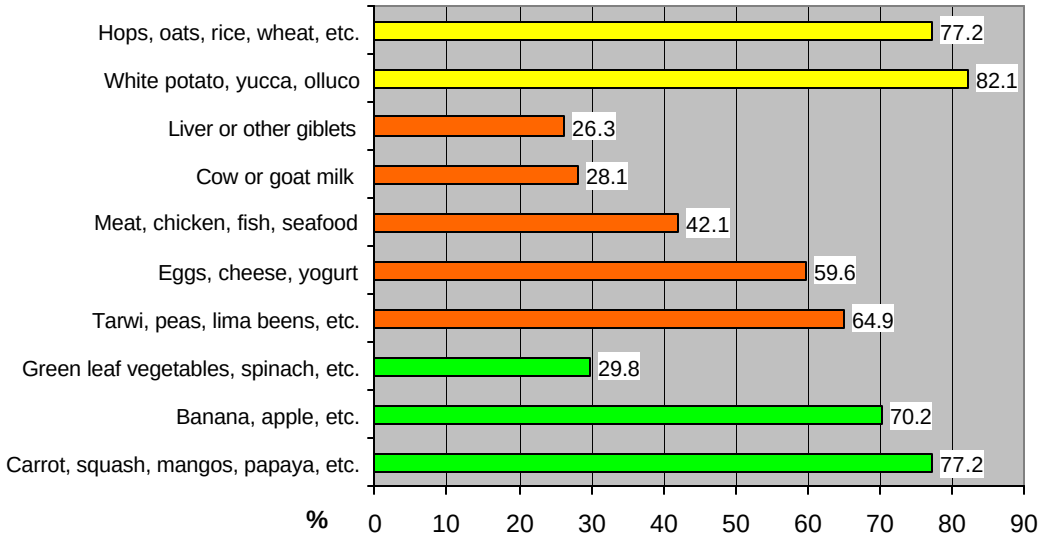
Among children from 6 to 8 months old, it was observed that the foods providing energy (cereals and tubers) and protectors (fruits and vegetables) were consumed the most. Proteins were consumed in a smaller percentage, and in this group those of animal origin are consumed even less. On the other hand, we can indicate that foods rich in iron, such as liver, blood sausage or green leafy vegetables are consumed by only 27% of these children.

Graph Nº 3: Pattern of food consumption of children aged 6 to 8 months (REDESS Project, 2004)



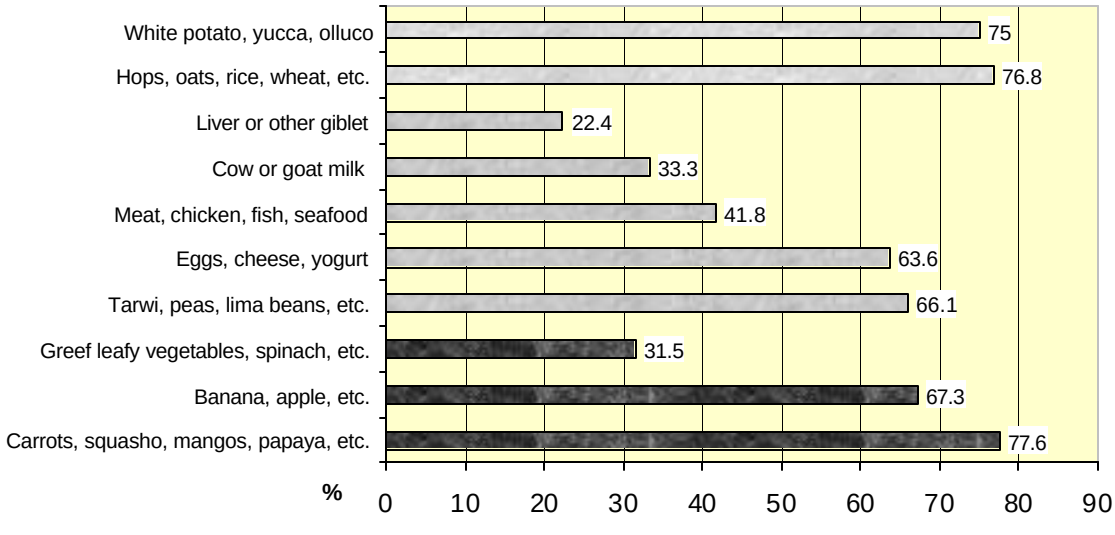
The pattern of food consumption in children from 9 to 11 months of age is very similar to the group from 6 to 8 months old. Nonetheless, we can observe an increase in the consumption of proteins, such as the case of legumes (from 51.4 to 64.9%), meat, chicken and fish (from 27 to 42.1%) and milk (from 21.6 to 28.1%). The consumption of foods rich in iron is similar to the 6-to-8-month-old group.

Graph Nº 4: Pattern of food consumption of children aged 9 to 11 months (REDESS Project, 2004).



Children 12 months and more of age have patterns of food consumption similar to the previous groups.

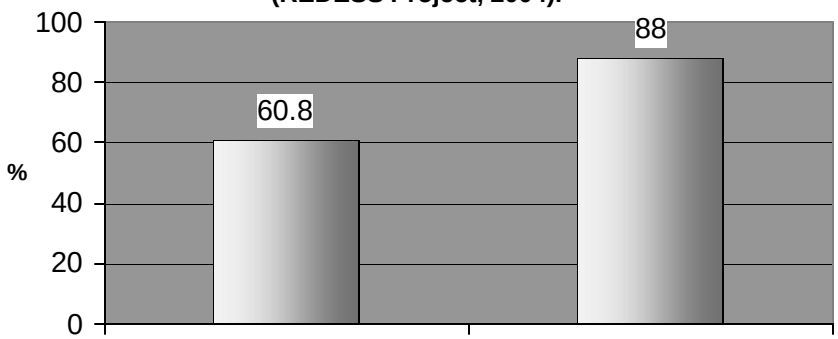
Graph Nº 5: Feeding pattern for children aged 12 months and older (REDESS Project, 2004).



In summary, the pattern of food consumption is similar among the different age groups. It can also be observed that the pattern of food consumption of the children is equal to the pattern of the family's food consumption, so it is possible that the whole family, including the very small children, eats from the same kettle.

With respect to the addition of lard or oil to the food of the children, we see a significant increase of 27.2% (p=0.000) between the initial and final phases, even surpassing the national average of 57% (INEI, 2001).

Graph No. 6: Addition of oil or lard in the food of children under 2 years of age (REDESS Project, 2004).



The use of iodized salt in the preparation of the meals of the children under 2 years old remains above 95% in both the initial and final Project evaluations.

82.0% of the mothers know they should give their children only maternal milk until 6 months of age and the concept of exclusive breastfeeding.

Checkup of the child's growth by the health facilities should be at least 7 times during the first year of life, according to present norms. In the Project area, 34.7% of the children observed this norm. We see the coverage in the sample from the Province of Cajabamba (30.3%) is just over half that in the Province of Sánchez Carrión (59.1%).

On the other hand, the administration of Vitamin A by the health services to children over 6 months of age only reaches 54.8%, according to the results of the evaluation.

4.1.3. Child immunization coverage.

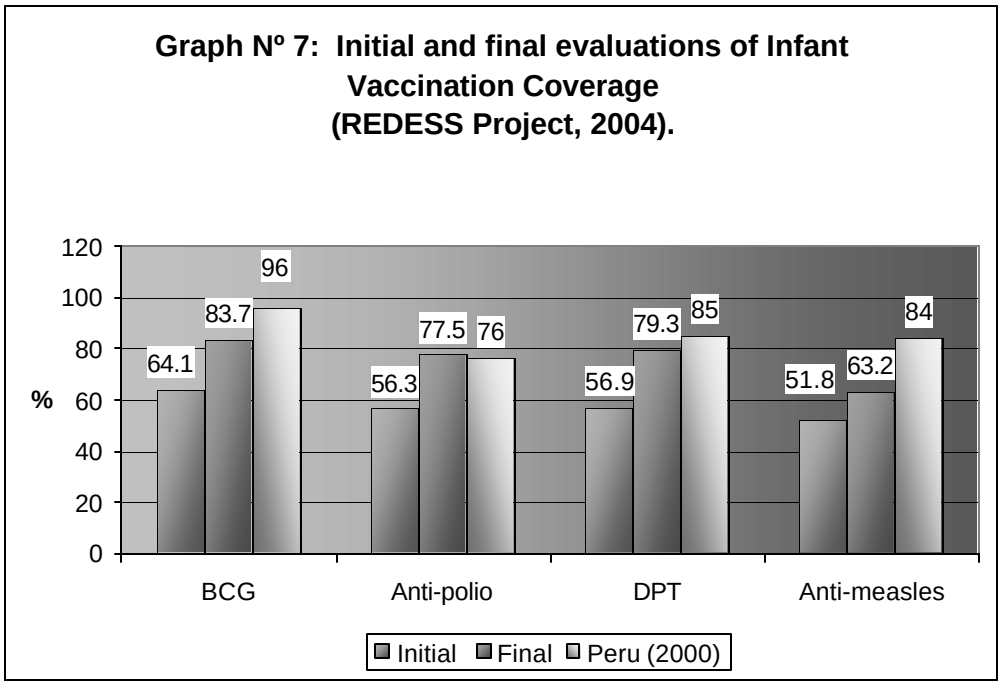
In the REDESS Project area, according to the final evaluation, 88.5% of the mothers had a growth and vaccination card; while 87.9% said that their children had been vaccinated at some point in time. One can see a small difference in the vaccination coverage among boys (51.7%) and girls (48.3%).

With respect to the coverage of BCG vaccine, we see an increase of 19.7% (64.1 to 83.7%) between the initial and final evaluations. This coverage is still below the national average of 96%.

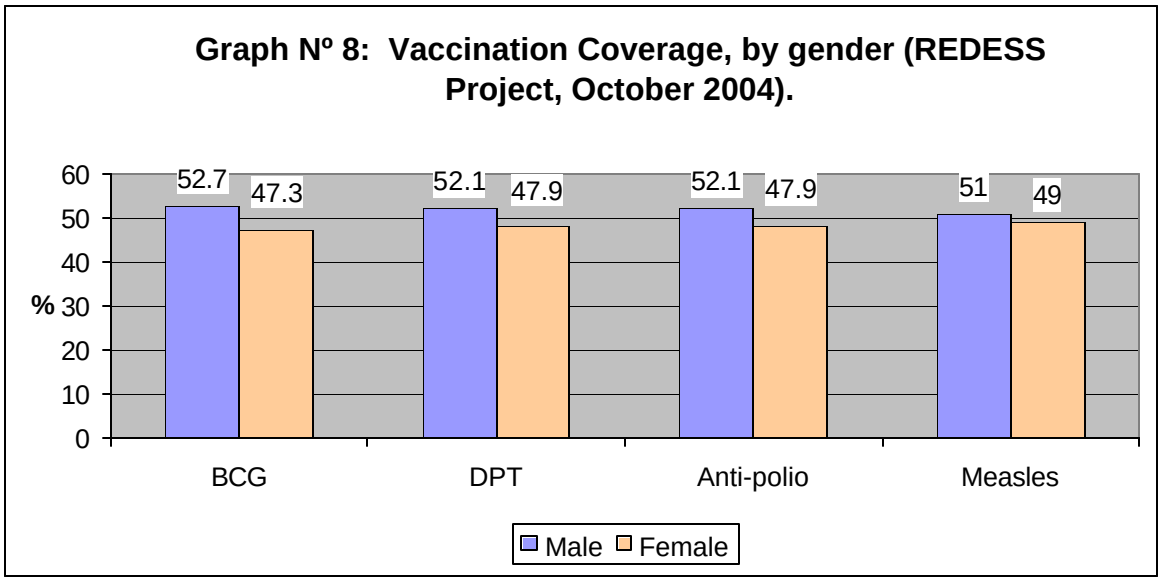
Also observed is an increase of 22.4% in coverage of children over 4 months old who are vaccinated with a third dose of DPT vaccine (from 56.9 to 79.3%). Nonetheless, coverage in the final evaluation (79.3%) is still below the national average (85%, according to INEI, 2001). In this same group of children (over 4 months old), coverage of the third dose of anti-polio vaccine also increased by 21.2% (from 56.3 to 77.5%) slightly surpassing the national average, which is 76% (INEI, 2001).

Measles vaccination coverage rose from 51.8 to 63.2%; nonetheless, it remains below the national average of 84%. It should be mentioned that last year there was an irregular supply of vaccines.

The percentages were calculated based on verifying the child growth and development data.



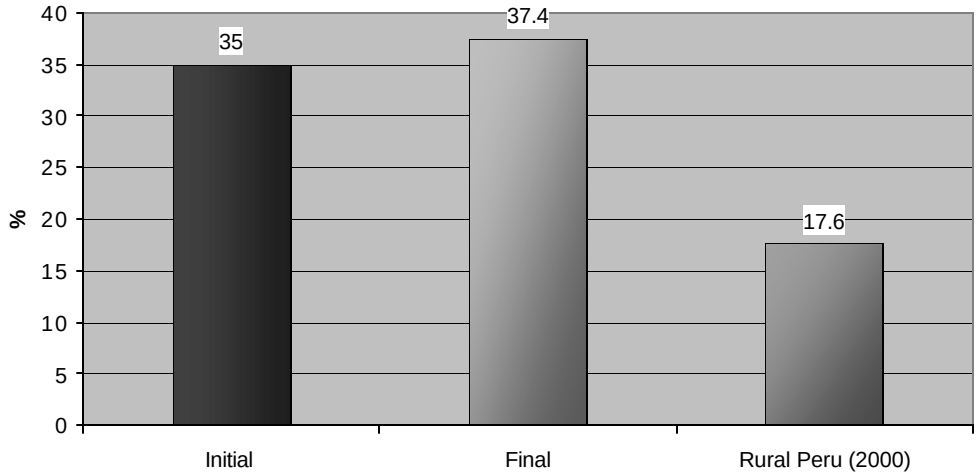
It was found that there were not significant changes in child vaccination coverage measured by gender; however, coverage of girls was lower.



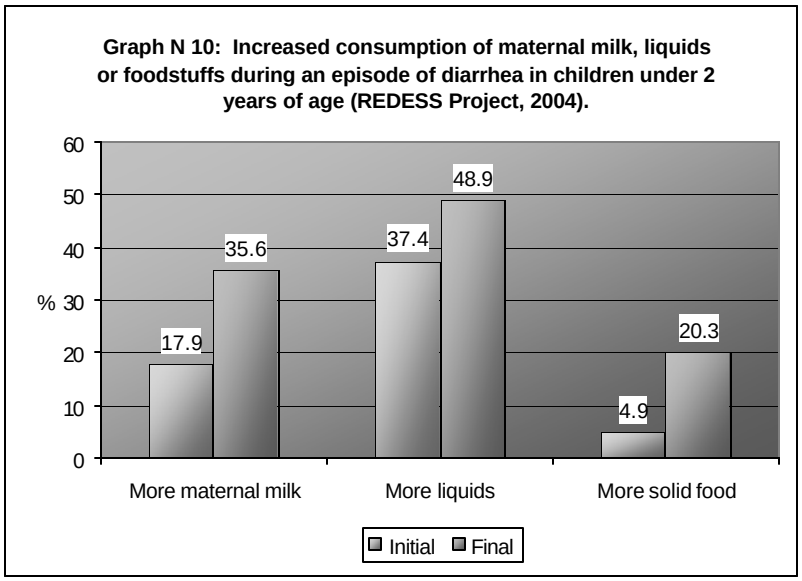
4.1.4. Prevalence of diarrhea and knowledge and practices on its control.

During the 15 days prior to the final evaluation, diarrhea was found in 37.4%, of children under 2 years old, a figure similar to that found in the Initial Evaluation (35.0%). Nationwide, diarrhea was found in 17.6% of children under 5 years old who live in rural zones; the national average of 15.4% (INEI, 2001).

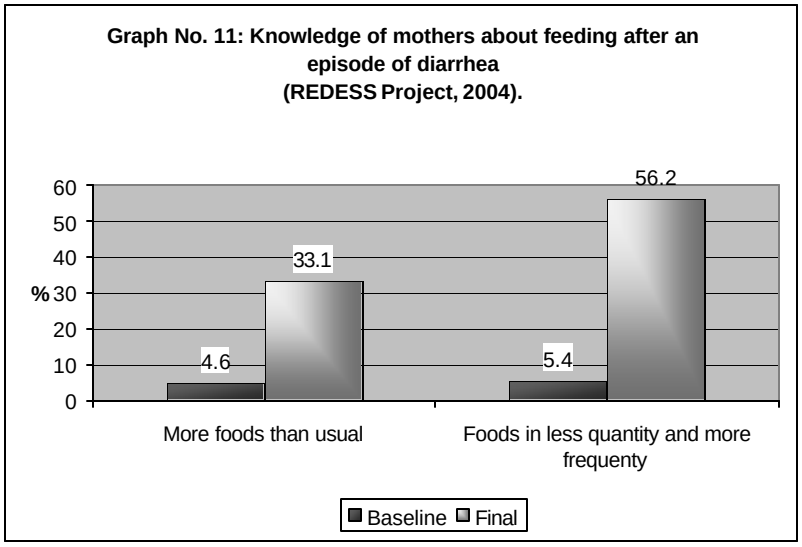
Graph Nº 9: Presence of diarrhea during the 15 days prior to the Evaluation (REDESS Project, 2004).



Next, we present the results of some feeding practices by mothers when their children suffer an episode of diarrhea. 77.3% of mothers mention having given the same quantity or more maternal milk; this percentage is slightly more than that obtained in the initial evaluation (69.1%). If we analyze the percentage of mothers who give more maternal milk, this increased significantly from 17.9 to 35.6% (p=0.001). Also, the percentage of mothers who mention having given more liquids to their child increased from 37.4% in the initial evaluation to 48.9% in the final evaluation (p=0.064). At the same time, the percentage of children who receive more solid foods or semi-solids also increased significantly from 4.9 to 20.3% (p=0.000).



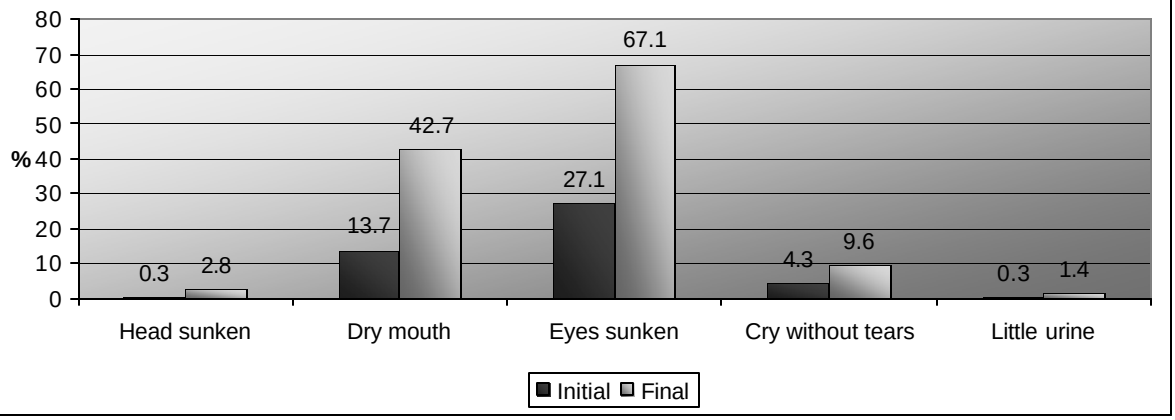
After the end of the period of diarrhea, proper feeding is important for the process of the child's recuperation. It can be seen that the percentage of mothers who know that they should give more foods than usual increased very significantly (from 4.6% to 33.1%) (p=0.000) between the initial and final evaluations, as did the percentage of mothers who mention that they should feed in less quantity, but more frequently (from 5.4 to 56.2%) (p=0.000).



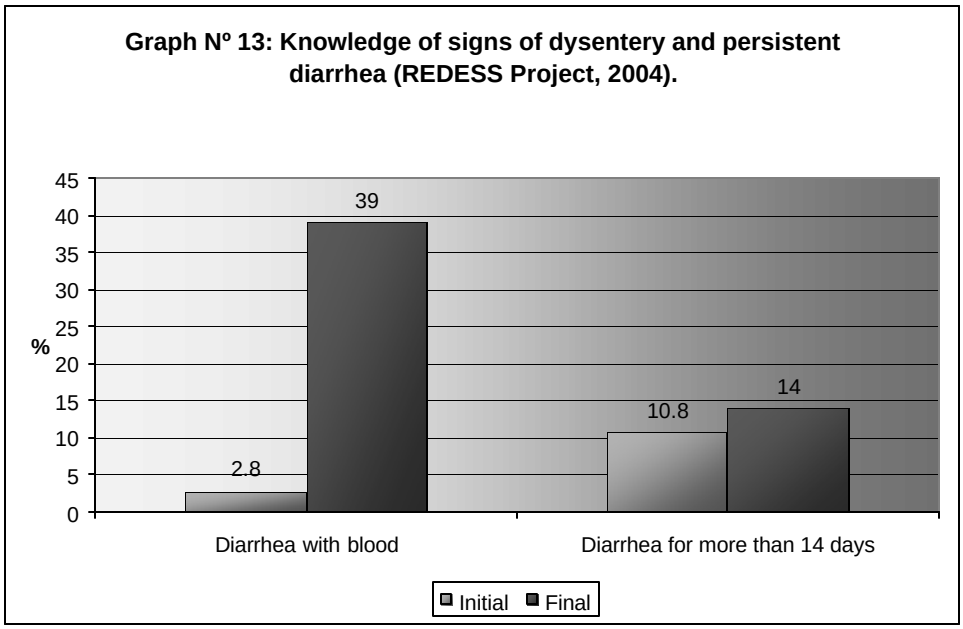
When asked about the person or persons who decide where to go to treat the diarrhea of the child, 76.5% of the mothers said that they take the decision themselves. Additionally, 56.3% of those interviewed decided to take the child, first, to a health facility, a percentage greater by 20.9% than in the initial evaluation (35.4%).

With respect to knowledge of the signs of dehydration, it was observed in each of the dehydration signs analyzed, the percentage of mothers who know signs of dehydration is greater than at the beginning of the Project. Some signs, such as dry mouth and sunken eyes are the best known, while crying without tears, sunken fontanelle and little urine are the least known.

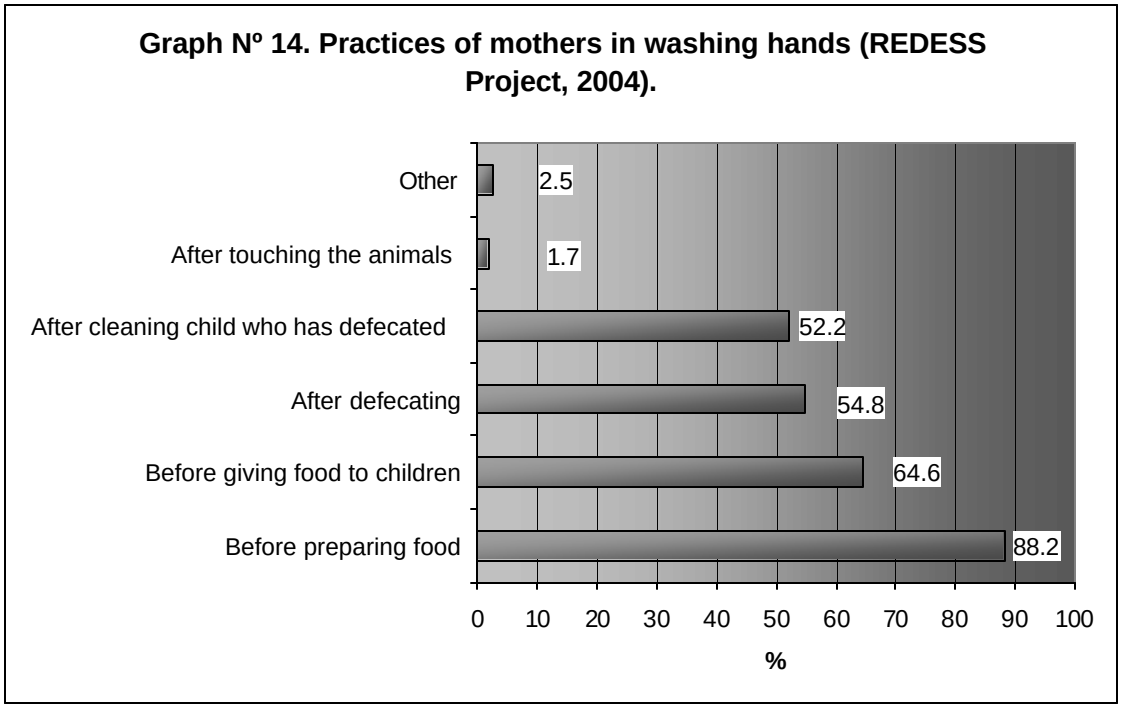
Graph Nº 12: Knowledge of mothers about signs of dehydratation (REDESS Project, 2004).



A significant increase (p=0.000) can be observed in the percentage of mothers who recognize a sign of dysentery diarrhea (initial = 2.8%; final = 39%). A slight increase can also be observed in those who recognize a persistent diarrhea (from 10.8 to 14.0%).



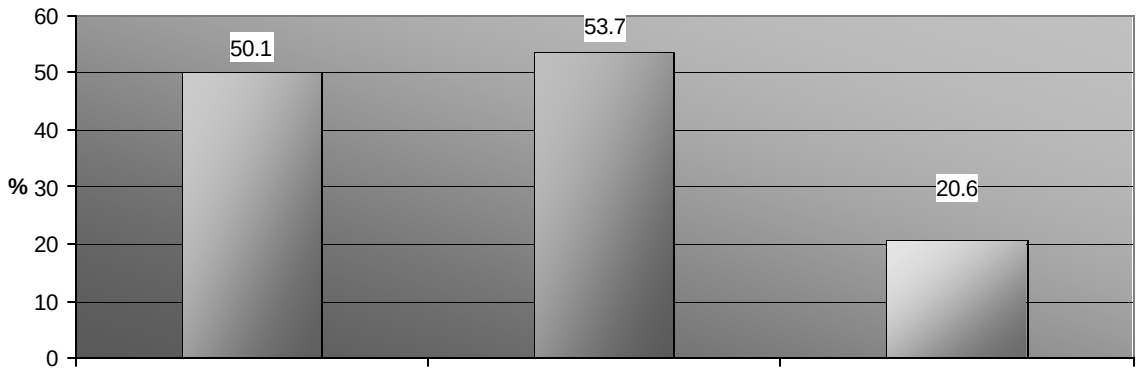
With respect to the practice of hand washing, the practice most common among mothers is washing prior to preparing foods (88.2%); other practices are less common.



4.1.5. Prevalence of acute respiratory infection and knowledge and practices on its management.

During the 15 days prior to the final evaluation, the prevalence of ARIs in children under 2 years of age was 53.7%, a level slightly higher than that found in the initial evaluation (50.1%). Nationwide, la prevalence of ARIs in children under 5 years of age is 20.6% in rural areas; a percentage that is well below that found in the Project area.

Graph No. 15: Presence of ARIs in the Evaluations of the REDESS Project (2004).

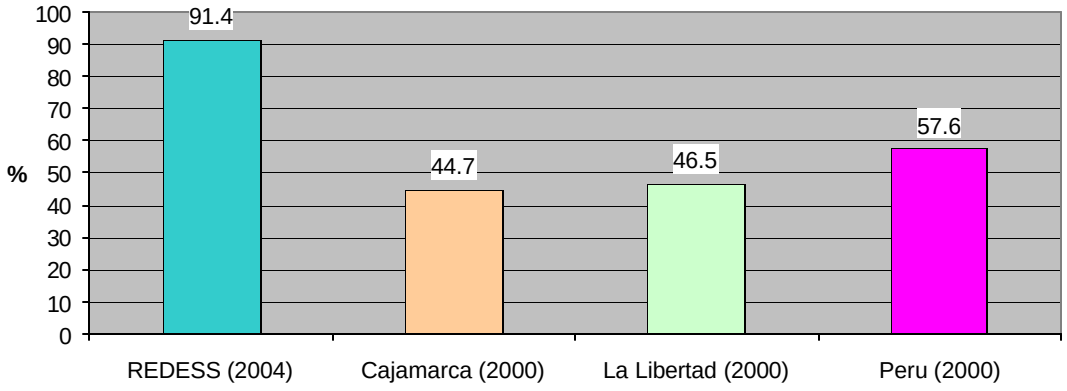


Of the children who had respiratory problems, almost half of them (46.6%) had rapid and difficult breathing or breathed as if tired or agitated. This level was practically the same as that found in the initial evaluation (47.2%). In these cases, seeking attention to treat respiratory problems was realized the same day in 36.1% of the cases, while 43.1% of the mothers sought help the following day. 78% of these mothers sought attention of health facilities (Health Center = 75.3; Hospital = 2.7%); this percentage is 30.2% greater than that found in the initial evaluation (47.8%).

In 68.5% of the cases, the mothers participated in the decision to elect where to seek care to attend to their child's rapid or difficult breathing. We consider this percentage to be important; the husband or partner participated in 47.9% of the cases.

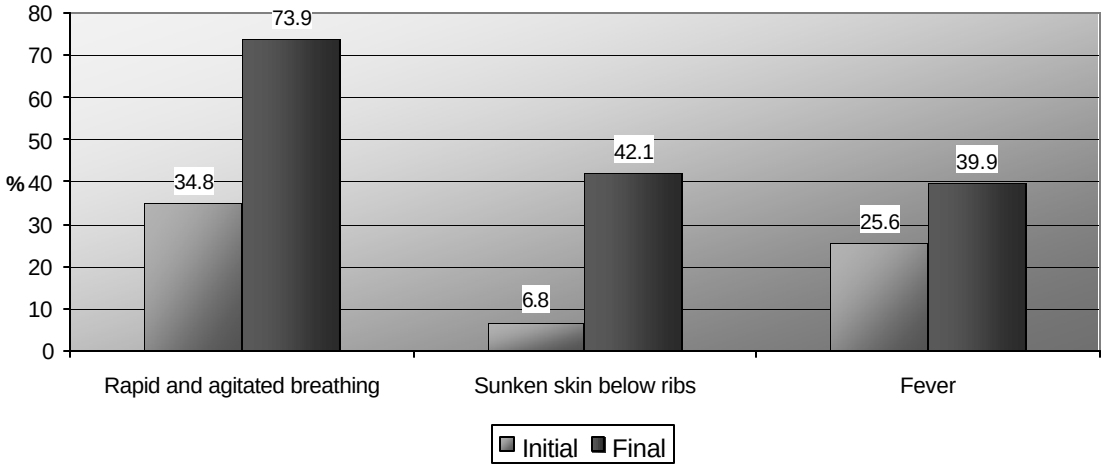
The majority of children with rapid and difficult breathing are treated in health facilities (Health Center or Post = 80.5%; Hospital = 6.8%). To compare these results with the ENDES 2000 (INEI, 2001), the children who received treatment in a health facility, pharmacy or by a health promoter were grouped together into a category called "children attended to by health providers." This group of children reaches up to 91%, and is larger than the averages, for children under 5 years of age, in the Department of Cajamarca (44.7%), the Department of La Libertad (46.5%) and even the national average (57.6%).

Graph Nº 16: Percentage of children with rapid or difficult breathing, attended to by different health providers in the area of the REDESS Project compared with other areas (Project REDESS, 2004).



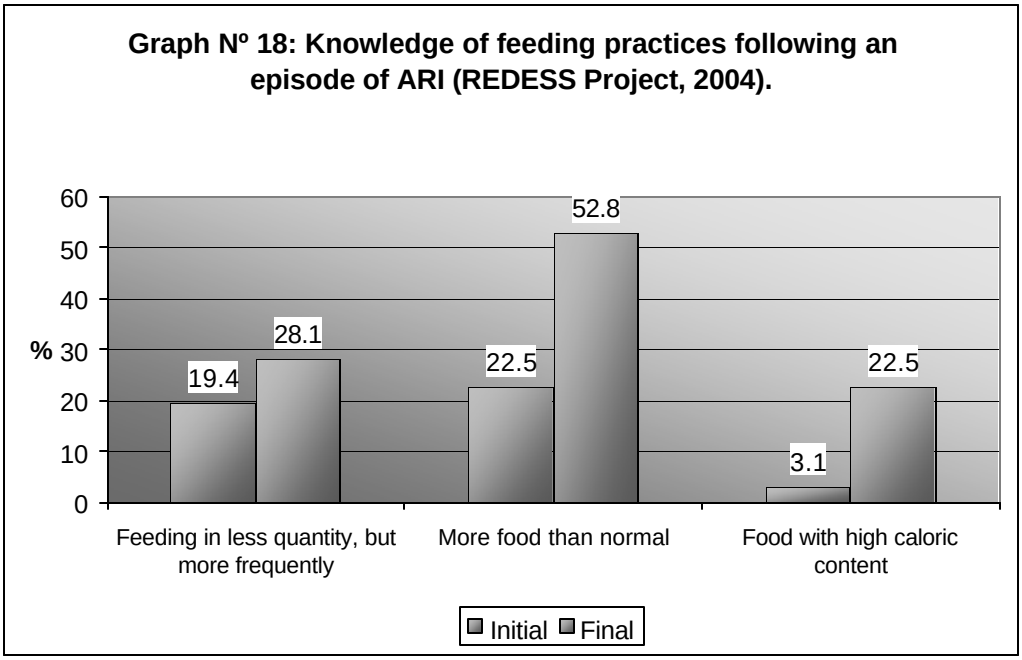
The final evaluation permits us to say that a greater percentage of mothers know each of the signs of pneumonia. The sign of pneumonia that is best known by mothers is rapid and difficult breathing (73.9%), while 42.1 and 39.9%, respectively, identify the signs "sunken skin below the ribs" and "fever." On the other hand, the percentage of mothers who do not know any sign of pneumonia was 44.2% in the initial evaluation and 19.1% in the final evaluation.

Graph No. 17: Knowledge of mothers about the signs de pneumonia (REDESS Project, 2004).



Comparing the results of the initial and final evaluations with respect to the knowledge of the mothers about feeding a child after an episode of ARI, we observe an increase in the percentage of mothers who know at least one adequate practice (from 58.7 to 80.6%). In addition, the majority of them know that they should give them more food than usual (52.8%), while smaller percentages mentioned that they should feed more than usual (28.1%) and provide food with a high caloric content (22.5%).

Graph Nº 18: Knowledge of feeding practices following an episode of ARI (REDESS Project, 2004).

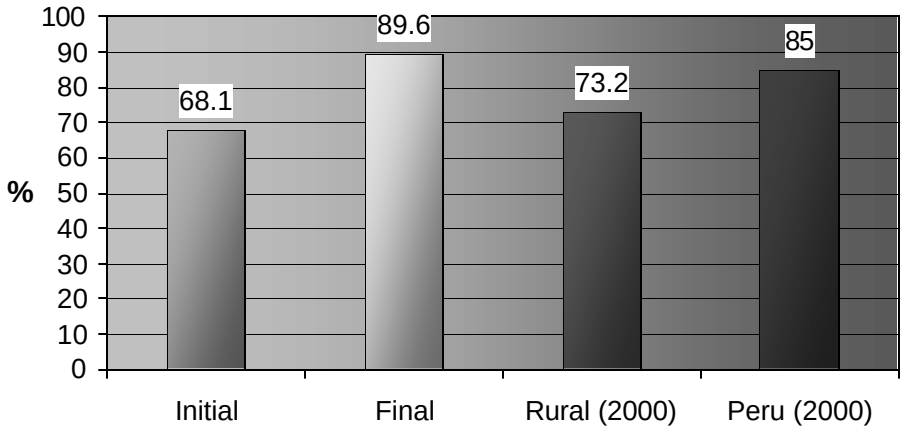


4.1.6. Knowledge and practices of care and attention with respect to maternal health.

4.1.6.1. With respect to prenatal care.

The number of mothers who had some prenatal checkup in a health facility increased by 21.5% compared to the initial evaluation (from 68.1 to 89.6%), surpassing the average for rural zones, which is 73.2%, and slightly greater than the national average, which is 85% according to the ENDES 2000 (INIEI, 2001). 80.9% identified the obstetrician as the professional who realized their prenatal checkups.

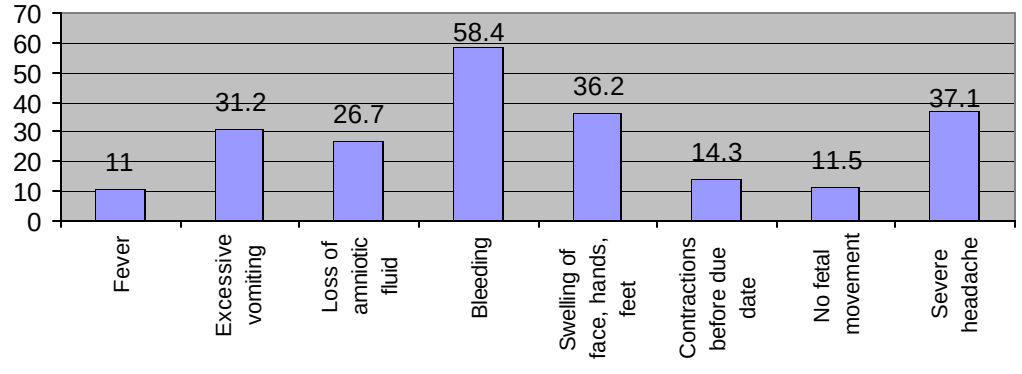
Graph Nº 19: Mothers who receive prenatal attention in health facilities (REDESS Project, 2004).



During the prenatal checkups, the mothers remember having received orientation sessions about: family planning (78.4%), identification of danger signs during pregnancy (73.7%), child feeding during the first 6 months (70.5%) and planning for childbirth (68.3%). Only 5.6% mention not having received any health and nutrition advice.

The percentage of mothers who have knowledge of at least 1 danger sign during pregnancy has increased (initial = 27.4%; final = 76.4%). Graph Nº 20 shows that the sign most recognized by the mothers - vaginal bleeding - is a danger that could cause death.

Graph No.20: Percentage of mothers in final evaluation with knowledge of the signs of danger during pregnancy (REDESS Project, 2004)



On the other hand, 94.9% of the mothers mention that they seek out care in a health center in case they experience a danger sign during their pregnancy, while only 3.9% said they would seek a health promoter. This tendency has remained nearly the same as in the initial evaluation, when the majority of mothers also mentioned seeking out a health facility (88.5%) and a smaller percentage, going to a health promoter (1.1%).

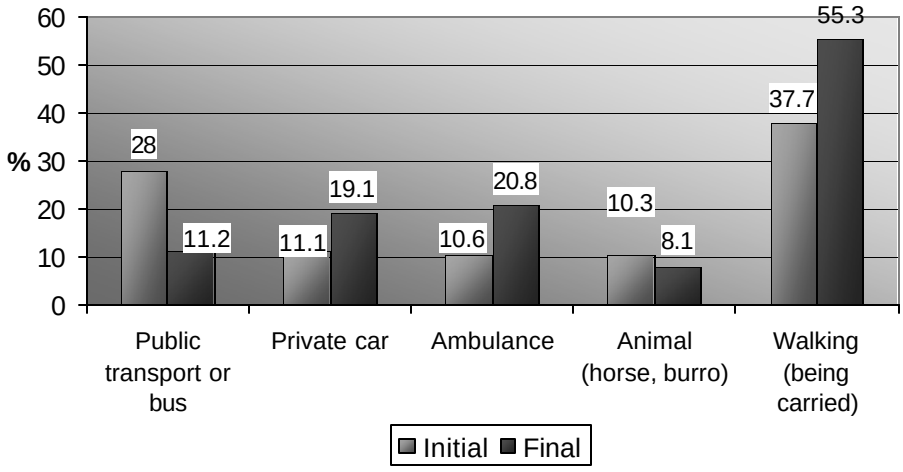
When asked about the persons who participate in the decision to decide the place where the mother should be transported when some danger sign presents itself during pregnancy, we see that the husband or partner participate in the decision-making in 60.4% of the cases. The mothers participate 39.3% of the time, while their mothers or mothers-in-law participate 19.1% of the time. This tells us that the husband or partner plays an important role in making this decision.

According to the project evaluation, the majority of the mothers arrive from their houses to a health facility in less than 3 hours. In the initial evaluation, this figure was 88.9%, while in the final, it was 91.8%.

A variety of means of transportation are used to transport mothers in cases of emergency. Among those used the most are being carried by stretcher (55.3%), the ambulances of the

health facilities (20.8%) and a private vehicle (10.6%). Recently, the use of public transport has diminished (from 28.0% to 11.2%) as has the use of an animal, such as a horse or donkey (from 10.3 to 8.1%).

Graph Nº 21: Means of transportation used by mothers in case of an obstetric emergency (REDESS, 2004).

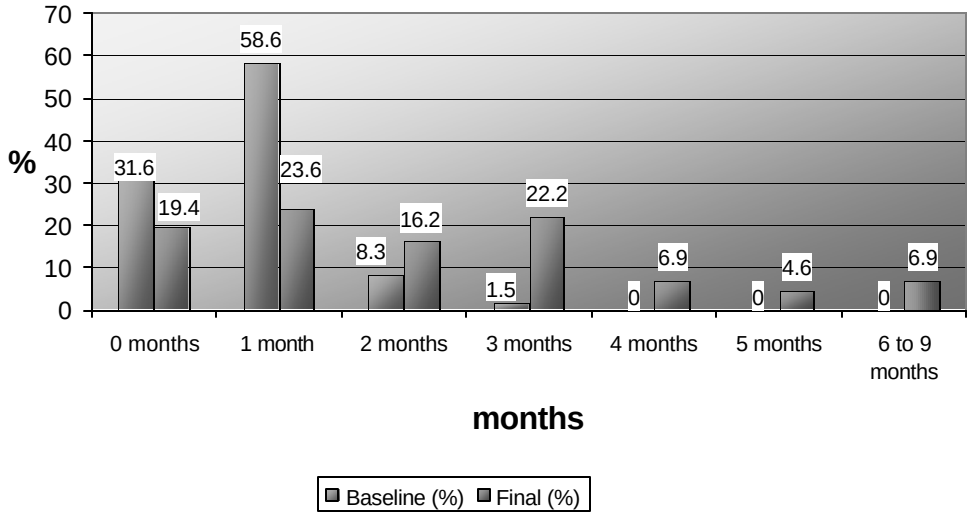


When asked in the final evaluation about complications during pregnancy or childbirth, mothers recognized having suffered principally swelling (22.9%), vaginal hemorrhaging (18.6%), obstruction or delayed childbirth (17.1%) and severe vomiting (17.1%). In the initial evaluation, it was observed that the principal complications were obstruction or delayed childbirth (32.3%), infections or fever (12.3%) and vaginal hemorrhaging 10.8%).

Comparing the consumption of iron sulfate during pregnancy, we see an increase from 40.6% to 66.1% between the initial and final evaluations. The average consumption in the initial evaluation was during 23.6 days (DE=1.45), while in the final, it was 67.8 days (DE= 60).

Also observed in the final evaluation was that 40.2% of the mothers consumed iron pills for more than 3 months, way above the 1.5% in the initial evaluation, as well as the 9% average for rural areas (INEI, 2001) and the 23% that is the national average (INEI, 2001).

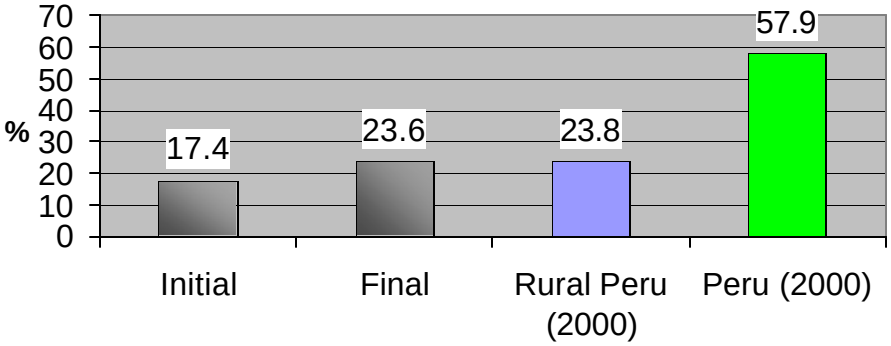
Graph No. 22: Use of an iron sulfate supplement by mothers during their most recent pregnancy (REDESS Project, Octubre 2004).



4.1.6.2. With respect to care during childbirth.

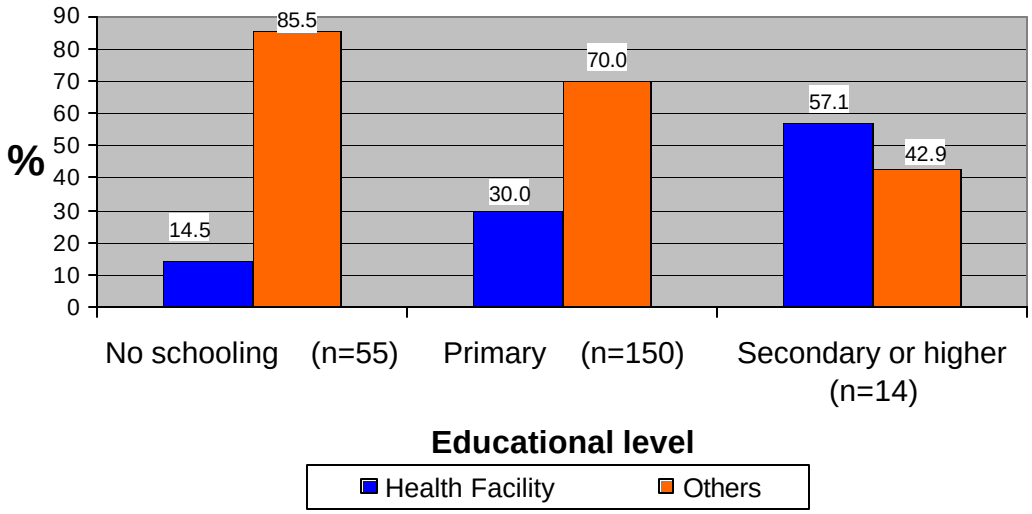
The percentage of mothers who were cared for in a health facility during their last childbirth was 17.4% in the initial evaluation and in the final, 23.6% (p=0.098). The percentage in the final evaluation is very close to the average for rural zones (23.8%) (INEI, 2001), but still way below the national average of 57.9% (INEI, 2001).

Graph No. 23: Percentage of mothers whose most recent childbirth was in a health facility (REDESS Project, 2004).



Analyzing the relation between the mother's education level and the place they were cared for during childbirth, we observe a significant direct relation in the case of births in health facilities, and an inverse relation in the case of births in their home or other places (p=0.034).

Graph No. 24: Percentage of childbirths in institutions, by education level.

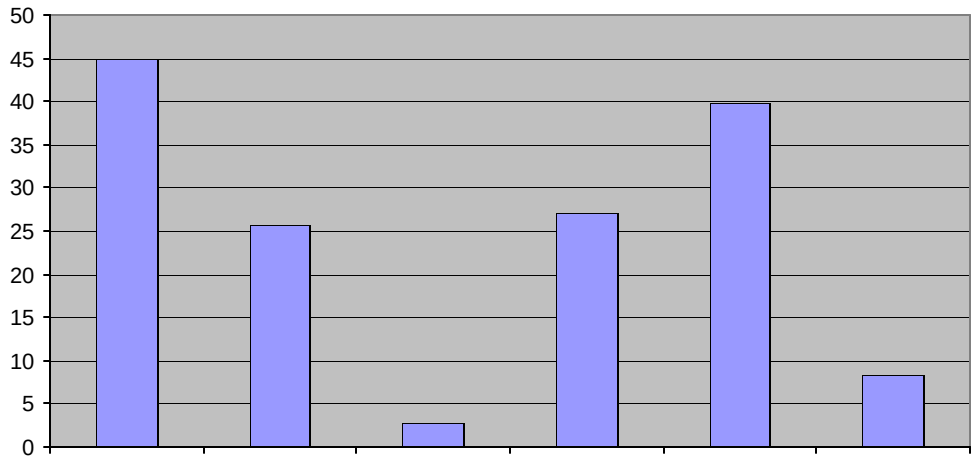


It should be emphasized that almost half the childbirths are attended to by health personnel (44.9%), including attention in health facilities and in homes. 42.1% are still attended to by midwives or close friend, 9.3% by a family member, and only 3.4% by health promoters.

When asked about the persons who participated in the decision of the place to take the mother for care during childbirth, it was found that in 48.0% of the cases, the husband or partner participated, while in 46.3% of the cases, the mother participated.

With respect to the knowledge that the mothers have about at least 1 danger sign during childbirth, an increase of 42.8% was observed (initial = 25.5%; final = 68.3%). In the final evaluation, the best known danger signs were hemorrhaging (44.9%), the hand, foot or umbilical cord dropping outside the vaginal opening (39.8%), the retention of placenta (27.0%) and prolonged childbirth (25.8%).

Graph No.25: Percentage of mothers in the final evaluation who recognize danger signals during childbirth (REDESS Project, 2004)



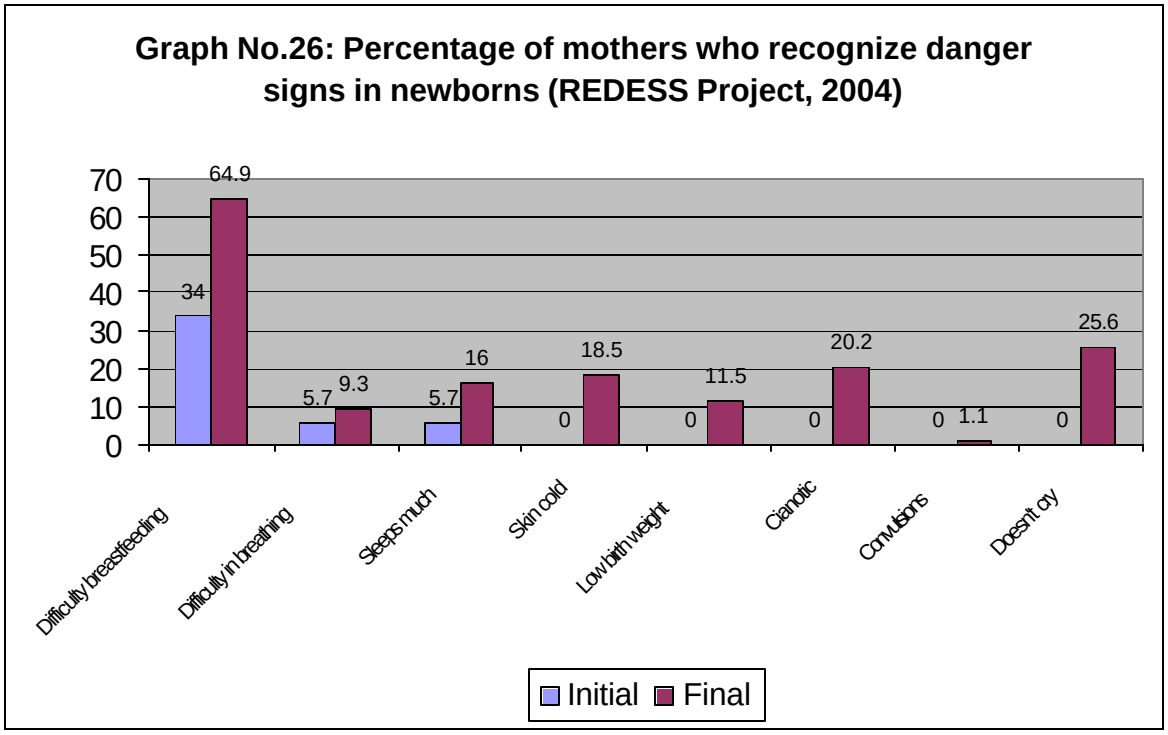
4.1.6.3. With respect to post-natal and newborn care.

Between the initial and final evaluations, the practice of cutting the umbilical cord by the health personnel almost doubled (initial = 23.7%; final = 43.8). Nonetheless, a midwife,

close friend or family member still did this in 56.2% of the cases. In these cases, only 5.5% used a new razor blade.

Of the mothers interviewed, 82.1% referred to the place where their newborn was placed immediately after birth was next to her. In addition, 63.5% of them mentioned that their first action was to breast feed their newborn.

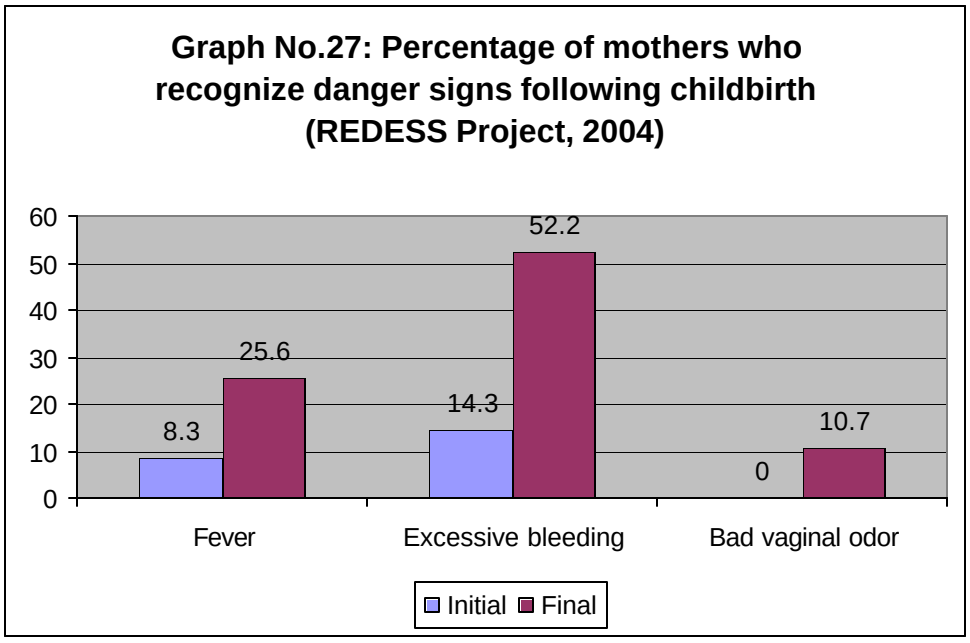
It can be seen that the knowledge of the mothers regarding the identification of the alarm signals in newborns has improved, as is shown in Graph Nº 26. Mothers also now recognize other alarm signals, such as the child not crying (25.6%), the child being cyanotic (20.2%) and the child with cold skin (18.5%). Also increasing was the percentage of mothers who recognize others signs, such as not breast feeding well, sleeping a lot and difficulty breathing.



On the other hand, 81.7% of newborns have received some health care during the first 28 days after childbirth, and 40.4% of mothers have received health care during the first day after childbirth. In these visits, they remember that advice was given about vaccination of

the child (84.8%), child feeding (78.3%) and family planning (74.5%), as well as in the recognition of danger signs in a child with diarrhea or pneumonia (57.0%).

The level of knowledge of the mothers on the danger signs after childbirth has improved. We observe an increase from 8.3 to 25.6% of those who mention fever, an increase from 14.3 to 52.2% in those who mention excessive bleeding, and 10% now mention a bad odor from the vagina as a danger sign.



4.1.7. Knowledge of prevention of Bartonellosis, Malaria and HIV/AIDS.

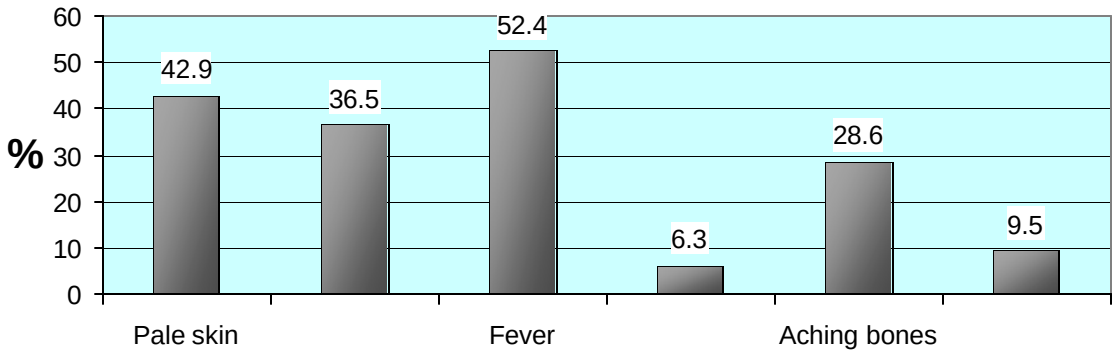
4.1.7.1. Bartonellosis.

In the Project area, according to information furnished by the Ministry of Health, there are 51 communities qualified as zones with risk of Bartonellosis (See Annex Nº 4). Six of these communities - San Miguel, Caracmaca, Soquian, Naranjopampa, Llur and Tayanga - were evaluated in the final Project evaluation. The results presented below correspond to this group of communities.

87.5% of the mothers who live in zones of risk have heard about Bartonellosis. In this group of mothers, almost half identify fever and paleness as signs and symptoms of

Bartonellosis; 36.5% identify yellow skin and eyes, while 28.6%, pain in the bones. Lesser known signs are hemorrhaging and petechias.

Graph No. 28: Knowledge of signs and symptoms of bartonelosis in mothers who live in high-risk zones (REDESS Project, 2004).



Likewise, 96.8% say that they would go to a health facility in case they suspect that a family member has Bartonellosis. Regarding preventative measures, 33.3% of mothers know they should cover cracks and holes in the walls of their homes, while a quarter of the mothers know the following measures: using clothing that covers almost their entire body (25.4%), sleep inside the house (27.0%), use mosquito netting (27.0%), and bury manure (25.4%). A lesser percentage of mothers recognize the use of latrines (12.7%) as a preventative measure.

4.1.7.2. Malaria.

In the Project area, based on information furnished by el Ministry of Health, 25 communities are identified as zones with risk of Malaria (See Annex Nº 4). In the Project's final evaluation, none of these zones of risk were evaluated.

4.1.7.3. HIV/AIDS.

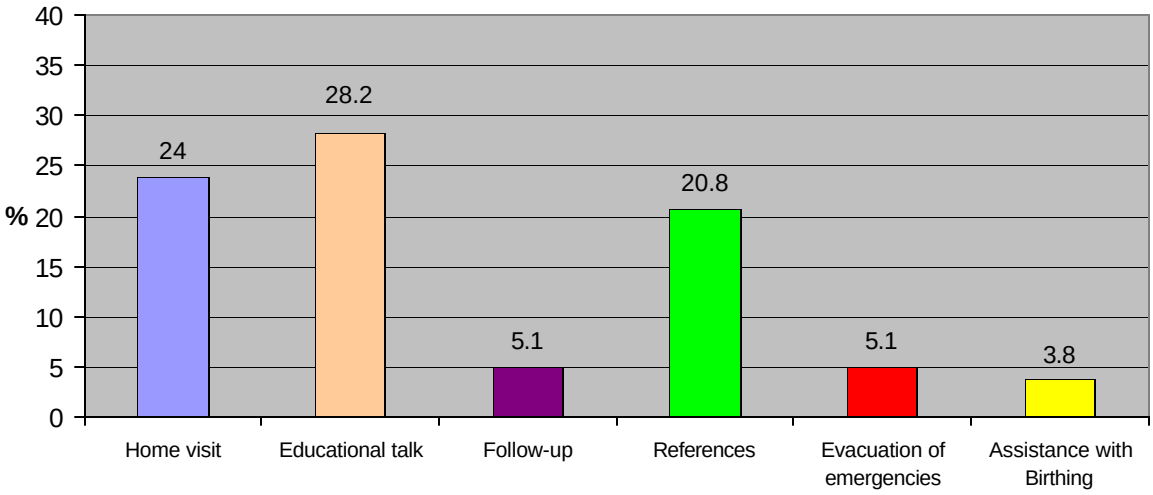
64.0% of the mothers have heard about AIDS, and 42.5% of them know at least one way to avoid contracting AIDS. This percentage is above the average for rural zones in Peru (26.9%), the average in the Department of Cajamarca (19.8%) and almost equal to the average in the Department of La Libertad (40.3%) (INEI, 2001).

Concerning the ways to avoid contracting AIDS, the best known among the mothers are having only one partner (23.2%) and avoiding sex with persons who have various sexual partners (13.2%). Comparatively small portions of mothers mention that they should limit the number of sexual partners (8.8%), use a condom (8.4%) and avoid blood transfusions (8.3%). Nationwide, 38.1% of mothers know that the use of a condom is a form to prevent contraction (INEI, 2001).

4.1.8. **Community organization.**

87.6% of the mothers acknowledge the existence of a promoter or midwife in their community. Of these, 55.4% have received some service from this CHA. The mothers acknowledge that the CHA have helped them principally through educational talks, home visits and case references to health facilities. A small portion of them acknowledge having received follow-up treatment for sick people who have gone to health facilities, evacuation of cases of emergency and attention during childbirth.

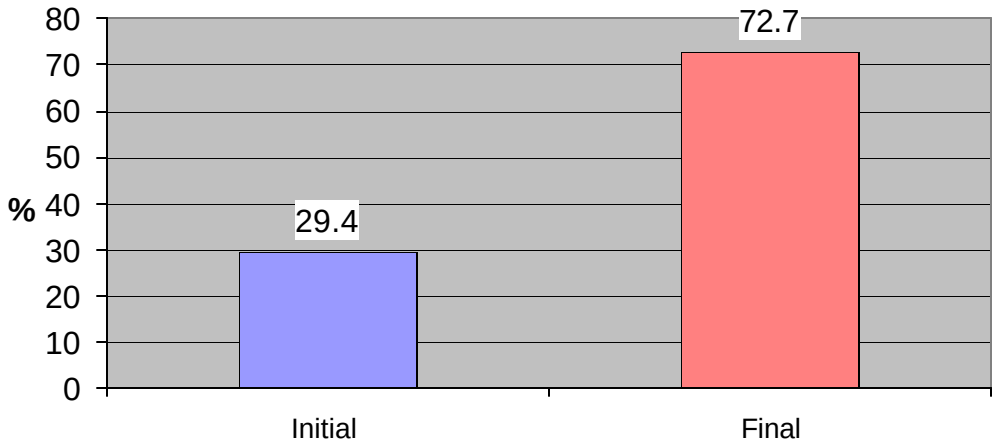
Graph Nº 29: Type of help received by mothers from Community Health Agents (REDESS Project, 2004).



27.5% of the mothers know what is a Community Development Committee (CODECO), and 26.3% know that one is currently functioning, although 80.6% do not know the specific functions of these community organizations. The majority of the mothers who do know mention that the CODECOs make arrangements with other institutions (14.0%). Smaller percentages mention that they participate in the evacuation of emergency cases (5.9%) and support to the CHAs (4.8%).

72.5% of the mothers acknowledge that their community is organized for the transportation of health emergency cases. This percentage is well above that obtained in the initial evaluation, which was 29.4%.

Graph No. 30: Percentage of mothers who know that their community is organized to evacuate a person in case of a health emergency (REDESS Project, 2004).



On the other hand, the percentage of mothers who know that their community has a stretcher to transport cases of health emergencies is 65.4% (final evaluation). This percentage surpasses that obtained in the initial evaluation (1.1%). Likewise, 85.7% of the mothers know that their community has a stretcher also know its location in the community.

31.8% of the mothers interviewed acknowledge that in their community there exists a community support group in health.

4.2. Results of the Anthropometric Study.

The prevalence of chronic, overall and acute malnutrition in the Project area have been estimated in the current evaluation. To accomplish this, in first place, z scores were calculated for each child with relation to the reference values established by the WHO/NCHS. Then the children with z scores below < 2.0 standard deviations from the reference values are classified as malnourished, and the prevalence of malnutrition is calculated.

4.2.1. Prevalence of chronic malnutrition

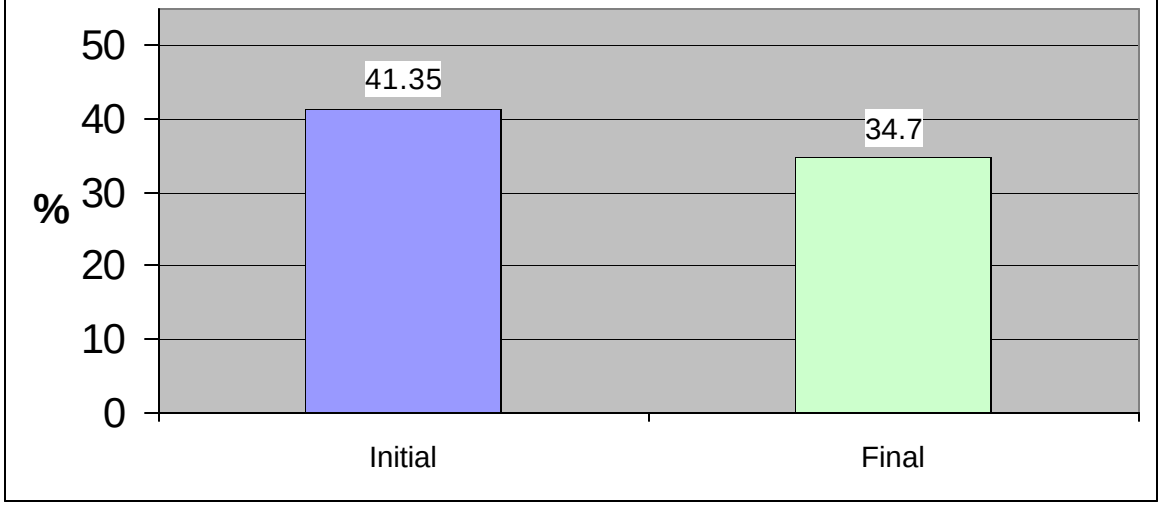
The indicator of chronic malnutrition relates the size of a child to his age. The *z* scores found vary between –3.92 and 2.85, with a mean value of –1.57 ± 1.16. The data have a normal distribution (Smirnof Kolmogorof Proof = 0.945).

Descriptive statistic of the z-score values for the size-age indicator

	N	Minimum Value	Maximum Value	Mean	Standard Deviation
Z-score values	354	-3.92	2.85	-1.57	1.16

The prevalence of chronic malnutrition found is 34.7%, showing a decline in comparison with the initial evaluation (41.35%). This percentage of reduction is significant, considering that the "p" value is very close to confirming it (p=0.055) and if the amount of data analyzed were larger, it would probably be significant.

Graph No. 31: Prevalence of chronic malnutrition (< 2 Standard Deviations according to WHO/NCHS) in the area of the REDESS Project compared with other areas (REDESS Project, 2004).



p = 0.055

4.2.2. Prevalence of overall malnutrition.

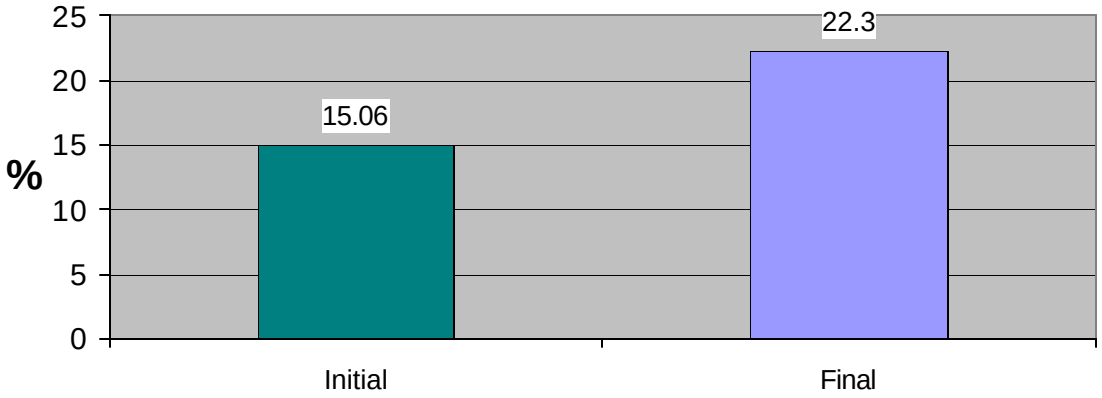
The overall malnutrition relates the weight and age of the children. The z-score values found vary between –3.83 and 3.04; with a mean value of –1.09 ± 1.12. The data have a normal distribution (Smirnof Kolmogorof Proof = 0.848).

Descriptive statistic of the z-score values for the weight - age indicator

	N	Minimum Value	Maximum Value	Mean	Standard Deviation
Z-score values	354	-3.83	3.04	-1.09	1.12

The prevalence of overall malnutrition is 22.3%, which is significantly greater (p=0.023) than that reported in the initial evaluation (15.06%).

Graph No. 32: Prevalence of malnutrition (< 2 Standard Deviations according to WHO/NCHS) in the area of the REDESS Project compared with other areas (REDESS Project, 2004).



p = 0.023

4.2.3. Prevalence of acute malnutrition.

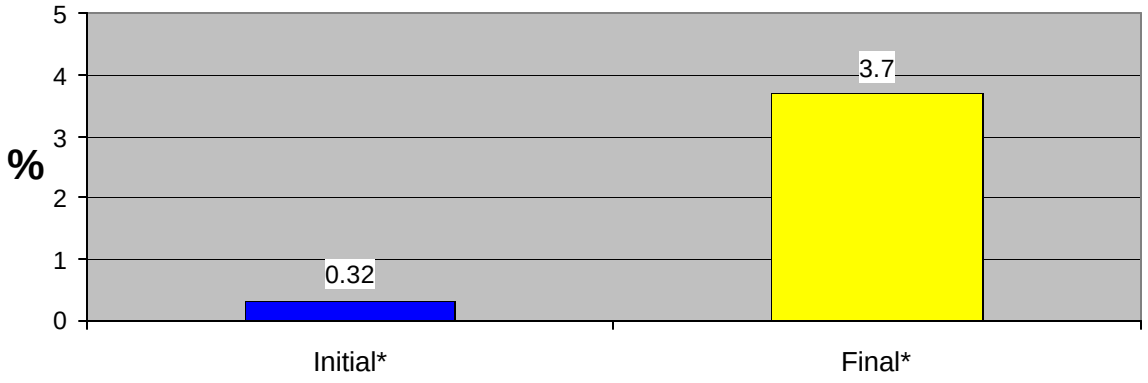
This indicator relates the weight and height of the children. The z-score values vary between –3.26 and 2.62, with a mean value of –0.09 ± 1.06. The data have a normal distribution (Smirnof Kolmogorof Proof = 0.941).

Descriptive statistic of the z-score values for the weight - height indicator

	N	Minimum Value	Maximum Value	Mean	Standard Deviation
Z-score values	348	-3.26	2.62	-0.09	1.06

We can observe a significant increase in the prevalence of acute malnutrition (p = 0.009) when we compare the findings of the initial and final evaluations. This finding is alarming, and should alert local authorities and spark interest in developing a holistic analysis of the nutritional problem.

Graph No. 33: Prevalence of acute malnutrition (< 2 Standard Deviations according to WHO/NCHS) in the area of the REDESS Project compared with other areas (REDESS Project, 2004).



p = 0.009

4.3. Results of the evaluation indicators of the REDESS Project.

The text that follows will show the results for the 13 indicators of the Project evaluation. It should be mentioned that the goals that were planned at the beginning of the Project have an accuracy of +/- 10%. Therefore, if the results obtained in the final evaluation are found to be within that interval, we can consider that the corresponding goal has been achieved.

The methodology for calculating the indicators was the same as that employed in the initial evaluation.

4.3.1. Indicators of the management of cases of pneumonia.

We observe an improvement in the 2 indicators; nonetheless, only indicator Nº2 attained the expected target. With respect to indicator Nº 1, although the planned target was not achieved, a very significant increase ($p < 0.01$) could be observed compared to the initial evaluation.

Table No. 9: Indicators of the management of cases of pneumonia.

No.	Indicator	Baseline	Final Evaluation and 95% C.I.	Target	Statistical significance *(p)**	Target Achieved?	Improvement in Indicator?
01	Increased number of mothers who recognize two signs of pneumonia.	5.7%	59.6% [54.5 ; 64.7]	80%	0.000	NO	YES
02	Increased number of mothers who seek adequate medical treatment for their children from 0 to 23 months old with signs of pneumonia.	47.8%	78.1% [73.8 ; 82.4]	80%	0.001	YES	YES

***** *if $p < 0.05$ the differences are significant; if $p < 0.01$ these differences are highly significant.*

With respect to indicator Nº 1, we must state that, according to the calculations undertaken using the data base from the initial evaluation, the prevalence found by the Consultant Team is 17.9%. Therefore, the Consultant Team used 17.9% as a base to estimate the statistical significance of the increase in this indicator.

4.3.2. Indicators of the prevention and control of diarrhea.

Table No. 10 shows indicators Nos. 3, 4 and 5. We can observe that 2/3 of them have improved and 1/3 have remained the same. Nonetheless, 100% of the indicators have failed to achieve the planned target.

Indicator Nº 4 shows a very significant increase ($p<0.01$), while indicators Nos. 3 and 5 show tendencies, in terms of percentages, that might suggest a positive effect of the Project actions.

Table No. 10: Indicators of the prevention and control of diarrhea.

No.	Indicator	Baseline	Final Evaluation and 95% C.I.	Target	Statistical significance *(p)*	Target Achieved?	Improvement in Indicator ?
03	Increased number of mothers with children from 0 to 23 months old able to correctly identify at least two signs of dehydration and signs of persistent diarrhea and dysentery	0.3% *	6.2 % [3.7 ; 8.7]	60%	0.000	NO	YES **
04	Increased number of mothers with children from 6 to 23 months old with diarrhea who administer the same or a larger amount of food during the episode.	36.7%	56.2% [51.2 ; 61.2]	70%	0.006	NO	YES

No.	Indicator	Baseline	Final Evaluation and 95% C.I.	Target	Statistical significance *(p)*	Target Achieved?	Improvement in Indicator ?
05	Reduced number of children from 0 to 23 months old with diarrhea who receive antibiotics (self-medicated) during the episode	25.2%	18% [14.1 ; 21.9]	10%	0.164	NO	NO

***** *The value of this indicator has been recalculated, given that the value consigned in the report of the initial evaluation was 1% but not calculated correctly as a composite indicator. The estimation of the Consultant Team, working with the same data base, was 0.3%.*

****** *The increase from 0.3 to 6% is significant (p=0.000), so the indicator is considered to have improved.*

4.3.3. Indicators of maternal health.

Table No. 11 presents the 5 indicators of this section (6, 7, 8, 9 and 10). Apparently, the percentage observed for indicator Nº 6 shows no variation between la initial and final evaluations. Nonetheless, we must mention that the figure that was consigned in the initial evaluation (19.9%) does not correspond precisely to the description of the indicator, which considers the knowledge of the mother of at least 6 danger signs (2 during pregnancy, 2 during childbirth and 2 in post childbirth), and in addition, the data base of the initial evaluation does not permit it to be estimated. It is therefore not possible to compare the prevalence of this indicator from the baseline to the final evaluation. In the final evaluation, it was determined that 18.5% of the mothers completed the conditions established for this indicator. Our comments, therefore, will refer to the other indicators.

It can be observed that 100% of the remaining indicators have shown improvement between the initial and final evaluations. Nonetheless, only 50% of them have achieved the level hoped for in the established Project targets.

Of the 2 indicators which did not achieve targets, Nº 8 and Nº 10 present statistically very significant increases, with values of p = 0.000 and p = 0.000, respectively. With respect to indicator Nº10, it should be indicated that this Consultant Team has recalculated (correctly) the baseline indicator, using the initial data base, and found a prevalence of 11.14%; the final evaluation shows 27.2%, thus indicating a significant increase.

Table No. 11: Indicators of maternal health

No.	Indicator	Baseline	Final Evaluation and 95% C.I.	Target	Statistical significance *(p)**	Target Achieved?	Improvement in Indicator ?
06	Increased % women of reproductive age that recognize at least 2 signs of danger during pregnancy, labor & delivery and post-partum.	19.9%	18.5% [14.5 ; 22.5]	60%	Un-Determined *	----	---
07	Increased % of women with 4 or more prenatal care visits during last pregnancy.*	56.3%	81.1% [77 ; 85.2]	80%	0.000	YES	YES
08	Increased % of women of reproductive age that have received two or more doses of tetanus toxoid before last childbirth.**	37.6%	54.5% [49.3 ; 59.7]	80%	0.000	NO	YES
09	Increased % of women with obstetric complications that are treated by a health professional.	55.4%	84.3 % [80.3 ; 88.3]	70%	0.000	YES	YES
10	Increased % of women with children under age two that recognize three or more danger signs for newborns.	11.1% ***	27.2% [22.6 ; 31.8]	60%	0.000	NO	YES

* *Calculation made among mothers with prenatal control identification card.*

** *Calculation made among all mothers.*

*** *This value was recalculated given that the prevalence assigned in the initial evaluation was 0.6% and not calculated correctly. This new estimate was made employing the same data base as the initial evaluation.*

For indicator Nº 7, prenatal controls in their last pregnancy were examined. Likewise, the calculations were made considering only mothers who had a prenatal control identification card. The calculations for indicator Nº 8 considered all the mothers who were interviewed. Likewise, the information on the vaccines was obtained from the mothers' vaccination cards.

4.3.4. Indicators of practices in child feeding.

Table No. 12 presents the results for the indicators of this section. It is apparent that indicator Nº 11 surpasses the target; note that the baseline value was recalculated (correctly). With respect to indicator Nº 12, although the target was not achieved, it shows a very significant increase (p=0.000).

Indicator Nº 13 remained unchanged between the initial and final evaluations, given the there were no significant differences, in terms of percentage, between the initial and final evaluations.

Table No. 12: Indicators of practices in child feeding.

No.	Indicator	Baseline	Final Evaluation and 95% C.I.	Target	Statistical significance *(p)**	Target Achieved?	Improvement in Indicator ?
11	Increased number of children from 0 to 5 months old with exclusive breastfeeding.	33.3% *	82.5% [78.5 ; 86.5]	70%	0.000	YES	YES
12	Increased number children from 6 to 23 months old who are fed five times daily.	11.8%	31.5% [26.7 ; 36.3]	70%	0.000	NO	YES
13	Increased number of children 12 to 23 months old who receive anti-parasite treatment every 6 mos.	8.7%	11.7% [8.7 ; 14.7]	60%	0.406	NO	NO

***** *The value of the initial evaluation (36.9%) has been modified, given that it was calculated in children from 0 to 6 months. The new value of the indicator considers only children from 0 to 5 months. After standardizing the values of the initial and final evaluations, the statistical significance was estimated.*

It should be mentioned that indicator 11, refers to feeding with only maternal lactation during the 24 hours prior to the survey and not precisely to the definition of only maternal lactation according to WHO/UNICEF as defined at the 45th and 47th World Health Organization Assembly (WHO, 1998). Likewise, we must indicate that the values of the initial and final evaluations, for indicator Nº 11, are not completely comparable, as the final evaluation employs the method of recording what was taken in the last 24 hours, while for the initial evaluation, the period of time of feeding was not specified, asking the question, rather, "at some time, have you given..."

4.4. Results of the indicators USAID Rapid Catch.

In addition to the indicators of the Project evaluation, others were calculated that were suggested by the Inter-agency Working Group (IAWG) on the Integrated Management of Childhood Illnesses (IMCI) and were included in the KPC 2000. The design of the survey of the final evaluation included a group of questions that would permit their calculation. Nonetheless, when trying to calculate the 16 proposed indicators of the data base from the initial evaluation, 5 of them could not be estimated due to the fact that the questions were not formulated for that purpose at baseline, and in other cases, because the data available in the baseline electronic archive did not allow for a proper estimate.

4.4.1. Prevalence of malnutrition.

The results permit us to indicate that overall malnutrition in the Project area increased in comparison to the initial evaluation.

Table No. 13: Indicators of the prevalence of malnutrition.

Nº	Indicator	Baseline	Final evaluation	Statistical significance *(p)*	Improvement in Indicator?
01	Percentage of children from 0 to 23 months old who have low weight for age (- 2 standard deviations)	15.06%	22.6%	0.023	NO

4.4.2. Indicators of the prevention of diseases and death.

This section has 12 indicators; it was possible to make comparisons with the initial baseline evaluation for 8 of them, while comparisons were not possible for 4 indicators. All the indicators for which comparisons were made showed improvement.

The prevalence of mothers with less than 24 months between pregnancies (indicator Nº 2) is 15.7%, which is less than the national average for rural areas (23.4%) (INEI, 2001). The prevalence of exclusive breastfeeding for children under 6 months old (indicator Nº 5) is 82.5%, a percentage that is superior to the nationwide average of 67.0% (varying, according to age, from 79% for those 0 to 2 months, to 67% for those 2 to 3 months and 57% for those 4 to 5 months old, according to INEI, 2001).

With respect to indicator Nº 3, childbirths attended by health personnel, we see that 44.9% have received it, which is a figure above the national average of 28.7% (this includes a small percentage attended by health promoter) according to ENDES 2000 (INEI, 2001).

It is found that 14.6% of the mothers in the Project area know 2 ways to avoid contracting HIV/AIDS (indicator Nº 12), slightly above the 8.5% national average among mothers who live in rural areas (INEI, 2001). There is no national-level information about hand washing that permits a comparison with the 17.1% obtained in the Project area.

Indicators Nº 4, 5, 7, 8, and 9 show increases between the initial baseline and final evaluations that are very significant ($p<0.01$). Likewise, indicator Nº 10 shows a significant percentage increase ($p<0.05$).

Table No. 14: Indicators of the prevention of illnesses and death.

Nº	Indicator	Baseline	Final evaluation	Statistical significance *(p)*	Improve-ment in indicator?
02	Percentage of children from 0 to 23 months of age who have been born at least 24 months after the last live birth.	Not asked at baseline.	84.3%	Un-determined *	---

Nº	Indicator		Baseline	Final evaluation	Statistical significance *(p)*	Improve-ment in indicator?
03	Percentage of children from 0 to 23 months of age whose births were attended by trained health personnel		Not asked at baseline**	44.9%	Un-determined *	---
04	Percentage of mothers with children from 0 to 23 months of age who received at least 2 doses of tetanus toxoid prior to the birth of their last child		37.6%	54.5%	0.000	YES
05	Percentage of children from 0 to 5 months of age who have received exclusively breast feeding during the past 24 hours		33.3%	82.5%	0.000	YES
06	Percentage of children from 6 to 9 months of age who have received maternal milk and complementary feeding during the past 24 hours		98.6%	92.3%	0.114	YES
07	Percentage of children from 12 to 23 months of age who have been completely vaccinated against the five preventable diseases before their first birthday	BCG	66.7%	85.5%	0.000	YES
08		DPT	61%	80%	0.000	YES
09		Anti-polio	60.4%	80%	0.000	YES
10	Percentage of children from 12 to 23 months of age who have been vaccinated against measles		47.8%	60.6%	0.021	YES
11	Percentage of children from 0 to 23 months of age who sleep under mosquito netting treated with insecticide.		This indicator was not calculated because no zone with risk of malaria was evaluated.			
12	Percentage of mothers with children from 0 to 23 months of age who know at least 2 forms to reduce the risks of infection with AIDS.		Not asked at baseline.	14.6%	Un-determined *	---
13	Percentage of mothers with children from 0 to 23 months of age who have reported that they wash their hands with soap or ash prior to preparing food, prior to feeding the baby, after defecating, and after attending to a child who has defecated.		Not asked at baseline.	17.1%	Un-determined *	---

***** *"Undetermined" means it was not possible to make a statistical comparison.*

** *Note that the percentage of births "in a health facility" increased from 17.4% to 23.6%.*

Indicator Nº 6 was considered to have improved, given that its high level of prevalence remained in the initial and final evaluations, with no difference between them (p=0.114). Its current prevalence is also above the national average, which is 81% (INEI, 2001). Children from 12 to 23 months old who were completely vaccinated against the 5 preventable diseases, meaning they received the anti-polio, DPT and measles vaccines, increased from 46.5% in the initial evaluation to 69.0% in the final (p=0.000).

Finally, indicator Nº 11 with respect to malaria could not be calculated because the random sample of the study does not include any zones with risk of malaria.

4.4.3. Indicator of the management and treatment of diseases.

These indicators refer to the knowledge that mothers have to identify signs and symptoms of pneumonia or dehydration, and practices of feeding their children during episodes of diarrhea. Each one has shown improvement between the initial and final evaluations.

The data shows in the regard that, in the Project area, mothers have increased very significantly (p<0.01) their knowledge and improved their practices.

Table Nº 15. Indicators of the management and treatment of illnesses.

Nº	Indicator		Baseline	Final evaluation	Statistical significance *(p)*	Improve-ment in indicator?
14	Percentage of mothers with children from 0 to 23 months of age who know at least 2 signs of childhood diseases that indicate need for treatment. *	Pneumonia	17.9	59.0	0.000	YES
15		Diarrhea	10	62.6	0.000	YES
16	Percentage of sick children from 0 to 23 months of age who have received increased amounts of fluids and solid foods during an illness in the last 2 weeks.	Diarrhea	18	43.6	0.000	YES

***** *To calculate this indicator, the estimate was fitted to the questions in the survey of the final evaluation, which does not necessarily correspond to the indicator proposed by the Rapid Catch. Nonetheless, it is possible to consider that the indicator developed makes a stricter interpretation.*

To calculate indicator Nº 16, children with diarrhea were considered, within which the following situations were considered valid: a) in those under 6 months, greater consumption of maternal milk or equal consumption of maternal milk plus other liquids, b) in children from 6 to 23 months, more solid food plus more liquids or more maternal milk plus solid food or more liquid and solid food or more maternal milk and solid food.

5. DISCUSSION

A general appreciation of the results of the evaluation shows us a positive balance in the variables that were studied. We can observe an improvement in the levels of knowledge and practices of the mother about maternal and child health and nutrition, increase in the coverage of maternal and child services, improvement of the organization of the community to resolve health problems and confront emergencies, and improved use of available services at local facilities of the Ministry of Health.

With respect to knowledge and practices of maternal lactation and child nutrition, for which comparisons with averages nationwide and in rural areas have been detailed earlier, show an improvement in the early initiation of lactation and also greater consumption of maternal milk (colostrum) during the three days after birth. Likewise, with respect to practices of child feeding, improvements in the frequency of child feeding and in the addition of oil or lard to the food of children under 2 years of age can also be observed. Child feeding is extremely varied, with a diversity of sources of Vitamin A. Nonetheless, the consumption of foods rich in iron by young children is limited.

Significant increases can be observed in the vaccination coverages in children. Immunization coverage for BCG, DPT and anti-polio vaccines have increased around 20%, while the measles vaccination coverage rose by 11.4% ($p=0.021$). In the Project area, the polio vaccine coverage is level with the national average, while coverage for other vaccines is close to the national average, with the exception of measles. A comparison was made in search of possible significant differences in the vaccination coverage by gender, and no such relation was discovered.

It was determined that the prevalence of diarrhea is high (37.4%) in comparison to the national average for rural zones (17.6%) (INEI, 2001). Nonetheless, feeding practices during the episode have improved. Mothers now give their children larger amounts of liquids, solid food or maternal milk. The level of mothers' knowledge has improved ostensibly in relation to signs of persistent diarrhea or dysentery, and the signs of

dehydration. In this question, the best known signs are dry mouth and sunken eyes. Similarly, in comparison to the initial evaluation, now a relatively high percentage of mothers decide to take their children with diarrhea to a health service for care.

The prevalence of acute respiratory infections (ARI) in children under 2 years old also continued to be high (baseline = 50.3%, final = 53.7%) and above the national average for rural areas, which is 20.2% (INEI, 2001). In the group of children with ARI, 46.6% had rapid and difficult breathing or breathing as if tired or agitated. The majority of mothers (85%), after observing these signs, went to a health service for care for their child. This positive attitude is a factor in the improvement of the survival of these children. Nonetheless, still pending is the inter-sectoral labor to increase preventative measures for ARI. During the period of the implementation of the Project, the number of mothers who know at least 1 sign of pneumonia has increased by 25.1% and those who know how to feed their child after an episode of ARI, by 21.9%.

Children whose mothers have a relatively high level of education tend to have less problems with acute diarrhea and ARIs. There is a significant indirect relation (p=0.006) between education level and the prevalence of acute diarrhea, a greater association than between education level and the ARI variable (See Annex Nº 5.)

With respect to the practices of prenatal care, the mothers in the Project area who received attention in the health services surpassed the national average of the ENDES 2000 (INEI; 2001). The mothers also show important improvements in the recognition of alarm signals in pregnancy (74.6% know at least 1), in childbirth (68.3%) and after childbirth (50% know more than 1). An increase can also be observed in the consumption of iron sulfate pills. 40.2% of mothers consume iron pills for 3 months or more, placing them in a level well above the average for rural zones, which is 9%, and the national average (23%) (INEI, 2001).

With respect to care for childbirth in health facilities, the average obtained in the final evaluation (23.6%) equals the average for Peru's rural zones (23.8%). Nonetheless,

significant differences are not seen between the initial and final evaluations (p=0.098). A statistically significant direct relation was observed between the education level of the mother and the care for childbirths in health services (p=0.034). It is important to mention that almost half of the childbirths are cared for by health professionals, showing the combined efforts of the different socials actors involved (promoters, midwifes, women leaders, health personnel, authorities and the REDESS Project). With respect to the decisions on attention for health complications during pregnancy and childbirth, we observe that the man takes a major role in the decision of what place to be transported to should an emergency occur during pregnancy, while the decision on where the childbirth is to take place is taken by the husband or by the woman herself. On the other hand, only 5% of the childbirths that are attended to by a midwife, promoter or others employ a new razor blade to cut the newborn's umbilical cord, thus exposing them to a high risk of contracting tetanus. This calls for the urgent development of massive campaigns of promotion and prevention. On the other hand, 34.3% of mothers still do not recognize any danger signals for newborns.

It is worth mentioning that the maternal health actions are among the most important priorities of the Peruvian Ministry of Health during the recent past.

In the Project area localities that are zones of risk of Bartonellosis, we still see that 35.4% of the mothers do not know how to recognize a single sign or symptom of Bartonellosis, and 35% still do not know one or more preventative measures. With respect to HIV/AIDS, 73% of the women do not know one or more ways to avoid contracting this fatal illness. These are new and urgent challenges for the public and private institutions, and for the local civil society organizations.

Very important advances have been seen in the strengthening of community organization, increasing the number of community health agents, community organizations for the improvement of maternal and child health (CODECO, Mothers Support Groups) and the percentage of communities with stretchers to transport patients (from 1 to 65%). Now a larger percentage of mothers (initial = 29.4%, final = 72.7%) acknowledge that their

community is prepared to evacuate health emergency cases. These results might be considered among the pillars of the results obtained via the REDESS Project.

There are 13 evaluation indicators of the REDESS Project, 7 of which refer to practices, 4 to knowledge, and 2 to coverage. With respect to the indicator for the increase of mothers who know 2 or more danger signs in pregnancy, childbirth and just after childbirth, this indicator cannot be compared with the initial evaluation due to the considerations described earlier. Nonetheless, we suggest that the level of knowledge of the mothers with respect to said danger signals has improved, given that we observe an increase from 6.9% to 44.9%, respectively, when we evaluate the increase of mothers who know at least 1 danger signal in pregnancy, childbirth and post-childbirth between the initial and final evaluations. Thus we consider it pertinent to suggest that the indicator has shown an improvement.

Thus, the improvement in the indicator analyzed in the previous paragraph together with number 6 in Table Nº 11, we see that 11 of the 13 evaluation indicators show improvement, telling us that the Project has had an 84.6% improvement in the proposed indicators.

If we analyze the level achievement towards the goals planned for the Project, we observe that 4 of 12 indicators have reached the expected levels, so that the Project has had a 33.3% rate of achieving targets.

With respect to the different types of indicators, 50% of the indicators on coverage were achieved, as were 47% and 25% of the indicators on practices and knowledge, respectively. Thus we see that the indicators on knowledge were those that were attained the least.

By sections, we observe that 100% of the indicator targets on the prevention and control of diarrhea were not achieved, nor were 66% of the section of indicator targets for nutritional improvement. The sections on the management of cases of pneumonia and maternal health achieved 50% of their proposed indicators and showed improvement in 100% of their

proposed indicators. This could suggest a major effort in actions related to these 2 last sections.

Fifteen proposed Rapid Catch indicators were also analyzed. In four of them, it was impossible to establish comparisons for the lack of information in la initial evaluation. Nonetheless, the comparisons made with the national averages according to ENDES 2000 (INEI, 2001) showed their levels to be similar or superior to the national averages, except for the indicator on hand washing, which could not be compared.

In the 11 remaining indicators, 91% of them achieved an improvement over the baseline values. Especially improved were aspects relative to the prevention of death and the management and treatment of childhood diseases.

It must be mentioned that the indicator of overall malnutrition in the Project area increased between the initial and final evaluations ($p= 0.023$). Regarding the 2 additional nutritional indicators, chronic malnutrition diminished from 41.35 to 34.7% ($p=0.055$), while that for acute malnutrition increased from 0.32 to 3.7% ($p=0.009$). It is suggested to contrast these results with other sources of information and develop qualitative studies to corroborate the alarming prevalence of acute malnutrition that was found. From the information available, we can say that the high rates of diarrhea and respiratory diseases may well be a cause or a consequence of the nutritional problem.

This last finding and those already mentioned should be diffused among the different local actors. Receiving their feedback is an obligation of the Project and a right of the population, given their co-participation in the evaluation process. Not returning the information is unethical in any investigation. Future meetings should be held to reflect on the improvement or the maintenance of the results obtained.

6. BIBLIOGRAPHY

a. CARE. 2000a. Informe de Evaluación Inicial del Proyecto REDESS.

b. CARE. 2000b. Informe de Evaluación Nutricional del Proyecto REDESS.

c. CARE. 2001. Plan Detallado de Implementación. Presentado a USAID/BHR/PVC el 16.04.2001 por Peru Child Survival XVI.

d. GROSS R, KIELMANN A, KORTE R, SCHOENEBERGER H, SCHULTINK W. 1997. Guidelines for Nutrition Baseline Survey in Communities. Versión 1.2 Jakarta: GTZ, SEAMEO, TRPMED. 186 p.

e. INEI. 2001. Encuesta Demográfica y de Salud Familiar 2000. INEI, USAID, UNICEF. Lima – Perú.

f. INSTITUTO NACIONAL DE SALUD (INS). 2003. Informe Nacional de Niveles de Hemoglobina y Prevalencia de Anemia en Niños de 12 a 36 meses y Mujeres en Edad Fértil. Centro Nacional de Alimentación y Nutrición. Dirección Ejecutiva de Vigilancia Alimentaria y Nutricional.

g. MINSA. 1995. Normas de Control de Diseases Prevenibles por Vacunación. Dirección de Salud de la Mujer y del Niño. Sub Programa de Inmunizaciones. Lima-Perú.

h. MINSA. 1996. Normas de Atención del niño menor de 5 años. Programa de Salud de la Mujer y Niño. Sub Programa de Crecimiento y Desarrollo. Lima-Perú.

i. MINSA. 1999. Procedimientos y Protocolos de Atención en Salud de la Mujer. Programa de Salud y Nutrition Básica. Convenio Perú – BIRF 3701.PE.

j. MINSA. 1999. Procedimientos y Protocolos de Atención en Salud del Niño en Centros y Puestos de Salud. Programa de Salud y Nutrition Básica. Convenio Perú – BIRF 3701.PE.

k. MINSA. 2002. Lineamientos de Política Sectorial para el Período 2002-2012 y Principios Fundamentales para el Quinquenio Agosto 2001 a Julio 2006. Oficina de Comunicaciones MINSA.

l. MINSA. 2003. Lineamientos en Nutrition Infantil y Materna. Instituto Nacional de Salud. Centro Nacional de Alimentación y Nutrition. Lima-Perú.

m. OGE. 2003. Boletín Epidemiológico Semanal. Oficina General de Epidemiología del Ministerio de Salud del Perú. VOL. XII / Nº 37-2003 / Semana del 07 al 13 de Setiembre del 2003. Lima – Perú.

n. SARRIOT E, WINCH P, WEISS W, WAGMAN J. 1999. Methodology and Sampling issues for KPC Surveys. Johns Hopkins University, School of Public Salud, Department of International Salud

o. THE JOHN HOPKINS UNIVERSITY, 1995. Trainer's Guide on Quick Surveys on Knowledge, Practices and Coverage. July 1995.

p. UNICEF. 2003. The State of the World Children. Statistical Tables. New York.

q. WHO, 1998. Complementary feeding of young children in developing countries: a review of current scientific knowledge. United Nations Children´s Fund, University of California, World Health Organization. Geneva. 228p.

Annex No. 1

SELECTED CLUSTERS - CAJABAMBA			
ORDER	COMMUNITY	DISTRICT	EVALUATED
1	EL MILAGRO	ALGAMARCA	X
2	HUACADAY	ALGAMARCA	X
3	AYANGAY	OTUTO	X
4	HUAÑIMBA	HUAÑIMBA	X
5	NUÑUMABAMBA	HUAÑIMBA	X
6	QUILLISPAMPA	ARAQUEDA	X
7	PANCHO JARA	CAUDAY	X
8	PACHILANGA	CAUDAY	X
9	CUNGUNDAY	CAJABAMBA	
10	LICLAMPAMPA	CHUQUIBAMBA	

Community numbers 7 to 10 were optional

Annex N. 2

SELECTED CLUSTERS - SANCHEZ CARRION			
ORDER	COMMUNITY	DISTRICT	EVALUATED
1	SAN MIGUEL	MARCABALITO	X
2	CARACMACA	SANAGORAN	X
3	COCHABAMBA	CHUGAY	X
4	CACHIPAMPA	SARTIMBAMBA	X
5	CHUGURBAMBA	SANAGORAN	X
6	MUSHIT	CHUGAY	X
7	VAQUERIA	HUAMACHUCO	X
8	HUACHACHAL	CHUGAY	
9	SOQUIAN	COCHORCO	X
10	YAMAN	CHUGAY	X
11	NARANJOPAMPA	MARCABALITO	X
12	BUENA VISTA	CHUGAY	X
13	PAJA BLANCA	CHUGAY	
14	UCHUY	CHUGAY	
15	MOLINO VIEJO	COCHORCO	X
16	LICAME	CHUGAY	X
17	JAULABAMBA	HUAMACHUCO	X
18	ELPROGRESO	CHUGAY	X
19	SANJAPAMPA	HUAMACHUCO	X
20	LANLA	SARTIMBAMBA	X
21	LA RAMADA	HUAMACHUCO	X
22	MUNMALCA	SARIN	X
23	LLUR	SANAGORAN	X
24	LA PRIMAVERA	CHUGAY	
25	CHUGAY	CHUGAY	X
26	TAYANGA	MARCABALITO	X
27	CURGOS	CURGOS	X
28	HUAYLLAGUAL	CURGOS	X
29	PUERTO RICO	CHUGAY	
30	EL OLIVO	CHUGAY	

communities 24 to 30 were optional

Annex No. 3

PLAN OF THE MEETING TO TRAIN EVALUATORS AND SUPERVISORS IN THE APPLICATION OF A SURVEY ON KNOWLEDGE, PRACTICES AND COVERAGE AND THE ANTHROPOMETRIC EVALUATION

a. **Date:** September 9 - 11, 2004.

b. **Place:** Auditorium of the Hostal Real.

c. **Duration:** 3 days.

d. Objectives:

- Train survey takers and supervisors in the methodological aspects of the KPC Survey.
- Practice the application of the KPC Survey.
- Form the work teams (supervisors and survey takers) for the collection of information.

e. Programming:

Day 1: Thursday, September 9, 2004

Time	Subject	Responsible	Method
9 – 10.00	Introduction of the participants	REDESS - MINSA	Cards
10.00 – 11.00	The methodological aspects for the application of the Survey KPC – 1.	ISAN	Exposition Dialogue
11.00 – 12.00	Practical exercise of identification of homes.	ISAN	Group Work
12.00 - 1.00	Techniques for the application of the KPC Survey.	ISAN	Exposition Dialogue
1.00 – 2.30	**Lunch**		
2.30 – 4.00	Review of the KPC Survey.	ISAN	Exposition Dialogue
4.00 – 6.30	Practices for the application of the KPC Survey.	ISAN - MINSA - REDESS	Group Work
6.30 – 7.00	Interchange of experiences of the practice of application and feedback.	ISAN	Plenary
7.00 – 7.30	Meeting of Supervisors		

Day 2: Friday, September 10, 2004

Time	Subject	Responsible	Method
8.00 – 8.30	Organization of the field practices	REDESS	Dialogue
8.30 – 12.30	Field practices for the application of the KPC Survey.	ISAN – MINSA – REDESS	Home visits
12.30 – 2.00	**Lunch**		
2.00 – 4.30	Interchange of experiences of the field practices and final agreements.	REDESS	Plenary
4.30 – 5.30	The nutritional evaluation and the anthropometric measurements.	ISAN	Exposition
5.30 – 6.00	The Anthropometric Registry	ISAN	Exposition
6.00 – 6.30	Meeting of Supervisors		

Day 3: Saturday, September 11, 2004

Time	Subject	Responsible	Method
8.30 – 12.30	Anthropometric Standardization of survey takers and supervisors.	ISAN	Anthropometric Practice
12.30 – 2.00	**Lunch**		
2.00 – 3.00	Results of Anthropometric Standardization	ISAN	Group Work
3.00 – 4.00	Determination of routes and work plans by teams	REDESS	Plenary
4.00 – 5.00	Formation of teams and assignment of communities	REDESS	Plenary
5.00 – 6.00	Distribution of materials.	REDESS	Group Work

Resources:

- Computer.
- Multimedia equipment.
- Diskettes.
- Construction paper.
- Large white paper and easel.
- Masking tape.
- KPC Survey Forms (practice).
- Anthropometric Registry Forms.
- Scales.
- Height measurers.
- Batteries for scales.
- Anthropometric standardization forms.
- Others.

Annex No. 4

ENTREVISTA
MADRES CON NIÑOS (AS) DE 0 A 23 MESES
ESTUDIO DE CONOCIMIENTOS, PRÁCTICAS Y COBERTURA
EVALUACIÓN FINAL
CARE Perú, Proyecto *REDESS*.

Huamachuco y Cajabamba, 2004

IDENTIFICACIÓN DEL CUESTIONARIO	**# REGISTRO:** _ _ _ _ _
CODIGO DEL CONGLOMERADO: _____ # de Encuesta: _____	

FECHA DE ENTREVISTA _____/_____/_____
(dd / mm / aa)

NOMBRE DE ENTREVISTADOR/A _____

NOMBRE DEL SUPERVISOR_____

DEPARTAMENTO _____

ESTABLECIMIENTO DE SALUD _____

COMUNIDAD _____

INTRODUCCIÓN Y CONSENTIMIENTO

CONSENTIMIENTO DE LA ENTREVISTADA

Hola. Mi nombre es _____ y estoy trabajando en CARE Perú / MINSA. Estamos realizando una entrevista acerca de la salud de mujeres y niños (as). Agradecemos mucho su participación en esta entrevista. Esta información ayudará a planificar y mejorar las actividades de salud. La entrevista tarda usualmente 30 minutos. Cualquier información que nos dé será mantenida entre nosotros.

La participación en esta entrevista es voluntaria y de aceptar esperamos que responda las siguientes preguntas. Su opinión es muy importante.

¿Tiene Ud. alguna pregunta?

Firma del entrevistador: _____ Fecha: _____

ESTÁ DE ACUERDO A SER ENTREVISTADA ? Si ( ) No ( )

NOMBRE DE LA MADRE _____

EDAD DE LA MADRE (EN AÑOS) ___ ___ (aprox.)

GRADO DE INSTRUCCIÓN DE LA MADRE:

Sin Institución: ---------- 1

Primaria: ---------- 2

Secundaria: ---------- 3

Superior: ---------- 4

UBICACIÓN DE LA VIIVENDA : _____

_____

¿Cuantos hijos tiene ? _____

PEDIR BOLETAS DE NACIMIENTO / TARJETAS DE CRECIMIENTO DE SUS 2 HIJOS MENORES Y EL CARNET PERINATAL DE LA MADRE, LUEGO ANOTAR:

Datos del niño menor de 2 años a ser entrevistado:
Nombre del Niño/a : ……..

Fecha de Nacimiento _____/_____/_____
(dd/mm/aa)

Edad del Niño (meses completo) : _____
SI EL NIÑO (A) TIENE MENOS DE UN MES ANOTE 0.

Sexo del niño/a: M ó F **(ENCIERRE EN CÍRCULO)**

Datos del hermano anterior al niño/a encuestado/a ?
Fecha de nacimiento _____/_____/_____ o Edad _____
(dd / mm / aa)

SECCION 1. PREVENCION DE ENFERMEDADES

SECCION 1 A: LACTANCIA MATERNA Y NUTRICIÓN INFANTIL

No.	PREGUNTAS	RESPUESTAS	PASE
1	¿Usted, le ha dado alguna vez leche de pecho a (NOMBRE del niño/a)?	SI.....1 NO.....2	➔7
2	¿Cuánto tiempo después de que nació (NOMBRE del niño/a) le empezó usted a dar su pecho? **Si la respuesta fue MAS DE 8 HORAS, pregunte ----------➔**	No recuerda.....1 Antes de la primera hora después del parto.....2 Entre Una y Ocho horas después del parto.....3 Más de Ocho horas después del parto .....4 Porque más de 8 horas: _____ _____	
3	¿Le dio usted a (NOMBRE del niño/a) la primera leche de su pecho los tres primeros días (Calostro)?	SI.....1 Solamente una parte .....2 NO.....3 No Recuerda.....4	
4	¿Está dando el pecho (NOMBRE del niño/a) ahora?	SI..... 1➔ NO …… 2	Pase a 6
5	¿Hasta que edad le dio leche de pecho a (NOMBRE del niño) ?	_____ meses cumplidos ➔	Pase a 7

No.	PREGUNTAS	RESPUESTAS			PASE
6	¿Durante el día y la noche de ayer, cuántas veces le dio pecho a (NOMBRE del niño/a)	_____ No. de veces			
7	Ahora me gustaría que me indique los alimentos que comió ayer (NOMBRE del niño/a)	SI = 1	NO = 2	NO SABE = 8	
A	¿Le dio agüita de hierba o té a (NOMBRE del niño/a) ?				
B	¿ Le dio leche de vaca, cabra o leche de tarro o en polvo a (NOMBRE del niño/a) ?				
C	¿ Le dio cebada, avena, harina de maíz, arroz o trigo a (NOMBRE del niño/a) ?.				
D	¿ Le dio verduras de hojas verdes, como el chilche (huacatay), espinaca, apio, acelga, etc a (NOMBRE del niño/a) ??				
E	¿ Le dio zanahorias, zapallo, mangos o papaya, papas rojas o amarillas, camote amarillo, ocas, etc a (NOMBRE del niño/a) ?				
F	¿ Le dio frutas, como: plátano, manzana, etc a (NOMBRE del niño/a) ?.				
G	¿ Le dio Tuberculos, como: papa blanca, yuca, olluco a (NOMBRE del niño/a) ?.				
H	¿ Le dio Menestras, como: chocho, arveja, habas, lenteja, garbanzo, etc a (NOMBRE del niño/a) ?.				
I	¿ Le dio Carne, pollo, pescado, mariscos a (NOMBRE del niño/a) ?.				
J	¿Le dio hígado o sangrecita a (NOMBRE del niño/a) ?				
K	¿Le dio huevos, queso, cuajada o quesillo a (NOMBRE del niño/a) ?				
	Si la madre responde NO a todas las preguntas No.7 entonces → PASE A LA 12.				
8	¿En la comida de (NOMBRE del niño/a) le agregó aceite o manteca?	SI = 1	NO = 2	NO SABE = 8	
9	¿Usó sal yodada (como Sal de la Vida) en la preparación de la comida de (nombre del niño)?				
	PIDA QUE ENSEÑE EL PAQUETE DE SAL Y DE ACUERDO A LO OBSERVADO ANOTE	SI usa sal yodada.....1 NO usa sal yodada.....2 NO enseñó el paquete 3			
10	¿A que edad empezó a darle de comer a (NOMBRE del niño/a)?	Antes de los 6 meses ..... 1 6 ..... 2 7 a 8 ..... 3 9 a 12 ..... 4 Mas de 12 meses ..... 5 No recuerda 6			
11	¿Durante el día y la noche de ayer, cuántas veces le dio alimentos sólidos o semisólidos (comidas espesas, segundos y frutas) a (NOMBRE del niño/a)? **INSISTIR PREGUNTANDO, SI LE DIO FRUTAS Y/O VERDURAS EN ALGUN MOMENTO.**	Ninguna vez.....1 Una vez.....2 Dos veces.....3 Tres veces.....4 Cuatro veces.....5 Cinco veces o más.....6			

No.	PREGUNTAS	RESPUESTAS	PASE
12	¿ Hasta que edad debe alimentar a su niño SOLAMENTE con leche materna ?	Hasta los 6 meses ……1 No sabe ……..2 OTRO _____96 (ESPECIFIQUE)	
13	¿Tiene (NOMBRE del niño/a) su carnet de crecimiento y desarrollo? SI DICE QUE SI, SOLICITE QUE MUESTRE LA TARJETA. SI YA LA TIENE SOLO ANOTE.	SI y lo muestra …….. 1 No tiene.....2 ➔ Perdió la tarjeta …… 3➔	Pase a 15 Pase a 15
14	**VERIFIQUE EN LA TARJETA O CARNET DE CRECIMIENTO Y DESARROLLO.** Anote el numero de controles de peso y TAMBIEN la fecha del ultimo control ------➔	Menos de 5 …… 1 5 …….. 2 6 …….. 3 7 …….. 4 Mas de 7 …… 5 No tiene …… 6 _____/_____/_____ dd / mm / aa	
15	Recibió (NOMBRE del niño/a) una dosis de Vitamina A, como esta, durante los últimos 6 meses. **MOSTRAR A LA MADRES UNA CAPSULA DE VITAMINA A**	SI ……..... .1 NO …… .....2 NO SABE ……..... 3 NO CORRESPONDE ..... 4 ➔	Cuando el niño es < de 6 meses
16	Ha recibido (NOMBRE del niño/a) alguna vez un tratamiento (con medicamentos) para lombrices, "bichos" o parásitos	SI.....1 NO……2	

SECCIÓN 1B: INMUNIZACIONES

No.	PREGUNTAS	RESPUESTAS	PASE
17	Ha sido vacunado alguna vez (NOMBRE del niño/a)?	SI, y tiene carnet …… 1 SI, y no tiene carnet …….. 2➔ NO..... 3➔ No Sabe/No Recuerda..... 4➔	Pase a 19 Pase a 19 Pase a 19
18	REVISE EL CARNET O TARJETA DE VACUNAS, RECIBIDAS POR EL NIÑO, ENCERRANDO EN CIRCULO LA DOSIS RECIBIDAS	Vacuna BCG …… RN Antipolio…… RN 1ª. 2ª 3ª Ref. DPT (Triple)……1ª 2ª 3ª Ref. Antisarampión o SPR ……1ª Ref	

SECCIÓN 1C: HIGIENE DE MANOS

No.	PREGUNTAS	RESPUESTAS	PASE
19	¿En que momentos se lava Ud. las manos con jabón/detergente/ceniza ? **PUEDE MARCAR UNA O VARIAS RESPUESTAS INSISTIR PREGUNTANDO:** Cuando más?	Nunca…… 1 Antes de preparar los alimentos……2 Antes de dar de comer a su niño/a……..3 Después de hacer la caca o defecar……4 Después de limpiar/atender a su niño/a que ha hecho la caca ……..5 OTRO _____96 (ESPECIFIQUE)	

SECCION 1D : MALARIA

No.	PREGUNTAS	RESPUESTAS	PASE
20	Tiene Ud. algún mosquitero en su casa?	SI.....1 NO.....2 NO SABE …… 3	 ➔ 23 ➔ 23
21	Quién / quienes durmieron bajo el mosquitero anoche? **PUEDE MARCAR UNA O VARIAS RESPUESTAS INSISTIR PREGUNTANDO:** Alguien más?	Su hijo (NOMBRE del niño/a) ……..1 Ella misma (encuestada) ……..2 Nadie ……..3 OTRO (S) _____96 (ESPECIFIQUE)	
22	Alguna vez su mosquitero ha sido mojado o humedecido en algún liquido repelente de mosquitos?	SI.....1 NO.....2 NO SABE …….. 3	

SECCION 1E : VIH/SIDA

No.	PREGUNTAS	RESPUESTAS	PASE
23	Alguna vez ha escuchado de la enfermedad llamada SIDA?	SI.....1 NO.....2 NO SABE ……3	 ➔ 25 ➔ 25
24	Que puede hacer una persona para evitar contagiarse del SIDA. PUEDE MARCAR VARIAS RESPUESTAS	Nada ……..1 Abstenerse de sexo……..2 Tener una sola pareja…… ……..3 Limitar el número de parejas sexuales …….4 Evitar el sexo con prostitutas……..5 Evitar sexo con personas que tienen varias parejas sexuales.....6 Evitar contacto sexual con personas del mismo sexo……..7 Evitar el sexo con quienes usan drogas por inyectables……..8 Evitar transfusiones sanguíneas……...9 Evitar besos……10 Evitar picadura de mosquitos……11 Evitar compartir navajas/hojas de afeitar…12 No sabe……13 Usar condón ……..14 OTRO_____96	

SECCIÓN 2: NIÑO/A ENFERMO/A
SECCIÓN 2A: ENFERMEDADES DIARREICAS

No.	PREGUNTAS	RESPUESTAS	PASE
25	Ha tenido (NOMBRE del niño/a) diarrea en las últimas 2 semanas?	SI .....1 NO..... 2➔ No Sabe/No Recuerda..... 3➔	 Pase a 36 Pase a 36
26	Cuándo (NOMBRE del niño/a) tuvo diarrea, ¿qué le dio? PUEDE MARCAR VARIAS RESPUESTAS **INSISTIR PREGUNTANDO:** Algo más?	Nada.....1 Sales de Rehidratación Oral.....2 Suero Casero.....3 Panetelas .....4 Líquido, agüita, infusión, caldito.....5 Antidiarreico/Antibiótico sin receta .....6 Antibiótico con receta .....7 OTRO _____96 (ESPECIFIQUE)	
27	Durante la diarrea de (NOMBRE del niño/a) siguió dándole pecho (leche materna) ...? LEA CADA UNA DE LAS OPCIONES Y ENCIERRE EN CIRCULO LA RESPUESTA.	Dejó de darle.....1 Más de lo acostumbrado.....2 Igual a lo acostumbrado.....3 Menos de lo acostumbrado.....4 Ya no recibía pecho.....5	
28	Durante la diarrea de (NOMBRE del niño/a) ¿Le dio otros líquidos como aguita o te...? LEA CADA UNA DE LAS OPCIONES Y ENCIERRE EN CIRCULO, LA RESPUESTA	Más de lo acostumbrado.....1 Igual a lo acostumbrado.....2 Menos de lo acostumbrado.....3 No le dio aguitas o te .....4 Sólo recibió pecho.....5	
29	Durante la diarrea de (NOMBRE del niño/a) ¿Le dio de comer...? LEA CADA UNA DE LAS OPCIONES Y ENCIERRE EN CIRCULO LA RESPUESTA	Más de lo acostumbrado.....1 Igual a lo acostumbrado.....2 Menos de lo acostumbrado.....3 No le dio de comer .....4 Sólo recibió pecho.....5	
30	¿Buscó usted alguna atención fuera de casa para curar la diarrea de (NOMBRE del niño/a)?	SI ..... 1 NO..... 2➔	Pase a 36
31	Cuándo (NOMBRE del niño/a) tuvo diarrea, ¿Dónde pidió atención primero?	Hospital General.....1 Centro o Puesto de Salud.....2 Médico o Clínica Particular.....3 Farmacia.....4 Promotor de salud ……5 Mujer líder.....6 Curandero.....7 Partera.....8 Parientes .....9 OTRO _____96 (ESPECIFIQUE)	
32	¿Quién / quienes decidió ir a ……. (referirse al lugar o persona mencionado por el entrevistado) para atender la diarrea de (NOMBRE del niño/a) **PUEDE MARCAR VARIAS RESPUESTAS**	Ella misma …….. 1 Esposo /conviviente …… 2 Parientes …… 3 Amigos/vecinos. …….. 4 Promotor de Salud …… 5 OTRO _____96 (ESPECIFIQUE)	

No.	PREGUNTAS	RESPUESTAS	PASE
33	¿Después buscó atención en otra parte?	SI.....1 NO.....2 ➔	Pase a 36
34	¿De quien buscó atención? PUEDE MARCAR VARIAS RESPUESTAS **INSISTIR PREGUNTANDO:** Alguien más?	Hospital General.....1 Centro o Puesto de Salud.....2 Médico o Clínica Particular.....3 Farmacia.....4 Promotor de salud ……5 Mujer líder.....6 Curandero.....7 Partera.....8 Parientes .....9 OTRO _____96 (ESPECIFIQUE)	
35	Después de la diarrea de (NOMBRE del niño/a) ¿Le dio a (NOMBRE del niño/a)otros líquidos como agüita o te...? LEA CADA UNA DE LAS OPCIONES Y ENCIERRE EN CIRCULO, LA RESPUESTA	Más de lo acostumbrado.....1 Igual a lo acostumbrado.....2 Menos de lo acostumbrado.....3 No le dio agüitas o te .....4 Sólo recibió pecho.....5	
36	¿Cómo reconoce que un niño con diarrea está deshidratado (sequito/chupadito)? PUEDE MARCAR VARIAS RESPUESTAS **INSISTIR PREGUNTANDO:** Algo más?	No sabe.....1 Mollera hundida .....2 Boca Seca.....3 Ojos Hundidos .....4 Signo del Pliegue.....5 Bebe ávidamente/Mucha sed .....6 Letárgico / no despierta fácilmente .....7 Irritabilidad / llora mucho / fastidiado …… 8 Llora sin lágrimas .....9 Orina poco..... 10 OTRO _____96 (ESPECIFIQUE)	
37	¿Cómo reconoce que su niño tiene una diarrea persistente o disentérica (grave, severa o peligrosa)? PUEDE MARCAR VARIAS RESPUESTAS **INSISTIR PREGUNTANDO:** Algo más?	No sabe.....1 Diarrea con sangre.....2 Diarrea por más de 14 días .....3 Diarrea como agua de arroz y Vómitos (Cólera).....4 OTRO _____96 (ESPECIFIQUE)	
38	¿Si su niño/a con diarrea presenta señales de peligro (gravedad) hacia donde acudiría primeramente para su atención?	Hospital General.....1 Centro o Puesto de Salud.....2 Médico o Clínica Particular.....3 Farmacia.....4 Promotor de salud ……5 Mujer líder.....6 Curandero.....7 Partera.....8 Parientes .....9 OTRO _____96 (ESPECIFIQUE)	

No.	PREGUNTAS	RESPUESTAS	PASE
39	¿Cómo debe ser la alimentación de un niño/a para recuperarlo, después de haber tenido diarrea? PUEDE MARCAR VARIAS RESPUESTAS **INSISTIR PREGUNTANDO:** Algo más?	No sabe.....1 Dar alimentos en menor cantidad, pero, con más frecuencia.....2 Más alimento de lo usual.....3 Alimento con alto contenido calórico.....4 OTRO _____96 (ESPECIFIQUE)	

SECCIÓN 2B: INFECCIONES RESPIRATORIAS AGUDAS

No.	PREGUNTAS	RESPUESTAS	PASE
40	¿Ha estado (NOMBRE del niño/a) enfermo con tos o problemas respiratorios en las últimas dos semanas?	SI.....1 NO.....2 NO SABE.....3	 ➔50 ➔50
41	¿Tuvo (NOMBRE del niño/a) respiración rápida y difícil, respiraba agitado/a, como cansado/a (cansío) cuando enfermó?	SI.....1 NO.....2 NO SABE.....3	 ➔50 ➔50
42	¿Buscó usted ayuda (atención) para curar a (NOMBRE del niño/a) cuando se enfermó con la respiración rápida y difícil (cansío)?	SI.....1 NO.....2	 ➔50
43	Después que se dio cuenta que (NOMBRE del niño/a) tenia respiración rápida o difícil (cansío) ¿ Cuanto tiempo demoro en buscar atención?	El mismo día …… 1 Día siguiente …… 2 Dos días o mas …… 3	
44	Cuándo (NOMBRE del niño/a) estaba enfermo, ¿A quien pidió atención primero?	Hospital General.....1 Centro o Puesto de Salud.....2 Médico o Clínica Particular.....3 Farmacia.....4 Promotor de salud ……5 Mujer líder.....6 Curandero.....7 Partera.....8 Parientes .....9 OTRO _____96 (ESPECIFIQUE)	
45	¿Quién / quienes decidieron ir a ……. (referirse al lugar o persona mencionado por el entrevistado) para atender la respiración rápida o difícil (cansío) de (NOMBRE del niño/a) **PUEDE MARCAR VARIAS RESPUESTAS**	Ella misma …… 1 Esposo /conviviente ……2 Parientes ……3 Amigos/vecinos. ……4 Promotor de Salud …… 5 OTRO _____96 (ESPECIFIQUE)	
46	¿Después buscó atención en otra parte?	SI.....1 NO.....2	 ➔48

No.	PREGUNTAS	RESPUESTAS	PASE
47	¿De quien más buscó atención? PUEDE MARCAR VARIAS RESPUESTAS	Hospital General.....1 Centro o Puesto de Salud.....2 Médico o Clínica Particular.....3 Farmacia.....4 Promotor de salud ……5 Mujer líder .....6 Curandero.....7 Partera.....8 Parientes .....9 OTRO _____96 (ESPECIFIQUE)	
48	¿ De quien recibió tratamiento, finalmente? PUEDE MARCAR VARIAS RESPUESTAS	Hospital General.....1 Centro o Puesto de Salud.....2 Médico o Clínica Particular.....3 Farmacia.....4 Promotor de salud ……5 Mujer líder .....6 Curandero.....7 Partera.....8 Parientes .....9 OTRO _____96 (ESPECIFIQUE)	➔50 ➔50 ➔50
49	¿ Que medicinas le dieron a (NOMBRE de niño/a)? PUEDE MARCAR VARIAS RESPUESTAS	Nada …… 1 Aspirina …… 2 Panadol …… 3 Amoxicilina ……4 Eritromicina ……5 Penicilina ……6 No sabe / no recuerda ……7 OTRO _____96 (ESPECIFIQUE)	
50	¿Cuáles son las señales que le indican que un niño tiene neumonía? PUEDE MARCAR VARIAS RESPUESTAS **INSISTIR PREGUNTANDO:** Algo más?	No sabe.....1 Respiración rápida y agitada (Cansío).....2 Hundimiento de piel debajo de costillas.....3 Fiebre.....4 Tos.....5 OTRO _____96 (ESPECIFIQUE)	
51	¿Cómo debe ser la alimentación de un niño/a, para recuperarlo, después de haber tenido una respiración rápida y difícil (cansío, neumonía) ? PUEDE MARCAR VARIAS RESPUESTAS **INSISTIR PREGUNTANDO:** Algo más?	No sabe.....1 Dar alimentos en menor cantidad, pero, con más frecuencia.....2 Más alimento de lo usual.....3 Alimento con alto contenido calórico .....4 OTRO _____96 (ESPECIFIQUE)	

SECCIÓN 3: SALUD MATERNA

SECCIÓN 3A: ATENCIÓN PRENATAL

No.	PREGUNTAS	RESPUESTAS	PASE
52	Cuando Ud. estaba embarazada de (NOMBRE del niño/a) ¿Recibió algún control por el personal del establecimiento de salud (Centro, puesto u hospital) ?	SI ..... 1 NO 2	➔ 57
53	¿Qué tipo de personal de salud le hizo los controles durante el embarazo? PUEDE MARCAR VARIAS RESPUESTAS **INSISTIR PREGUNTANDO:** Alguien más?	Médico……1 Obstetriz ……2 Enfermera…… 3 Técnico de Enfermería……4	
54	¿Cuántos controles en total recibió usted por parte del personal de salud, durante el embarazo de (NOMBRE del niño/a?	Número de CPN ___ ___ No recuerda _____	
55	**SOLICITE POR FAVOR QUE LE MUESTRE:** **La Tarjeta de Control de Embarazo ….. ( )** **Plan de Parto …….. ( )** **PARA VERIFICAR EL NUMERO DE CONTROLES PRENATALES QUE TUVO DURANTE SU ULTIMO EMBARAZO**	Menos de 4 controles……..1 4 ó mas controles…… ….2 No tiene carnet…….....3 Perdió su carnet…….. 4	
56	Durante sus controles del embarazo, le aconsejaron sobre lo siguiente: ¿Preparativos para el parto? ó ¿Plan de parto? ¿Lactancia materna? ¿ Como cuidarse para no tener hijos muy seguidos? ¿Señales de alarma o de peligro de muerte durante el embarazo? LEA CADA UNA DE LAS PREGUNTAS Y PUEDE MARCAR VARIAS RESPUESTAS	Preparativos para parto ó Plan de parto….1 Lactancia materna……..2 Como cuidarse para no tener hijos muy seguidos ……..…….....3 Señales de alarma o de peligro de muerte durante el embarazo……..4 No recibió consejos …..... 5 No recuerda …..... 6	
57	**SOLICITE POR FAVOR QUE LE MUESTRE:** **La Tarjeta de Control de Embarazo ….. ( )** **Carné de Vacunación Antitetánica …... ( )** **Plan de Parto …….. ( )** Alguna vez antes de su último parto ¿Recibió Ud. la vacuna antitetánica? VERIFIQUE EL NUMERO DE DOSIS DE VACUNAS ANTITETANICAS RECIBIDAS ANTES DE SU ULTIMO PARTO.	Ninguna vacuna……..…….....1 Menos de 2 dosis……..…….....2 2 o más dosis……..…….....3 No tiene medio de verificación ……4 No sabe …….. 5	

No.	PREGUNTAS	RESPUESTAS	PASE
58	¿Conoce las señales de alarma o de peligro de muerte durante el embarazo? **PUEDE MARCAR MAS DE UNA RESPUESTA** **INSISTIR PREGUNTANDO:** Algo más?	Fiebre....1 Vómitos exagerados....2 Pérdida de líquido por la vagina....3 Sangrado Vaginal....4 Hinchazón de cara, manos y pies....5 Dolores de parto antes de la fecha....6 El niño/a no se mueve, no patea....7 Dolor de cabeza....8 No sabe....9 OTRO _____96 (ESPECIFIQUE)	
59	¿ A dónde iría usted si se le presentara algún signo de alarma o peligro durante su embarazo? **PUEDE MARCAR MAS DE UNA RESPUESTA** Algo más?	Hospital General....1 Centro o Puesto de Salud....2 Médico o Clínica Particular....3 Farmacia....4 Promotor de salud ……5 Mujer líder....6 Curandero....7 Partera....8 Parientes....9 OTRO _____96 (ESPECIFIQUE)	
60	¿Quién / quienes deciden que Ud. Debiera ir …….. (referirse al lugar o persona mencionado por el entrevistado)? **PUEDE MARCAR MAS DE UNA RESPUESTA**	Ella misma ……1 Partera ……2 Esposo/Pareja ……3 Ambos …… ……4 Suegra …… …..5 Madre …… 6 OTRO _____96 (ESPECIFIQUE)	
61	¿Cuál es el medio de transporte más rápido que Ud. utiliza en caso de una emergencia? **PUEDE MARCAR MAS DE UNA RESPUESTA**	Transporte público u ómnibus……1 Carro particular……..2 Ambulancia……3 Animal (caballo, burro)…….... 4 A pie (en litera)……..5 No sabe....6 OTRO _____96 (ESPECIFIQUE)	
62	¿Cuánto tiempo demora en llegar desde su comunidad hasta el establecimiento de salud en caso de emergencia de una mujer embarazada?	Menos de una hora……1 Entre una y menos de tres horas……2 Entre tres y seis horas…….. 3 Más den seis ……4 No sabe……5	
63	En su último embarazo y parto ¿Sufrió Ud. Alguna complicación de salud?	SI....1 NO....2 NO Recuerda....3	➔ 66 ➔ 66

No.	PREGUNTAS	RESPUESTAS	PASE
64	¿Cuál fue esa complicación? **PUEDE MARCAR MAS DE UNA RESPUESTA** **INSISTIR PREGUNTANDO:** Algo más?	Hemorragia vaginal (sangrado fuerte, pérdida de Sangre)..... 1 Salida de mano/pie/cordón……..2 Retención de placenta ..... 3 Vómitos exagerados..... 4 Infección/fiebre……..... 5 Obstrucción, demora del parto……6 Opilación/hinchazón ……7 No sabe…….. 8 OTRO _____96 (ESPECIFIQUE)	
65	¿Quién le atendió (dio tratamiento) cuando tuvo esa complicación? **PUEDE MARCAR MAS DE UNA RESPUESTA** **INSISTIR PREGUNTANDO:** Alguien más?	Médico / Obstetríz..... 1 Enfermera …… 2 Técnico en Salud..... 3 Partera..... 4 Promotor en Salud..... 5 OTRO _____96 (ESPECIFIQUE)	
66	Cuando estuvo embarazada de (NOMBRE del niño/a), Ud. tomó pastillas de hierro. **MOSTRAR A LA MADRES LAS PASTILLAS DE SULFATO FERROSO**	Si ..... 1 ¿Cuántos días? _____ ¿Cuántos meses?_____ No recuerda ___ No ..…….... 2 No sabe / No recuerda 3	

SECCIÓN 3B: ATENCIÓN DEL PARTO

No.	PREGUNTAS	RESPUESTAS	PASE
67	¿Dónde dió a luz a (NOMBRE del niño/a)?	Hospital ……..…….. 1 Centro o Puesto de Salud …… 2 Casa …… 3 OTRO _____96 (ESPECIFIQUE)	
68	¿Quién le atendió el parto de (NOMBRE del niño/a)?	Personal de salud …… 1 Promotor/a …… 2 Partera ……3 Comadre …….... 4 OTRO _____96 (ESPECIFIQUE)	

No.	PREGUNTAS	RESPUESTAS	PASE
69	¿Quién / quienes tomaron la decisión del lugar de atención de su parto? **PUEDE MARCAR MAS DE UNA RESPUESTA** **INSISTIR PREGUNTANDO:** Algo más?	Ella misma ……1 Partera …… ...2 Esposo/Pareja ……..3 Ambos …… ...4 Suegra …… ..5 Madre …… .6 OTRO _____96 (ESPECIFIQUE)	
70	¿Cuáles son las señales de alarma o de peligro de muerte durante el parto? **PUEDE MARCAR MAS DE UNA RESPUESTA** **INSISTIR PREGUNTANDO:** Algo más?	Hemorragia o Sangrado ....1 Parto Prolongado ..... 2 Hipertensión/desmayo/convulsiones . 3 Retención de Placenta …… 4 Salida de mano/pie ……..5 Salida de cordón …… 6 Rompimiento de fuente en un tiempo mayor de 6 horas antes del parto …. 7 No Sabe …… 8 OTRO _____96 (ESPECIFIQUE)	

SECCIÓN 3C: ATENCIÓN POSTNATAL Y DEL RECIEN NACIDO

No.	PREGUNTAS	RESPUESTAS	PASE
71	Cuando nació (NOMBRE del niño/a), ¿Quién ató y cortó el "ombligo" o cordón?	Ella misma.....1 Un familiar.....2 Partera/matrona.....3 Personal de salud.....4➔ Médico particular……..5➔ No sabe.....6 OTRO _____96 (ESPECIFIQUE)	Pase 73 Pase 73
72	**SI LA PERSONA QUE CORTO EL "OMBLIGO" NO FUE PERSONAL DE SALUD, PREGUNTAR** ¿Qué usaron para cortar el "ombligo" o cordón?	Hoja de afeitar nueva……1 OTRO _____96 (ESPECIFIQUE)	
73	¿ Inmediatamente (apenas) nació (NOMBRE del niño/a) donde fue colocado?	Junto a la madre……1 En el piso……2 En otra cama……..3 OTRO _____96 (ESPECIFIQUE)	
74	¿ Inmediatamente (apenas) nació (NOMBRE) qué hizo Ud. con él / ella? **LEA LAS OPCIONES**	Le dio pecho…… 1 Lo bañó……..2 Lo dejó dormir…… 3 Lo llevaron a otro ambiente……..4 OTRO _____96 (ESPECIFIQUE)	

No.	PREGUNTAS	RESPUESTAS	PASE
75	¿Cómo reconoce que un recién nacido esta enfermo y necesita atención médica? **PUEDE MARCAR MAS DE UNA RESPUESTA** **INSISTIR PREGUNTANDO:** Algo más?	No mama bien.....1 Respiración rápida/dificultad para respirar2 Difícil de despertar / duerme mucho …….3 Piel Fría/Niño frío.....4 Bajo peso al nacer.....5 Piel morada/cianótico.....6 Convulsiones .....7 No llora.....8 No sabe.....9 OTRO _____96 (ESPECIFIQUE)	
76	Después de haber nacido (NOMBRE del niño/a) ¿Recibió alguna atención en salud en los primeros 28 días?	SI..... 1 NO.....2 ➔ NO Recuerda.....3 ➔	 Pase 78 Pase 78
77	¿Quién atendió a (NOMBRE del niño/a) en esa oportunidad? **PUEDE MARCAR MAS DE UNA RESPUESTA**	Partera.....1 Promotor.....2 Personal de salud.....3 OTRO _____96 (ESPECIFIQUE)	
78	Después del parto de (NOMBRE del niño/a) ¿Cuándo recibió Ud. alguna atención en salud?	No Recibió ……1➔ Primer día después del parto.....2 Entre 2 y 7 días después del parto .....3 Más de 7 días después del parto 4	Pase 81
79	¿Quién la atendió en esa oportunidad? **PUEDE MARCAR MAS DE UNA RESPUESTA**	Partera.....1 Promotor.....2 Personal de salud..... .3 OTRO _____96 (ESPECIFIQUE)	
80	En esa oportunidad, ¿le dieron consejos acerca de …… ? • ... como cuidarse para no tener hijos muy seguidos? • ... cómo debe alimentar al niño/a (nutrición infantil)? • ... la vacunación del niño/a (inmunización infantil)? • ... la Señales de peligro en un niño/a con diarrea o neumonía? **LEA LAS OPCIONES** **PUEDE MARCAR MAS DE UNA RESPUESTA**	¿ Como cuidarse para no tener hijos muy seguidos? …….. 1 Alimentación del niño/a (nutrición infantil) ……..…… 2 Vacunación del niño/a (inmunización infantil) …….. …….. 3 Señales de peligro en un niño/a con diarrea o neumonía …… 4 No recibió consejos …… 5 No recuerda …… 6	
81	¿Cuáles son las señales de alarma o de peligro de muerte de una mujer después del parto (desde las primeras horas hasta los 42 días)? **PUEDE MARCAR MAS DE UNA RESPUESTA** **INSISTIR PREGUNTANDO:** Algo más?	Fiebre.....1 Sangrado Excesivo.....2 Mal olor de la vagina (de sus partes).....3 No Sabe.....4 OTRO _____96 (ESPECIFIQUE)	

SECCIÓN 4: ENFERMEDADES TRASMISIBLES
SECCION 4A : BARTONELOSIS

No.	PREGUNTAS	RESPUESTAS	PASE
82	Conoce ó ha escuchado hablar de la Bartonelosis?	SI.....1 NO.....2 NO SABE ……..3	 ➔86 ➔86
83	Como reconocería Ud. que un familiar/persona tiene Bartonelosis? **MARQUE TODAS LAS RESPUESTAS MENCIONADAS POR LA MADRE**	Palidez……1 Piel y ojos amarillos……..2 Fiebre ……3 Hemorragias……..4 Dolor de huesos……5 Petequias (puntitos rojos) ……..6 Verruga ……7 No sabe……..8 OTRO_____96 (ESPECIFIQUE)	
84	Donde buscaría atención ayuda, si sospecha que un familiar/persona tiene Bartonelosis?	Hospital……1 Puesto o Centro de Salud……2 Promotor……..3 Familiares……4 No sabe ……..5 OTRO_____96 (ESPECIFIQUE)	
85	Sabe Ud. que hacer para evitar enfermarse con Bartonelosis? **PUEDE MARCAR VARIAS RESPUESTAS**	Usar ropa que le cubra casi todo el cuerpo…1 Dormir dentro de la casa……..2 Usar mosquiteros……..3 Tapar grietas y huecos de paredes……..4 Enterrar el estiércol (guano)……...5 Usar letrinas……..6 No Sabe…….....7 OTRO_____96 (ESPECIFIQUE)	

SECCIÓN 5: ORGANIZACIÓN COMUNITARIA

No.	PREGUNTAS	RESPUESTAS	PASE
86	¿Existe una partera o promotor en su comunidad?	SI.....1 NO.....2 NO Sabe.....3	Pase ➔ 88 ➔ 88
87	¿Ha recibido alguna ayuda (apoyo) por parte de la partera o promotor? **PUEDE MARCAR VARIAS RESPUESTAS** **Que más?**	No recibió apoyo ……..1 Visita domiciliaria …….. 2 Charla educativa …… 3 Seguimiento de casos …….. 4 Referencias …… 5 Evacuación de emergencias …… 6 OTRO_____ 96 (ESPECIFIQUE)	

No.	PREGUNTAS	RESPUESTAS	PASE
88	Ha escuchado Ud. acerca del CODECO (Comité de Desarrollo Comunal) ?	SI……1 NO……2	
89	En su comunidad funciona un CODECO? **Si la respuesta fue NO, entonces pregunte** --------➔	SI.....1 No Sabe……..2 NO..... …3 Porqué no funciona (especifique)? _____ (ESPECIFIQUE)	
90	Sabe Ud. Que hace el CODECO, o cual es su función en la comunidad? **PUEDE MARCAR VARIAS RESPUESTAS**	Evacuación de emergencias……..1 Hace gestiones con instituciones…….2 Apoya al ACS……..3 Nada……4 No sabe……5 OTRO _____96 (ESPECIFIQUE)	
91	¿Su comunidad se encuentra organizada para evacuar a una persona en una emergencia de salud?	SI.....1 NO.....2 NO Sabe.....3	
92	¿Cuenta su comunidad con una litera/camilla para evacuar un caso de emergencia de salud?	SI.....1 NO..... 2➔ NO Sabe..... 3➔	**Pase 95** **95**
93	Sabe donde esta ubicada la litera / camilla?	SI.....1 NO.....2	
94	¿ En su comunidad, han usado la litera para evacuar las emergencias de salud	SI..... 1 NO..... 2 NO Sabe……3	
95	Sabe Ud. Si existe un Grupo de Apoyo Comunitario, en su Comunidad ?	SI……1 NO……2 NO SABE ……..……3	

AGRADEZCA LA ATENCIÓN Y EL TIEMPO BRINDADO

E. Project Data Sheet form – updated version