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BARA CHILD HEALTH PROJECT

CARE SUDAN / MINISTRY OF HEALTH

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ABBREVIATIONS

ARI	Acute Respiratory Infections
BCHP	Bara Child Health Project
BMHP	Bara Maternal Health Project
BP	British Petroleum
CM	Community Management
CDD	Control of Diarrhoeal Diseases
CHW	Community Health Worker
CWSP	Community Wells and Sanitation Project
DIP	Detailed Implementation Plan
EC	Extension Coordinator
EPI	Expanded Program on Immunization
FC	Field Coordinator
GOS	Government of Sudan
HV	Health Visitor
IG	Intermediate Goal
KAP	Knowledge, Attitude, Practice
MA	Medical Assistant
MBO	Management by Objective
MOH	Ministry of Health
NKCHP	North Kordofan Child Health Project
NGO	Non Government Organisation
ORS	Oral Rehydration Salts
ORT	Oral Rehydration Therapy
PAT	Project Activity Target
PHC	Primary Health Care
PIR	Project Implementation Report
PM	Project Manager
PPHC	Provincial Primary Health Care
PRA	Participatory Rural Appraisal
PRONISS	Provincial Nutrition Information and Surveillance System
RC	Rural Council
RFPP	Rural Finance and Planning Project
RTA	Regional Technical Advisor
SCCOO	State Cold Chain Operations Officer
SCF	Save the Children
SMA	Senior Medical Assistant
SOW	Scope of Work
TOT	Training of Trainers
TBA	Traditional Birth Attendant
VAD	Vitamin A Deficiency
VC	Village Council
VDC	Village Development Committee
VHC	Village Health Committee
VMW	Village Midwife

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A. EXECUTIVE SUMMARY

The Bara Child Health Project (BCHP) is one of three components of an integrated child and maternal health program being implemented in up to seven rural councils in Bara province, one of five provinces of north Kordofan state in western Sudan. The total target population was estimated to be 106,150. This project was a continuation of a Child Survival (USAID) funded child health project (NKCHP) covering En Nahud and Bara provinces during the period 1986-1989 and implemented jointly by CARE Sudan and the Ministry of Health (MOH). It was intended to build on the lessons of the NKCHP and in so doing focussed its attention on Bara province simultaneously strengthening the capacities of the MOH's rural service delivery and the capacities of communities to assume more responsibility for supporting health services in their communities. This strategy has proved to be a sound one, although very much a longer term objective than the four year period of this project allowed.

The perennial drought susceptibility of Bara, and north Kordofan as a whole, places great strains on the population's health, with children and mothers being particularly vulnerable. The major causes of infant mortality and morbidity are the six immunizable diseases, diarrhoea, malaria, respiratory infections, malnutrition and vitamin A deficiency. For this reason the project has focussed its attention on minimizing the effects on children, particularly those less than one year, of these killer illnesses. Key activity areas have included the use of ORT; immunization; treatment of malaria, VAD, ARI; strengthening village health committees; extensive training in the above areas at all levels; extending the cold chain, all with the aim of reducing mortality and morbidity amongst children less than five years of age and pregnant and lactating mothers. A project agreement was signed the end of 1989 with the Kordofan state MOH and the project has been active over a four year period September 1989 to September 1994. Principal funding for the project from Comic Relief (USD 607,325) and USAID (USD 550,000) was originally intended for a three year period. However, due to a series of devaluations over the life of the project, a no-cost extension was granted for an additional year. Additional donors included the Camelot Foundation, CARE USA, Ed Ryan and other private individuals. The total value of the project was USD 1,281,525 of which USD 1,152,777 was spent.

During a period of intense drought, deteriorating MOH infrastructure, decreasing financial support of the government to the states, and waning donor support, this project has seen

remarkable progress towards accomplishment of its goals. The final evaluation indicated great success of the CDD component which placed an emphasis on training community promoters (mothers) who in turn trained others and so a chain reaction was created. According to community members, EPI was seen as the most effective intervention area in terms of child survival because of its visible and long-lasting results. The formation and training of fifty-two village health committees (VHCs) was a critical element of the project's community management capacity strengthening strategy, particularly in maintaining aspects of the cold chain and securing essential drugs and medical supplies which have not been adequately sustained by the MOH. Great strides have been made in increasing awareness of both these VHCs and rural health cadres of their essential role in maintaining and expanding health services at the community level. In a climate such as today, where the MOH's capacity to maintain a basic infrastructure in support of PHC in the rural areas is very much in question, this dual strategy of strengthening both communities and the MOH is the most effective. However, "capacity strengthening" cannot be achieved over night, particularly in an environment such as Sudan which is constantly changing in an attempt to adapt to the stresses and strains of a declining economic situation. Without continued donor and government support for such health service delivery projects, communities will face ever increasing vulnerability and a further decline in health status. The challenge now lies with the potential funders to capitalize on the gains made by the BHP through support to a third phase of the project.

B. BACKGROUND

The Bara Child Health Project (BCHP) is one of three projects being implemented in an integrated fashion by CARE Sudan and the Ministry of Health (MOH) in Bara province, North Kordofan state in western Sudan. The project, although originally intended to be implemented in the seven rural councils of Bara, has concentrated its activities in six mainly Bara, Geregikh, Um Keredium, Taiyba, Um Garfa and Um Sayaala. Mazroub, the seventh, has proved difficult to effectively operate in primarily due to its poor health infrastructure (see Annex A for a map of Sudan and the project area). Bara province has a total population of an estimated 275,000 scattered in over 750 villages and one town in an area the size of Swaziland. These figures were taken from the 1991 ration card registration carried out by the Government. It is estimated the population is closer to 290,000 today.

CARE has been active in north Kordofan since 1979 in the areas of water, agroforestry, small enterprise, health and food assistance given the drought prone nature of this region. The BCHP is a continuation (second phase) of the North Kordofan Child Health Project (NKCHP) initiated in 1986 as part of CARE's rehabilitative and development responses to the aftermath of the 1984/85 drought. The overall aim of both projects was to reduce mortality and morbidity amongst children less than five years of age and pregnant and lactating mothers. The major causes of infant mortality and morbidity are the six immunizable diseases, diarrhoea, malaria, respiratory infections, malnutrition and vitamin A deficiency. For this reason the project has focussed its attention on minimizing the effects on children of these killer diseases. Although NKCHP operated in four rural councils (RC) of En Nahud province and five RCs of Bara, a decision was taken to concentrate phase two in Bara due to the expansive distances between the two provinces. In this way the project would be more manageable and cost-effective.

The BCHP was designed in accordance with the lessons learned from NKCHP which included the following:

- the project should promote health service delivery through the MOH

- the project should establish more static sites (solar unit sub-cold chain system) to ensure greater sustainability of EPI services

-working through village health committees has greater chances of ensuring sustainability of interventions since these beneficiaries/participants are more likely to be involved in all phases of the project cycle

-CDD women's groups are the nucleus of a voluntary health promotion system and are a most effective means of strengthening village women's KAP (knowledge, attitude, practice) of critical health interventions.

BCHP thus commenced in September 1989 on a firm basis of contextual understanding and past learning. The intermediate goals of the project, slightly modified from the original set listed in the Detailed Implementation Plan (DIP) in response to recommendations from the mid-term evaluation (June 1991) and technical reviews. They are as follows:

By August 1993:

1. 65% of children under 5 years in operational areas who had diarrhoea in the last two weeks received proper ORT.
2. 65% of children under 1 in operational areas are fully immunized and 40% of new mothers are adequately vaccinated with tetanus toxoid.
3. 50 Village Health Committees and 60 trained health cadres in operational areas take steps to control malaria, ARI and Vitamin A deficiency in children under 5.
4. 50 VHCs have the capacity to manage and support regular and sustainable PHC services in their villages.

What was originally intermediate goal (objective) three with a focus on strengthening a nutrition communications program to improve nutritional practices amongst children under five, was refocussed on nutrition surveillance during the drought. It was discontinued early in 1991 by the project when it became a strategy of two other projects introduced by CARE during the 1990/91 drought - the Supplementary Feeding project and PRONISS (Provincial Nutrition Information & Surveillance System).

In December 1989, CARE Sudan and the Director General of Health Services for Kordofan state signed a project agreement for the BCHP and Bara Maternal Health Project (BMHP). With this agreement CARE had the authorization to implement health activities in Bara province and collaborate directly with the State and provincial MOH officers for the implementation of activities in the project's principal intervention areas. CARE also negotiated a national level agreement with the MOH which served as an umbrella agreement for any future and existing health activities CARE Sudan might wish

to undertake.

The BCHP, as mentioned earlier, became part of an integrated program consisting of the BCHP, BMHP and the Community Wells and Sanitation Project (CWSP). The clustering of these projects had both its advantages and disadvantages, but it certainly contributed in the long run to a more efficient use of resources and promotion of a more integrated concept of development amongst both our staff and the community. Specifically, field coordinators were assigned responsibility for supporting all three activities in their RCs enabling them to develop a package of messages which were complementary and could be delivered at the same time to the community. The same VHCs and health cadres were targetted for all three activities. The BMHP has been working to improve the health status of women of child-bearing age (15-45) by increasing awareness amongst them of how they can improve their health including family planning; strengthening the quality of pre-natal, natal and post-natal services offered by TBAs and village midwives (VMW); and strengthening the first aid obstetric and referral services offered by higher levels of health cadres in the MOH. The CWSP focussed on organizing the digging of hand-dug wells, establishing maintenance systems with the communities and undertaking sanitation education with the VHCs. In addition, a latrines construction component was implemented alongside the wells activity.

In all, Bara grew to be a major program hub for CARE Sudan, displaying a healthy mix of relief, rehabilitation and development projects all implemented with a degree of integration and coordination.

C. PROJECT FUNDING

The project was originally planned for a three year period (Sept.1989 - August 1992) but due to significant currency devaluations experienced during this period, a no-cost extension was requested and approved up to the end of August 1993 (for the USAID grant) and September 1993 (for the Comic Relief grant) to make use of the balance funds. Other donors to the project included the Camelot Foundation, CARE USA, Ed Ryan and other private donors. The total funding for the project was USD 1,281,525 of which a total of USD 1,152,777 was spent. A summary of expenditure against budget plans is provided below.

Donor	Grant Amount (in USD)	Expenditure (in USD)
USAID	550,000	421,252
Comic Relief	607,325	607,325
	(UKL 354,834)	

Camelot Foundation	85,000	85,000
Youssif Hussein	10,909	10,909
Ed Ryan	22,000	22,000
CARE USA	6,291	6,291
TOTAL	1,281,525	1,152,777

D. TARGET POPULATION

According to MOH statistics, 55% of the population in Kordofan live within 5 kms of a health unit defined as either a hospital, a dispensary (run by a Medical Assistant, nurse and/or midwife and serves approximately 20,000 people) or a primary health care unit (staffed with a community health worker to serve a population of 5,000). Although this may be true, not all health units are staffed thus leaving portions of the population with larger distances to travel for health care. The project has focussed its activities on these impact areas surrounding staffed government health facilities. The table below estimates the target population based on the 55%.

Rural Council	Total Pop.	Project Target (55% of pop.)
Bara	40,000	22,000
Gerejikh	20,000	11,000
Taiyba	40,000	22,000
Um Keredium	65,000	35,750
Um Sayala	50,000	27,500
Um Garfa	25,000	13,750
Mazroub	35,000	19,250
Total	275,000	151,250

Source: 1991 GOS ration card registration.

The project has from the above target population identified specific vulnerable groups to further target. Children less than 5 years of age were identified as a high risk group given their vulnerability to the six immunizable diseases (measles, poliomyelitis, whooping cough, tetanus, diphtheria and tuberculosis) which is worsened by malnutrition prevailing in the area both within this age group and pregnant mothers. Women of child bearing age have been targetted since they too are susceptible to tetanus and malnutrition during delivery which in turn jeopardizes their lives and those of their children. The generally poor health status of this target group is attributed to the interaction between malnutrition and diarrheal and other communicable

infectious diseases. The total target population for these sub-groups is estimated as 106,150 using the following percentages of the general population from the 1983 census: under sixty months 18.5% (50,875) and women of child bearing age 20.1% (55,275). Within the under five group 11.5% are less than two years (31,625) and 4.1% are under 1 year (11,275).

In addition, given the project's strategy to strengthen both the MOH and community infrastructure to address these health problems, health cadres at both the provincial, RC and village council (VC) levels were targetted for training and other support together with an estimated 350 village promoters and 52 VHCs.

E. PROJECT STRATEGY

The project strategy was essentially two-fold:

-Institutional strengthening of the MOH to provide quality services. This involved training and upgrading the skill levels of MOH health cadre in five key child survival interventions namely the Expanded Program on Immunization (EPI), control of diarrhoeal diseases (CDD), acute respiratory infections (ARI), malaria and vitamin A deficiency (VAD), and training of trainers (TOT) skills. In addition CARE has provided equipment and supplies eg. solar refrigerators and has supported the delivery of health services by facilitating the expansion of the cold chain system in Bara, the delivery of drugs and vaccines and making frequent follow-up and supervisory visits jointly with MOH staff to the communities.

-Community management through the formation and training of VHCs in 52 villages to mobilize, educate and support the five project interventions at the village level, provision through the project staff of regular support to VHC activities, and support to the training of 350 community health promoters in CDD.

Please refer to Annex B for a project schematic originating from the final evaluation of the project.

Generally, this project strategy was determined in both the final evaluation and by the project itself to be a sound one for the maximum sustainability of project interventions. However, it was founded on an assumption that the MOH is able to maintain a basic infrastructure for the delivery of these essential health services. This assumption has not proved true. Consequently in the current economic climate a third phase of this project would be better focussed on those health interventions which are less dependent on the MOH, and thus more sustainable at the community level, with an equal emphasis on strengthening the community management thrust of the project. This proposed shift in emphasis of strategy is more of a modification rather than a rejection of the two-pronged

approach. More description of these two strategies is provided below.

MOH strengthening

The project undertook refresher trainings in all intervention areas for provincial level MOH staff, particularly the Senior Medical Assistant (SMA responsible for all preventive and curative health matters in the province excepting maternal and supervises the medical assistants at dispensaries) and Health Visitor (HV responsible for maternal health matters in the province and supervises the midwives), RC level and village based health cadres (medical assistants, nurses, community health workers). Other ministry staff (Education, Local Administration, Forestry, etc.) were included in some of the less technical trainings to broaden community outreach. The project's emphasis was on training staff situated at static sites versus mobile teams. The intent was to enable the provision by the MOH of multi-services to the community to widen the impact of these community health facilities. Although the MOH's resources are currently dwindling, its presence over the past four year period has not only provided essential services, but motivated communities to be aware of the role they can play in supporting health services.

In addition to technical training, considerable time and effort has been invested by the project in equipping the key health cadres with TOT skills. These "master trainers" have trained community health workers, midwives, nurses and promoters to in turn train mothers and other members of the community in various interventions. The role of the project's staff has been to conduct the master training and then follow-up to ensure training is trickling down to all levels. This has been effectively done down to the promoters level, but the project was not able to spend the needed time to follow-up at the household level. This would be a valuable addition to the project's strategy in future phases.

The project assisted the MOH in establishing sub-cold chain centres in Um Sayala, Gerejikh and Saata by providing and installing three solar units. A PHC office was also established in Um Keredium with the project's assistance as an additional cold chain depot servicing two of the above-mentioned centres and picking up vaccines directly from El Obeid (state capital) rather than the provincial headquarters (Bara). BHP has also provided support to repair and service the EPI and SMA's vehicles to keep them mobile.

The project and the MOH established a provincial Primary Health Care Committee (PPHC) with representation from all the key health personnel (Medical Inspector, SMA, EPI Officer, Public Health Inspector, HV), the provincial Executive Director representing the Commissioner's office and the Chairman of the Salvation Committee. This committee met bi-monthly or monthly when needed to discuss project progress, problems, suggest solutions and assist in

planning future activities. The PPHC could play a key role in supporting the project's phased over activities to the VHCs and others at the community level if they received the necessary resources from within the MOH. An attempt was made to establish a similar coordinating body at the state level called the State Advisory Committee which had the added participation of SCF (USA) undertaking a similar (child survival) project in Um Ruaba province in Kordofan. However, this committee had the commitment of only a few from the MOH state office and thus met only four times during the life of the project.

Community Management

The project's aim was to establish village based coordinating bodies (VHCs) to mobilize and sustain project interventions, but also to expand the MOH's extension service by training community based representatives in both technical and training skills. Because there is a marked shortage of health cadres at the community level to cover the geographical area, volunteers and health promoters (women from the community usually formed into a group) were trained to support immunization and CDD services respectively. The health promoters, although primarily trained in CDD, have proved a very effective extension means to other women's groups and potentially to the household level. The MA at the dispensary trains a volunteer group of women from the villages serviced by the dispensary. These women are known as health promoters and each member has the responsibility to identify a group of women who live near them and conduct the same training so as to expand the trained target group of women. And so the system is further extended until all the women in a village are trained. The weak link in this system has been the household follow-up to ensure that what the women have been taught is being practiced. Although the evaluation results would suggest this to be happening such a step is an important part of a training impact monitoring system. Because of the success of this approach, the role of the community health promoters could be easily expanded into other intervention areas.

For the VHCs a training manual was developed modelled on the CDD one and focussed on equipping the VHCs with committee management skills, problem solving, training and mobilization skills. Although effective in enabling the VHCs to organize themselves and mobilize the community for clean-up campaigns, immunization and fund-raising, the VHCs require more training and support in assuming a more strategic and long-term planning and organizing role. This was too much to attempt during the life of this project and would form an important focus for the next phase. Perhaps of most significance has been the clear indication that VHCs can play a key role in supporting health services at the community level, and that with more training focussed on the above areas, they could assume an even greater role in sustaining community health

services.

F. PROJECT ASSUMPTIONS

The BCHP was designed on a number of assumptions which are briefly discussed below. In a context like Sudan, which is both politically complex, facing severe economic constraints, is subject to drought and continues to wage war in the south, it is unlikely that all assumptions made at the outset are likely to hold true to the end. The following is a recap of those principal assumptions made by the project.

-Bara province which is a drought prone area will continue to need outside assistance to improve the health status of its population given the strained resources of the government.

This assumption has proved true. The 1990/91 drought saw an initial large mobilization of external (both to the province and to the country) resources in the form of food, drugs, cash, materials and equipment from agencies like UNICEF, WFP, CARE, Ministry of Economic Planning, Ministry of Finance, to mention but a few. Although such levels of assistance have not been maintained by the donors, the need is very much there.

-The MOH staff will serve as the backbone for the implementation of the child survival interventions.

This assumption proved wrong given the constrained resources of the MOH which affected salaries resulting in some staff leaving and few new ones being added eg. midwives, CHWs, MAs. For this reason the project capitalized on the use of volunteers and promoters to assist in immunization campaigns, both in static and empty sites serviced by mobile teams, and in the extension of CDD. Towards the latter half of the project the MOH was not able to provide the needed operational costs to maintain the cold chain refrigerators, vehicle costs for key supervisory staff, stationary for dispensaries to maintain registers, etc. This has constrained the effectiveness of these MOH personnel in implementing project interventions.

-The GOS will improve its relations with the NGOs to enable them to extend assistance to the needy populations in a smooth and unimpaired manner.

At the state and provincial levels this assumption has proved true up until the last nine months of the project. At the national level relations with the GOS have been relatively good. However, the bureaucratic procedures governing NGO operations in the country are generally burdensome and have not seen significant improvement with the exception of cancellation of the requirement of travel

permits in non-conflict areas.

-Competent national staff will join the project to plan, implement and monitor the project interventions.

The project has been fortunate in the staff it has been able to second from other projects as they phased out, and hire new. The only constraints faced have been in the management staff's need for more training in planning, reporting and in general management and the over-burdening of the project manager with the management of the two health projects.

-The MOH will provide the basic materials, equipment and funds to operate and maintain the MOH infrastructure.

Although this assumption was valid at the start of the project, it did not hold true throughout to the point that the project became involved in cold chain support functions it did not initially intend to. The single biggest factors which worked against this assumption have been UNICEF's reduction of support to the MOH's EPI program in Bara, and the GOS increasingly scarce resources compounded by the decentralisation of central government responsibility for services to the state.

-The communities in the project area will be receptive to, and willing to sustain the project interventions.

This has proved true viz the communities receptivity. Their willingness to sustain interventions is also there but their current capability is not yet fully developed. This will be discussed further under project accomplishments.

G. PROJECT ACCOMPLISHMENTS

In this section will be discussed accomplishment of the project's intermediate goals (objectives) and a detailed review of activity accomplishment contributing to the achievement of the goals. Please refer to Annexes C and D respectively. Neither this report nor the final evaluation have reviewed accomplishment of the final goal which was considered beyond their scope. However, it can be assumed that accomplishment of the intermediate goals (IG) will contribute positively to accomplishment of the final goal. In the absence of morbidity and mortality data, it would appear from the degree of IG accomplishment measured through the evaluation and this report that if this project had not been implemented in Bara over the past four years, the mortality and morbidity rates for the targetted population are likely to have significantly increased. Although this is not a clear statement of final goal achievement it is indicative of the significant role this project has played in

staving off a possible dramatic drop in health services to Bara's rural population with a concomitant deterioration in health condition of the most vulnerable groups.

As mentioned earlier, there were some changes made to the original IGs of the project for the following reasons:

-With the approval from the principal donors to the project - USAID and Comic Relief - a no-cost extension was granted extending the project life to August/September 1993.

-Village Health Committees (VHCs) replaced Village Development Committees (VDCs) to ensure an initial health focus at the community level but not excluding other community needs.

-Districts were replaced with Provinces in early 1990 when the new government came into power.

-The project's geographical target area was reduced from seven rural councils (RCs) to six dropping Mazroub RC whose health infrastructure was very weak. As the project strategy was to work through the MOH infrastructure, Mazroub was not sufficiently established to qualify. It was, therefore, excluded in December 1990.

-Although not originally included in the DIP (detailed implementation plan), ARI, malaria and VAD were added in January 1990 as health interventions to be promoted by the project to respond to critical health problems prevailing in the area. This decision was accepted by USAID as they fell within the Child Survival guidelines.

INTERMEDIATE GOAL # 1: By August 1993, 65% of children under five years of age in project operational areas of Bara province who had diarrhoea in the past two weeks and received proper ORT.

Goal Accomplishment: In the original goal statement a percentage of 55% was given which was subsequently changed to 65% following the 1990 baseline survey results in the two RCs of Um Sayala and Um Garfa which revealed the ORS user rate to be 25% as compared to 72% (1989 survey) in the remaining five RCs. The project felt confident that a revised target of 65% was achievable within the life of the project. This has proved to be correct as the final evaluation survey revealed a figure of 63% of mothers with children experiencing diarrhoea during the last two weeks as having received ORS and fluids. This is indeed encouraging and reflects a generally positive picture of proper ORT practice being applied based on mothers knowledge of how to manage diarrhoea. The final evaluation indicated that 92% of mothers interviewed were well aware of the symptoms of diarrhoea, and 63% to 73% knew the most appropriate means to treat it.

A number of key activity areas have contributed to accomplishment of this goal. First of these is the extensive training (refresher and new) program of 76 health cadre plus community volunteers in both CDD and TOT (training of trainers) methods who in turn trained over 350 community "promoters". It was this latter strategy of identifying and training promoters who in turn trained other women's groups who then became trainers and so on that proved very effective in extending messages to a large, dispersed target group. It was a low-cost, culturally attractive and more sustainable way to reach the ultimate target group. Using a TOT approach was equally effective and a useful (Arabic) manual was produced that remained at the dispensary for future use. Perhaps key to the success of this CDD training approach has been the involvement of all levels of health workers (provincial, RC, VC) in developing the strategy, producing the manual, conducting the training, holding problem solving meetings which together have ensured greater support and understanding of the approach from all concerned.

The availability of ORS packets has been key to enabling ORT to be practiced. 75% of the health facilities visited in the final evaluation had adequate stocks (more than 100 packets) of ORS. Although the reliability of the MOH drug supply system has deteriorated, VHC initiatives throughout the project area to pay for the transport of ORS and drugs have contributed to a more regular supply, with the presence of the community pharmacy in Bara serving as an additional source.

All of the above has been followed up with regular visits from both the project staff and the SMA. 75% of the health facilities visited at evaluation time had received at least semi-annual supervision visits. Joint supervisory meetings to health units by project staff, the SMA and the Health Visitor (HV) although less frequent have at least established the principle, and should the resources be available to support such visits, would likely continue.

Accomplishment of this goal has not been without its constraints. The disruption in supply of ORS through MOH channels is worrying. The Bara community pharmacy stock is not sufficient to service all of Bara. There is also no system yet in place for the distribution of ORS packets to community promoters which could be easily addressed in future. Further education of mothers by promoters and health cadres alike needs to focus on the inappropriateness of treating diarrhoea with drugs. 12% of mothers surveyed during the evaluation still mention drugs as a means to treat diarrhoea. Finally, it is unfortunate that the MOH will not at present allow promotion of SSS (sugar, salt, solution) for the treatment of diarrhoea. Their concerns may be justified, but with the potential threat of reduced access to ORS packets facing rural Bara dispensaries, what other recourse is there if diarrhoea is to continue to be combatted by mothers?

Activity Accomplishment:

TRAINING

Conduct training for health cadres (PAT #1)

Seven of the planned nine trainings took place by which 76 health cadres (MAs, nurses, CHWs, VMW, TBAs) and 400 volunteers (teachers, community leaders, members of GOS departments) were trained as trainers. The basic CDD MOH master training was done during the NKCHP so that during this second phase the training focussed on assisting these master trainers to conduct trainings of health workers, volunteers and promoters. The training sessions grouped the health cadres and volunteers together and included methods such as discussion, demonstration, role plays and songs to disseminate the basic CDD messages. After the trainings, the participants used the same methodologies to train mothers groups within the community called promoters who in turn further trained other mothers in CDD. A higher number of health cadres were trained but defaulters were not invited more than twice. The nomadic CHWs used to move with their communities seasonally and during droughts they were absent from the north for prolonged periods.

Finalize and distribute the CDD manual in Arabic (PAT #3)

In 1987/88 the NKCHP hired a consultant to work with MOH staff and communities to develop a training manual to help them in disseminating CDD messages to the community. Topics covered were traditional practices for managing diarrhoea used by the community; symptoms and signs of dehydration, how it occurs and how to combat it; the use of home available fluids and ORS which is demonstrated in a role play; referral to a health facility; the importance of immunization against measles and the six childhood diseases and the importance of good hygiene and sanitation. The manual was pretested, modified and then adopted for the training of the master trainers. In 1990 the manual was revised again by a team of project staff, the state CDD Coordinator, the mission training officer and CARE's Regional Technical Advisor for Community Management. The outcome was to divide the manual into two parts - one for TOT and the other for training women health promoters. The layout was modified and guidelines for trainers added. The revised manual was pretested in October 1990 and finalized. Printing was completed one year later and sufficient copies distributed to MAs, CHWs, some health promoters and the national and state CDD offices for use in other areas.

Conduct community education sessions in village councils with no health cadres (PAT #9)

This activity was introduced in mid 1992 when the project had finished all its basic training in CDD of health cadres, volunteers and promoters. These community education sessions were conducted

by project staff, trained health cadres and promoters in villages which make up the VC (the village where the dispensary and PHC unit is located). The aim was to disseminate CDD messages to community members which included adult men, women and children. Total attendance is estimated at 9-10,000 people across the 150 villages visited. Demonstrations of ORS were done by the trainers followed by volunteers from amongst the participants demonstrating to their peers ORS preparation. These meetings proved relatively effective in mobilizing men to assist women in child care during diarrhoea episodes. In these meetings health staff also responded to community enquiries on other aspects of health such as family planning, etc.

ORS DELIVERY SYSTEMS

Develop distribution plans for ORS and EPI vaccines for targetted RCs with PHC Committees (PAT #6)

In an attempt to improve distribution of ORS and EPI vaccines in the project area, the project staff and the provincial PHC committee (PPHC) divided the province into eastern and western distribution zones due to the natural barrier created by the sand dunes and the lack of GOS vehicles making delivery to the western side from Bara extremely difficult. The RC PHC committees in Taiyba, Mazroub and Um Keridium agreed to collect their vaccines and ORS directly from El Obeid. In addition, the VHCs initiated drug revolving funds to help pay for transport costs of both ORS and drugs on market trucks or by other means from El Obeid and Bara to their dispensaries, and to collect vaccines from the sub-cold chains. This plan is now functioning in six RCs (excluding Mazroub).

Work with the state and provincial MOH and VHCs to ensure that each community has adequate supplies of ORS (PAT #10).

The project has assisted the VHCs to raise funds in support of drug and ORS acquisition and transport by discussing with them the problem of drug shortages and the need for solutions at the community level. VHCs were also informed of the opportunity to request drugs and ORS from the community pharmacy through the SMA, Medical Inspector and community pharmacy doctor. Recently the SMA complained of a shortage of ORS due to the high transport costs from Khartoum to El Obeid which neither the community pharmacy nor the state CDD department are able to shoulder at present. The SMA has the overall responsibility for drug/ORS distribution in the province. Due to the overall shortage of drugs in the country which is affecting Bara, the distribution plan for drugs and ORS directly from El Obeid for the western side described in PAT #6 has recently been suspended. All drugs and ORS stock destined for Bara province must be channelled through Bara for further distribution by the SMA to ensure distribution is done in accordance with health facility monthly needs.

SUPERVISION

Conduct follow-up meetings with trained health cadres and CDD promoters to phase over CDD activities to them (PAT #2).

The project field coordinators (FCs) together with the SMA paid at least monthly visits to the CHWs/nurses/MAs and promoters to ensure that the CDD messages to the target population (mothers, fathers, older children) were being adequately and correctly disseminated. In essence there was little to phase over to them as both the health cadres and promoters had been involved in doing the training right from the outset. Although there is a marked deviation on this PAT this arose from inaccurate recording of these visits.

Develop and institute an integrated supervision plan for each RC (PAT #4).

To improve the quality of supervision of health cadres in the province the project initiated joint supervisory teams consisting of the SMA responsible for supervising the MAs and the CHWs, the provincial Health Visitor responsible for supervising the TBAs and VMWs, a CARE FC, the RC Administrative Officer and the provincial EPI Operations officer. The project area was divided into eastern and western areas and the team planned quarterly visits. Unfortunately, only five joint visits took place during the life of the project. This was attributed to the MOH staff's inability to keep to a quarterly schedule. The same proved true of the Administrative Officers at the RC level. Nevertheless, project staff and usually one or two MOH staff, often the SMA, made follow-up visits. The matter was reviewed in the monthly PPHC committee meetings but was never resolved.

Attend meetings with the provincial and RC PHC committees on a regular basis (PAT #5).

Project staff, usually the project manager, extension coordinator and a representative FC attended regular meetings of the PPHC committee. In these meetings project activities and sector specific health issues were discussed and solutions generated for problems raised. Such meetings not only served a monitoring function, but fostered closer understanding amongst project and MOH staff and ensured the latter's involvement in all aspects of the project's operation. Up until recently, the project was the primary initiator of these meetings. As this continued practice would only defeat the purpose of sustainability in having a coordinating body for continuation of project interventions, the issue was raised at one of the PPHC committee meetings. The responsibility was subsequently delegated to the SMA as the Medical Inspector had too busy a schedule to maintain this responsibility. Since that time meetings have been called regularly and are well-attended.

As regards the RC PHC committee meetings, these bodies had a similar function to the provincial one. However, they were not nearly as active as at the provincial level. This would be an area for further emphasis in a future phase of this project.

ORT CORNERS

Establish and equip ORT corners in Mazroub hospital and rural dispensaries (PAT #7 & 8).

The intent of this activity was to set up ORT corners to serve as training centres for mothers for both dissemination of information and demonstration of ORS preparation. The project originally intended to supply these corners with equipment and materials eg. basins, jugs, spoons, teaglasses, soap, tables and stools, etc. However, a previous experience in Bara hospital discouraged the project from providing such materials to the health units as the health cadres tended to utilize them in their own homes. Additionally, there were no health cadres in Mazroub hospital to run the ORT corners and Mazroub was dropped from the target area. All in all, since the TOT and promoters strategy was working effectively, it was not felt that this activity was any longer needed.

INTERMEDIATE GOAL # 2: By August 1993, 65% of children less than one year in the project's operational area in Bara province are fully immunized against the six immunizable diseases and 40% of new mothers are adequately vaccinated with tetanus toxoid.

Goal Accomplishment: This goal also underwent revisions of the targets as compared to the original goal statement as a result of the 1990 baseline (conducted in 2 RCs) whose low coverage called for a reduction in targetted coverage from 75% to 65% for EPI and 50% of mothers to 40% for tetanus vaccination. Overall achievement of this goal fell short of the target. Nonetheless, the 47% coverage for EPI at the time of the final evaluation indicates EPI coverage was at least slightly increased over the 1989/1990 status and maintained during a period of rapidly deteriorating MOH infrastructural capacity to maintain coverage in the area. The project is pleasantly surprised with the final evaluation survey results. Generally, mothers appear to be aware of the importance of immunization (72%) but they need more support and motivation to practice what they know. The discrepancy between knowledge (up to 72%) and practice (47%) is partly attributed to the failure of the mother to complete the immunization schedule of three doses, and partly to poor service delivery in some areas. Tetanus coverage

amongst new mothers was not directly addressed in the final survey. However 35.5% of women who had children less than 2 years old had 1-2 doses marked on their immunization cards. Although not a complete dose, this suggests increased awareness on the part of mothers of the importance of TT.

Components of the EPI system to ensure service delivery were put in place and maintained as far as resources would permit. Refresher and basic training to 72 health cadres was successfully completed together with training and orientation of VHCs to establish and maintain a registration system for children and mothers and a follow-up system for defaulters. The cold chain was extended to three new RCs (Saata, Um Sayala and Gerejikh) through the provision of solar refrigerators, while the cold chain in Um Keridium was re-established to service Taiyba, Um Keridium and Mazroub. The conversion of five empty sites to static sites through the establishment of sub-cold chain centres at Saata, Um Sayala, Gerejikh, Kewaimat and Damira has enabled 40 additional VHCs to access vaccines on a more regular basis. Although maintenance training for these solar units was done (9 MAs and some VHC representatives), there was not adequate support provided from the provincial/state MOH hence breakdowns occurred. The project has actually gone beyond its original mandate to provide essential equipment for expanding the cold chain, training and community capacity strengthening due to significant gaps in service support which emerged later in the project period particularly when UNICEF reduced its support to EPI in Bara. One such form of support was the EPI catch-up campaign using mobile units which was felt to be necessary due to the deteriorating coverage in non-project serviced areas. This situation had affected overall provincial coverage which dropped in June 1992 to 19%. By the end of the campaign (Sept. 1992) coverage had risen to 48.3% only to drop again in 1993. Such a trend suggests there is little chance of sustainability of EPI coverage achieved through the project to date once the project phases out. The MOH just does not have adequate resources at present to support the needed infrastructure. Reduction in donor support, both directly to the MOH and through NGOs, has been largely responsible for this situation and continues to exacerbate the situation.

Activity Accomplishment:

TRAINING

Conduct refresher training for health cadres in EPI (PAT #12)

This refresher training was intended to upgrade the skills and knowledge of already trained health cadres (MAs, nurses, CHWs) in providing EPI services. Six sessions were conducted during the project life in six RCs. The trainers included the EPI Operations Officer and the project's Extension Coordinator who reviewed with the participants the causes of the six immunizable diseases, mode

of transmission, signs and symptoms, means of protection and control, community mobilization and participation (registering target population, fund-raising, organizing immunization site). The different vaccines were examined, how they should be stored in the sub-cold chain, their susceptibility to light and heat, the proper doses and their administration. Practical sessions were then held in the field. There were a few defaulters while the nomadic CHWs were not trained due to their absence from the project area during the training period. Such training is considered an important contribution to the sustainability of immunization services as it enables static sites to be maintained as opposed to mobile teams which have been subject to frequent breakdowns.

Conduct basic training for health cadres in EPI (PAT #11).

In May 1992 one basic training was conducted for defaulters (20) from previous trainings and 6 project field staff. The value of training the project field staff was to enable them to assist and monitor the health cadres at community level from a more informed perspective. Essentially the same curriculum used in the refresher training was followed. There was little demand for the second planned training due to the failure of the state MOH to re-open the CHWs training school over the last five years. All available CHWs and MAs had received training during phase one of the project. Additionally, the MOH was reluctant for midwives and volunteers to be trained who are presumed not to have received sufficient formal health training to be eligible for EPI training and able to correctly dispense their immunization responsibilities. At a time when the ability to support health cadres is weak, it is unfortunate the MOH is not willing to make better use of responsible and committed representatives from the community by permitting them to receive proper training and assume more responsibility for health service delivery within their communities.

Reformulate and distribute written guidelines for EPI target group calculation (PAT #14).

To enable the health workers to calculate the approximate vaccine requirements for monthly/bi-monthly sessions at static units throughout the province, the project's monitoring and evaluation officer assisted the provincial EPI Operations Officer to develop and distribute written guidelines in Arabic on the formula to be used. For the catchment area of each static unit the target population of under ones ($N=4.09\%$ of the total) is multiplied by 3 (the estimated number of visits per child for complete coverage for DPT, polio, etc) and is divided by 12 or 6 (the number of months depending on the frequency of EPI sessions) to determine the target number of children to be vaccinated at each session. Health workers at static units maintained a register which was used for registration purposes and to determine the number of vaccines to be administered to a child, particularly when the child's vaccination

card was lost. The same system was applied for women of child bearing age. Unfortunately, these guidelines were not widely used because the EPI program at that time was not concerned with vaccine wastage by health workers requesting more than their needs, which is generally what they did. They may become more valuable now in times of shortage of vaccines.

COLD CHAIN SYSTEM

Procure and install three solar units (PAT #15 & 16).

As CARE's strategy was to support the establishment and maintenance of static sites to extend immunization services on a continuous basis, the project procured three B.P. (British Petroleum) solar units which were considered to be durable and reliable under adverse climatic conditions such as what prevails in Kordofan. The 3 solar fridges were received in November, 1990 but due to delayed installation support from the central EPI authorities, they were not able to be installed until February 1991. The three sites were Um Sayala, Gerejikh and Saata villages. Although only one of the three was functioning at the time of the final evaluation, all three have been maintained since and are currently functioning.

Train health cadres and selected VHC members in maintenance and operation of the solar units (PAT #17).

To ensure the smooth performance of the solar refrigerators, the project in collaboration with the state cold chain Operations Officer developed maintenance guidelines and checklists for the health workers posted to health centres where the solar units were installed. These checklists were designed both for health cadres to undertake daily maintenance tasks and to report basic information on refrigerator operation/environment to help identify potential and actual defects. The health worker would seek assistance from provincial headquarters should a problem be detected. The real value of these checklists was to do routine maintenance to avoid total breakdown of the solar unit.

In addition, the project together with the state cold chain Operations Officer conducted two workshops in eastern and western Bara for nine MAs on regular maintenance and minor repairs for solar refrigerator units. They were taught to recognize danger signals for major malfunctions in order to notify the state authorities to perform repairs before major damage occurred. Unfortunately, lack of timely response on the part of state authorities to repeated requests for assistance from the MAs resulted in the solar units of Um Sayala and Gerejikh to remain out of order for close to eight months. Although it is hard to blame the MOH when resources are so tight, they are nevertheless

responsible. Fortunately, the UNDP funded Solar Energy Promotion Program in Kordofan state (commenced late 1992) assisted the state cold chain Operations Officer to maintain the two refrigerators which are now functioning.

In early 1993 a refresher training for the nine MAs and two provincial cold chain officers for Bara was conducted in El Obeid and sponsored by UNICEF, UNDP Solar Energy Promotion Program and the MOH. Health cadres from all over the state also participated.

Training of VHC members in the operation and maintenance of solar units was not attempted by the project for two reasons: these members already had more on their plates than they could comfortably manage in their communities, and it was felt too early yet to involve them as the existing MOH maintenance system was not yet fully responsive.

Hand over regular maintenance tours for solar units to the state cold chain Officer, VHCs and the PPHC committee (PAT #18).

This activity was added in 1993 due to the breakdowns of the solar cold chain equipment which had occurred. Some of these breakdowns had clearly been caused by a lack of maintenance and improper use (overloading the refrigerators with food items) in spite of the training provided to MAs. Other malfunctions occurred in refrigerators that were receiving proper care but the breakdowns were beyond the capacity of the MAs to repair. The project made arrangements with the state cold chain Operations Officer (SCCOO) to conduct regular visits to all six solar units. In all, after repeated rescheduling, the SCCOO made only two visits due to other commitments in other parts of the state. He was accompanied by the UNDP solar energy technician. The project raised this issue with the PPHC committee requesting them to shoulder the responsibility to follow-up with the SCCOO to ensure the continuation of these maintenance checks beyond the life of the project. The PPHC committee is pursuing this.

Establish a sub-cold chain system in Um Keridium dispensary (PAT #20).

As already described under IG #1 the western part of Bara is separated from Bara by sand dunes which makes transportation of drugs, vaccines, ORS, and other medical materials very difficult from Bara town. A very dynamic MA and committed and active PHC committee reviewed the problem and proposed to establish a PHC unit in Um Keridium. The project, in collaboration with the PPHC committee and RCs PHC committees of western Bara agreed to support the establishment of a PHC unit in Um Keridium to serve Um Keridium, Taiyba and Mazroub RCs. Any needed medical supplies would be picked up directly from El Obeid. The RC PHC committee contributed LS 64,000, the project another LS 64,000 and UNICEF agreed to contribute LS 28,000 for the repair of an EPI vehicle to

assist in transporting vaccines and other materials from El Obeid. Um Keridium PHC committee shouldered the responsibility of repairing the two generators and deep freezer to equip the cold chain unit. The project further provided cement, timber and other basic materials to renovate two rooms in the dispensary to be used as the PHC unit. The unit is now established but not yet fully operational as the EPI vehicle is still under repair. Also with the current drug shortages, all orders must go through Bara. The success of this community supported initiative suggests the value and potential in strengthening community management approaches.

VHC SUPPORT

Update EPI rosters of under ones and women of child bearing age with VHCs in each static site (PAT #13).

The project encouraged the provincial EPI authorities to involve VHCs and Salvation Committees to register under ones and women of child bearing age in all six RCs. Project field staff assisted the VHCs to produce the first rosters which were periodically reviewed and updated during follow-up visits. Of particular importance was the registering of girls turning 15 and new born babies. These rosters were used by the VHCs for mobilizing and following up women and children for EPI services. Although the registration was not done in very durable register books, copies of the rosters were filed for use by the communities and EPI authorities. The project had hoped to introduce a registration system similar to that used by SCF (USA) in Um Ruaba which enabled easier tracking and registering of births, deaths and migration. However, time did not allow this innovation.

During the final evaluation visits it was found that 50% of the health cadres at the village level were holding routine immunization sessions. This was primarily due to the support they received from their communities.

CATCH-UP CAMPAIGN

Assist the provincial EPI authorities with a catch-up campaign to cover VCs not covered by static sites (PAT #19).

During the months of July through September 1992, the project assisted the provincial EPI team to increase their coverage in areas normally covered by the mobile teams. Although deviating from the project's strategy of promoting and strengthening static immunization sites, project management felt that CARE resources in the province viz vehicles, manpower, etc, could be effectively mobilized over the short term to significantly boost immunization coverage. The work of the EPI mobile teams had been crippled by lack of resources - their one vehicle was in constant disrepair, they lacked reporting forms, they experienced frequent shortages of

fuel and funds for field staff per diems. Overall coverage in the province has been adversely affected by this situation and stood at only 19% (for DPT) as of June 1992. During the three month campaign, EPI vaccinators travelled with CARE relief and MACHI Bara staff to hold immunization sessions in isolated villages. CARE provided per diems for the vaccinators, stationary for reporting, logistics for transport of vaccines to the sub-cold chain sites and mobilization of community members for participation in the sessions. As a result of this effort, provincial coverage for DPT was increased to 48.3%. In calendar year 1993 the EPI coverage dropped again in Bara because the GOS was again unable to adequately support the mobile teams which were out of action for 12 months. This sequence of events only reinforces the project's conviction that mobile teams as a mainstay for an EPI immunization service are not effective.

INTERMEDIATE GOAL # 3: By August 1993, 50 Village Health Committees and 60 trained health cadres in Bara province take steps to control malaria, ARI and Vitamin A deficiency in children under 5 years in selected operational areas.

Goal Accomplishment: 83 health cadres were trained in preventive measures and curative treatment of malaria, ARI and VAD. In the final evaluation their ability to diagnose and respond to malaria and VAD cases appeared better (82% and 90% respectively) than for ARI (55%). With reference to the latter, most of the health workers use antibiotics to treat even a common cold. This is largely a training issue whereby insufficient attention has been focussed on changing widely held beliefs of community members and health workers that ARI management does not necessarily require drugs. In spite of these concerns, 95% of mothers surveyed correctly identified signs of ARI and types of home treatment. Although the project has been unable to extend ARI messages to the household level directly, the training provided to the health cadres appears to have had some effect on mothers' management of ARI. The same can be said of malaria and VAD (91.6% and 79.6% respectively). Complementary to the health cadres' efforts have been those of the VHCs. All 52 VHCs have conducted clean-up campaigns as a preventive measure to combat malaria, and a large number played a key role in VA capsule distribution during the 1990 drought and have continued to maintain rosters of target populations vulnerable to VAD (8 months to 18 years and lactating mothers).

A key factor for the achievement of this goal, and largely the responsibility of the MOH, has been the supply of drugs for the health cadres to effectively treat these diseases. Adequate knowledge and skill on the part of health workers and mothers is useless unless they have access to the means to treat these illnesses. The decreasing supply of drugs has been perhaps the most constraining factor for achievement of this goal. Of the ten

randomly selected rural health facilities visited 63% had a stock of VAD capsules, a disappointing 38% had a stock of chloroquine and a dismal 20% had a stock of antibiotics. Drug supplies in the country have overall dropped and the high cost of transport makes what is available at central locations unaffordable for rural dispensaries to access through the MOH structure. The project foresaw this problem and hence built in a strategy to promote VHC managed drug revolving funds. Although not yet organized into an effective, sustainable system, the concept has taken hold amongst all VHCs for both the purchase and transport of drugs. In summary, IG #3 has been largely accomplished on the preventive side of controlling these diseases but somewhat constrained on the curative side, particularly with ARI.

Activity Accomplishment:

TRAINING

Facilitate the holding of refresher courses in diagnosis and treatment skills for health cadres (PAT #21).

The project collaborated with the state and provincial MOH to conduct training of 83 health cadres in the project's operational area. The approach was to first train the MAs (17) who in turn would train their health workers at the dispensary level. The first two trainings were a TOT to enable health staff to manage the ailments and to train CHWs. They were conducted in two locations: Um Sayala dispensary to which were invited MAs from the seven dispensaries on the eastern side, and Taiyba attended by MAs of an equal number of dispensaries on the western side. The MAs then conducted echo trainings with their respective CHWs. The latter provided the health cadres not only the opportunity to sharpen their skills in the treatment of ARI, malaria and VAD, but also served to strengthen the relationship between MAs and the other health workers in their areas. A forum was provided to learn from each other's experiences and discuss such problems as transport of vaccines, lack of essential drugs, etc. Ideas were exchanged and commitments made to increase the level of services to the communities and to mobilize communities to provide equal support for the improvement of their PHC services. Training manuals for ARI, VAD and malaria were developed by the project staff following the CDD manual model. These were then reviewed by CARE's RTA/PHC and then finalized by the project. Although not printed, copies of the manuals were provided to the trained MAs and the MOH.

Review and distribute MOH treatment protocols and manuals to health cadres (PAT #22).

The MOH treatment protocols for malaria, ARI and VAD were reviewed and distributed during the clinical skills trainings described above. The manuals (refer to PAT #21 above) were distributed at the same time. It appeared the protocols were being used since

replenishment of dispensary drug supplies depended on submission of a report listing the number of cases seen and the medicines dispensed. However, this information may have been somewhat skewed by the limited availability of some drugs.

Distribute copies of Facts of Life and Where There is no Doctor to all health workers (PAT # 23).

To further upgrade the knowledge and skills of health workers in PHC components, the project distributed 180 copies of UNICEF's Facts of Life (Sudan version) to all health cadres in the project's operational area through the SMA. School teachers were also provided with this health document which includes basic health messages to be disseminated to school children and community members. The project also provided the 19 MAs with an Arabic copy of Where There is no Doctor for skills upgrading of CHWs, and six English copies to the project field coordinators on their request.

VHC SUPPORT

Conduct follow-up meetings with VHCs to ensure that they are promoting preventive measures in their communities (PAT #24).

Project field coordinators conducted regular meetings with VHCs to review and discuss their efforts to support CDD, EPI, malaria, ARI and VAD interventions. In support of the three latter, VHCs have conducted clean-up campaigns to combat malaria and other similar diseases which has occasioned seccurring pesticides through the project and the GOS. Drug revolving funds on a small scale have been established to provide support for the transport and purchase or drugs and ORS. The VHCs have played a key role during the VA capsule distributions during the drought of 1990, and assisted the health cadres in registering and updating the registers of the target population susceptible to VAD. VHCs have also played a role in ARI control by encouraging mothers through the community health promoters to refer their sick children to existing health facilities when the need arises. Although these efforts are limited to short-term interventions, they are indicative of the realization by the VHCs of the role they must play in initiating and supporting health services at the community level. More focussed support to the VHCs is required in the next phase of the project to enable them to assume a larger management role.

Establish drug revolving systems within each VHC (PAT #25).

The project has assisted all 52 VHCs to establish drug revolving systems to facilitate greater accessibility of their communities to essential drugs. This has taken the form of paying for transport and the cost of drugs bought directly from the community pharmacy or local market. This innovation was originally conceived by one of the project's field coordinators. In 1990-91 when Sudan faced a severe shortage of drugs and other health materials in the

country as a whole which was acutely felt at the rural dispensary level, villagers saw their children falling seriously ill with no recourse for treatment. A project field coordinator in discussing this problem with community members during a visit moved the discussion to one of possible solutions within the grasp of the community. It was in such a forum the idea of the community raising funds to purchase drugs directly from the community/private pharmacies was developed. The field coordinator then assisted this particular community by taking their drug request form and funds raised and submitted them to the SMA and Medical Inspector for approval. The drugs were secured. This community initiative was discussed during the project's bi-monthly review meeting with the outcome of the project adopting it as policy. All field coordinators found receptivity to the idea by the VHCs although there were obvious differences in the degree to which it was carried out. This is one of many sources of drugs at the community level apart from the dispensary supply. Others include the CHW's own small drug supply which he sells and the home emergency box. CARE has since prepared a concept paper for a formal drug revolving fund scheme to be piloted in the project's operational area.

VITAMIN A DISTRIBUTION

Hand over trimesterly spot-checks for VAD to trained health cadres (PAT #26).

During the 1990 drought in northern Kordofan, children less than 18 years and lactating women were targetted in a vitamin A capsule distribution campaign. During this campaign rosters were developed for both the prophylactic and treatment cases to be followed up by the health workers, VHCs and school teachers. The project then assisted health workers and VHCs to check for VAD cases on a trimesterly basis. These cases were then treated and prophylactic vitamin A capsule provided in areas where VAD had multiplied. This activity is being carried out on a monthly basis and a report submitted to the SMA who then provides assistance where needed.

There have been no vitamin A distribution campaigns since 1990 hence vitamin A capsules have not been regularly distributed in subsequent years. They are made available only on an as needed basis.

INTERMEDIATE GOAL # 4: By August 1993, 50 Village Health Committees have the capacity to manage and support regular and sustainable health services in their villages.

Goal Accomplishment: This goal can be said to have been only partially accomplished to date with 52 VHCs having been established. Generally, much quality effort has been made to establish, orient, encourage and support the VHCs to play a key management and support role for health service delivery in their

communities. This is clearly evident in the training which has been conducted, the follow-up done by field staff, and the support rendered by the MOH health staff in adopting the VHC strategy whole heartedly. The VHC is now recognized as a focal point for community support to health services in the project's operational area by all concerned. Many of the activities the VHCs have initiated or assumed responsibility for have already been described in detail in previous sections of this report. VHCs have not yet played a significant, if any, role in facilitating training of community health cadres. Instead, time has been invested in developing their own understanding of their role and undertaking some initial, urgent responses to problems.

All that VHCs have done to date indicate the VHCs have the capacity to manage and support health services in their communities. However, only 22% felt at the time of evaluation that they could continue supporting health services in their communities without the project's assistance. Much more time is needed to move the VHCs from a crisis mode of management to one involving longer-term, more strategic planning. This would enable them to more effectively respond to the changing environment around them in which many obstacles prevail.

Activity Accomplishment:

VHC CAPACITY BUILDING

Select and orient VHCs to the project and community management principles (PAT #27), Develop the VHC training manual (PAT #28), and Conduct the training of VHCs in collaboration with the provincial and RC authorities (PAT #29).

These activities are being discussed together because they are all closely linked one to the other. The concept of working through village based groups was one that had been successfully applied in several other CARE/GOS projects particularly the Regional Finance and Planning project (RFPP) being implemented in En Nahud province which was forced to phase down the end of 1990. In collaboration with the PPHC committee and RC officers, the project selected 52 VHCs to work with in six RCs. The criteria used for their selection included the following:

- densely populated villages or a small village with many satellite villages
- the presence of a health cadre in the village
- a village which is close to a dispensary or hospital to ensure regular pick-up of vaccines from the sub-cold chains
- villages with no tribal conflicts that could jeopardize activities and positive relations with the community
- members are to include men, women and the poor

In order to fully and properly orient the VHCs to the project and

the role they would potentially play in it, a VHC training manual was developed modelled on the Encouragers Training manual developed for use by the RFPP. A series of "lessons" were developed late in 1990 and pretested with five VHCs in February 1991. It was further reviewed by the RTA/Community Management and subsequently finalized and used by the project and MOH staff to train and orient the VHC members in the following areas: an orientation to the MACHI Bara program and their intervention areas; effective communication; problem solving techniques; problem identification; use of locally available resources; fund-raising; and formal organization of the committee. The training conducted was considered effective in equipping the VHCs with the basic skills to become functional as evidenced from the range of activities they have undertaken during the life of the project, and the fact that more than 75% of VHCs had an awareness of the key health problems facing children in their communities at the time of evaluation. However, the manual was felt by the evaluation team to be too directive and relying on literary training tools.

During the RTA/CM's March 1990 visit, the project staff undertook a pilot exercise with 65 members of Gerijikh VC to identify and prioritize their problems and suggest solutions. This exercise was intended to train the project staff in problem identification/prioritization with communities to which the project should respond as best it could within its mandate. This exercise was intended to be undertaken by all VHCs with their respective communities but was never done due to time constraints.

Monitor VHC activities on a bi-monthly basis through meetings in the community (PAT #30).

The project field staff held meetings with VHCs and community members on a regular basis during their field visits. VHC performance indicators had been developed jointly with the VHCs and were reviewed with the VHC periodically. If the standards were not being met the field staff would work with the health cadre, the VHC members and possibly community members to identify the constraints and work out solutions. As evidenced from final evaluation ratings of these performance indicators listed below, over 50% of the VHCs successfully maintained all four indicators.

-55% were holding regular meetings and maintaining records of the meeting proceedings

-All VHCs had appointed a chairperson, secretary and treasurer

-77% of the VHCs had raised funds to support PHC activities such as the transport of drugs, vaccines, ORS, obstetric emergencies.

-One could deduce from the above activity that the last point of whether funds raised (cash box) are actually being used to support the health cadre in his/her activities is indeed happening. In

addition 77% of VHCs interviewed were able to measure at least two ways in which their activities had a direct, positive impact generally on their community's health situation. This suggests positive, active support on the part of the VHC to health activities in the community, if not in cash in kind.

There were a number of constraints faced by VHCs which should be addressed in a future phase of this project. Because the same members of the VHCs tended to also sit on other community committees such as the Salvation Committees which resulted in them being often outside the community, it was difficult for all the members to meet regularly to discuss health issues. Usually, in each meeting only a part of the members attended. This could result in poor decisions by the VHC if some of the more important members were consistently not attending meetings. A second demand on these committee members' time was the GOS withdrawal from the provision of many services which they are now transferring responsibility to the village committees. The VHCs mandate could conceivably grow into an unmanageable one. With such a devolution of responsibility comes the financial burden of providing some of the more essential services. This may result in less money being available for health support. Last of all, the women VHC members' role in decision making on the committee is still weak. It is said that how much one is listened to in such forums is proportionately linked to one's financial status in the community. This would mean women are rarely listened to. Efforts must be made to slowly change this attitude.

Arrange cross-visits between VHCs health cadres to share experiences and lessons learned in supporting PHC interventions (PAT #31).

This activity was intended to augment the training of VHCs. Upon completion of the training of the 52 VHCs, the project planned to conduct 15 cross-visits between groups of VHCs. The project only managed to accomplish two such visits prior to project phase-over. Two VHCs (El Taweel, Abu Gaida) paid a visit to El Beshiri while another two villages visited Um Garfa. The purpose of these visits was to enable the VHCs to benefit from each other's experiences and share lessons learned during the implementation of project interventions. Specific topics discussed included the lack of immunization in some villages due to shortages of syringes, the lack of commitment of some VHC members to support their health workers, registration of the EPI target population and maintaining a roster for vitamin A target groups. El Beshiri's experience in using a tractor and camels to collect vaccines from Bara was found to be quite innovative. El Taweel VHC regained some momentum after this cross-visit by taking steps to raise funds to assist their MA to collect drugs from the community pharmacy and to replenish their midwifery kit. The value of such cross-visits was unquestionable and the final evaluation has recommended more such visits to be organized in future.

Develop a simple book-keeping and financial management system for VHC drug funds (PAT #32).

This activity was not realized due to the field staff's already congested schedule of project activities. The need for it was not immediately felt as all VHCs engaged in CARE's hand-dug well project were required to maintain financial records. Many already had gained experience from building schools in their communities and rehabilitating waterways.

INTERMEDIATE GOAL: To enable the MOH to strengthen and maintain a nutrition communication program which ensures that 50% of families with children under five years of age in selected operational areas use improved nutritional practices by August 1992.

Due to the drought situation in the operational area in 1990 the focus of this original IG was redirected from "nutrition communications" to nutrition surveillance given the scarcity of locally available food. It was difficult for the project to justify promoting improved infant and child feeding practices when critical foods were not locally available or prohibitively expensive to the majority of the population in Bara province.

After several meetings at the state and national level in Sept-Oct. 1990, CARE agreed to assist the MOH to conduct regular and systematic surveys at the state and provincial levels in coordination with the National Dept. of Nutrition and the state MOH. The MOH planned to carry out provincial surveys in the three states where drought had been particularly severe, following guidelines established by the Dept. of Nutrition. For each state the surveys were implemented in 35 randomly selected clusters based on the state population with a sample of 30 children in each cluster. By following the same survey methodology and questionnaires in Kordofan established by the MOH, the results on child malnutrition prevalence could be compared across the Red Sea Hills, north Kordofan and north Darfur.

In January 1991, the project dropped this IG from the BCHP and incorporated it into an emergency project funded by UNDP/SUNDOS called PRONISS (Provincial Nutrition Information & Surveillance System). PRONISS in its early stages coordinated closely with BCHP in the use of staff, planning of activities and addressing training needs of staff and counterparts.

H. MONITORING AND EVALUATION

CARE Sudan has a well developed protocol for project monitoring and evaluation procedures which were applied to BCHP. In addition, it is standard practice for projects of the nature and size of BCHP to

collect baseline information which is later reassessed as part of a mid-term and final evaluation. The following is a description of these three key components of BCHP's monitoring and evaluation system.

Monitoring System

CARE Sudan uses a standard project reporting format called the PIR (project implementation report). This report is intended to review project progress against a set of annually determined activity targets (PATs) within the life of the project plan, explain any deviations, discuss constraints/issues and steps taken to resolve them, and propose any changes in strategy. The report is comprised of a narrative section and a detailed chart of planned activity targets and accomplishments. This report was prepared on a trimesterly basis more recently modified to six-monthly and serves not only internal monitoring and review purposes but is shared with counterparts, donors, CARE member offices, headquarters and interested parties. The report is carefully scrutinized by the CARE Sudan program department to understand detailed progress of the project and for advice and guidance to be offered to ensure the project remains on track.

On a more frequent basis, bi-monthly MBOs (management by objective activity charts) were prepared and reviewed by project management and field staff. These MBOs contained sub-activities of the PIR chart key activities which project staff planned to do in a given period. Their accomplishment would contribute to overall accomplishment of the PIR PATs and would generate information for inclusion in the PIRs. These MBOs were both developed and reviewed in a very participatory manner. The team leader, project manager, extension and field coordinators would meet bi-monthly to review achievements against the plan, field staff experiences, constraints and problems faced, how they were tackled, lessons learned, all of which would contribute to developing the next two month plan. The manner in which this monitoring tool was used in the project also served a team building and participatory decision-making purpose. This management tool was used throughout the project except for the last five months due to a change in team leaders and changes in overall mission program strategy.

Additionally, to feed into the bi-monthly MBOs were the field coordinators monthly reports based on activity checklists which were discussed with, and compiled by, the extension coordinator into a monthly field report reflecting progress in each RC. The checklists used by the field staff were developed with the help of the extension coordinator and monitoring and evaluation officer to follow-up planned activities with all the various target groups as well as to assess their impact. The latter was perhaps the weakest link in the whole monitoring system due to the delay by the project in preparing a comprehensive monitoring framework for both IGs and

PATs. A workshop to assist staff to develop such frameworks was conducted in January 1992 but the frameworks remained in draft form. Another lost monitoring opportunity was the joint supervisory visits by provincial MOH, RC and project staff.

Finally, frequent meetings held at all levels with all target groups also served a monitoring purpose. BChP, given its community orientation and close working relationship with the MOH, was able to make maximum use of both the formal and informal meetings which took place regularly. Visits from the CARE Khartoum program unit, although more regular during the last two years of the project than perhaps the first two, ensured the necessary programmatic oversight. These visits were supplemented with external visits by CARE RTAs for both PHC and community management which offered important technical guidance, but also provided staff development opportunities through a series of field and training exercises which were undertaken.

Baseline Surveys

In order to effectively measure changes in knowledge, attitude and practice of targetted community members, baseline surveys were undertaken at three points during the life of the project and once prior to the starting of the project (1989). The one at the start was essentially the final survey conducted for the first phase of the project (NKCHP) but covered four RCs of En Nahud and five from Bara. This called for another survey in 1990 focussed only on the two RCs excluded from 1989 (Um Sayala and Um Garfa). The knowledge, practice and coverage surveys used WHO's 30 cluster model and targetted mothers aged 15-49 with children less than two years of age. This model had been adopted by USAID through the intensive work of the Child Survival Support Program (CSSP) of the John Hopkin's University. Questionnaires used for assessing ORS user rate and access rate and EPI KAP and coverage were based on the 1989 evaluation survey of NKCHP and the generic questionnaire developed by CSSP. In June 1991 during the mid-term evaluation, another survey was undertaken covering all 7 RCs but providing information only on ORS user rate and EPI coverage ORS access rate was not assessed during the mid-term and final evaluations since the project strategy had changed to providing mothers with ORS in their homes and assisting VHCs to raise funds to purchase ORS. The final survey conducted in May/June 1993 aimed to collect data in the following areas:

-Knowledge of mothers of children under two years of age about the major threats to infant and child health, ways to prevent immunizable diseases, proper management of diarrhoeal diseases, malaria, ARI and VAD.

-Practices of mothers with regards to the intervention areas mentioned above.

-Immunization coverage rate for children 12-23 months old against the six immunizable diseases.

-The impact of training health workers in changing mothers' behaviours to combat childhood diseases.

Below is provided a table showing the results on four key indicators from the four surveys:

Variable	1989 NKCHP Eval. 5 RCs	1990 Baseline 2 RCs	1991 Mid-term 7 RCs	1993 Final Eval. 7 RCs
ORS User rate	72%	25.6%	38.5%	63%
ORS Access rate	55%	34.4%	-	-
EPI Coverage	45%	29%	43%	47%
TT Coverage	21%	14%	-	-

For more detailed information on the final survey results, please refer to the project's final evaluation report.

All surveys have been undertaken in collaboration with provincial MOH authorities, and for the 1990 survey with the Ministry of Education. In March 1991, the survey was conducted jointly with the MOH's nutrition survey, while the 1993 survey was done back-to-back with the BMHP mid-term evaluation survey. It would appear that both project and MOH staff have greatly benefitted from these exercises, particularly the project manager who received technical training from CSSO during a baseline survey/evaluation undertaken by SCF (USA)'s child survival funded project in Um Ruaba. The information from these surveys has not only been instrumental in determining the impact of the project, but also in revising project strategy and targets. The series of baseline surveys undertaken in most of the project area since 1986 will be invaluable in continuing to measure project impact should the project enter a third phase. The systems are in place and the staff well-trained.

Evaluation

Two evaluations were conducted as planned during the life of the project - a mid-term in June 1991 and a final in April-June 1993. These evaluations involved qualitative and quantitative assessment of project impact. The design of both evaluations was participatory in nature, although there was little participation of the community in the actual design of the evaluations. This was essentially handled by a team of evaluators and the project staff. In both evaluations, the evaluation team contained health and

extension experts external to the project and counterpart representatives. The final evaluation team was a combined team to review both the BCHP and BMHP enabling the team to also examine the integrative aspects of the two projects. The quantitative data was essentially provided through the KAP and coverage surveys undertaken during or shortly after the evaluations. The qualitative information was collected through focus group discussions with community representatives and health cadres, meetings and observation. Respondents were either total numbers within a particular group or sampled using appropriate statistical methods.

The process followed for both evaluations was essentially the same and consisted of the following key steps:

- Scope of work (SOW) is developed for the evaluation team by the project, team selected, background documents forwarded, logistics arranged.

- Team assembles, receives orientation on the project, reviews SOW, meets with key counterparts and donors in-country to solicit their input into the evaluation.

- Project and team conducts a workshop at project site involving project staff and counterparts to provide the evaluation team with project information, arrive at a common understanding the purpose of the evaluation, develop and finalize the evaluation approach, tools, schedule, sample, logistics, etc.

- Conduct interviews with MOH officials at both provincial, RC and state level.

- Conduct field visits to meet with MAs, CHWs, VMWs, promoters, VHCs, mothers, other relevant community representatives, and to visit the health facilities.

- Prepare a draft report and conduct a minimum of two debriefings at project level and national level in which preliminary findings and recommendations are shared with project staff, counterparts and other interested NGOs. During the mid-term, a state level debriefing was also conducted.

The project found these two evaluations to be both educational on evaluation process as well as technically and programmatically useful to the project. The approach used for both was perhaps key to their practical usefulness. For more detailed information on these two evaluation exercises and their outcomes, please refer to the two evaluation reports prepared. A summary of their recommendations is contained in Annexes E and F.

I. PROJECT ORGANIZATION AND MANAGEMENT

When the BCHP began its second phase late 1989 the project office was located in El Obeid, as it had been throughout the NKCHP, drawing on the administration and support structures of this state office. Support was provided to field staff on a monthly basis when they came in to El Obeid from the field. However, with the start-up of the BMHP, the impending drought and the need to foster closer relations with the Bara MOH officials, the project office was moved to Bara town in March 1990 and gradually developed into a provincial sub-office which at its peak was coordinating seven projects in Bara province. The project rehabilitated the guest house to initially serve as an office until a modest three room building was constructed on the MOH compound which when the project phases out will serve as the new midwifery school. Three additional rooms are now being added through assistance provided by the BMHP.

The move to Bara not only enabled closer oversight of the project's field operations, but greatly improved relations with MOH counterparts. Upon arrival, project staff conducted both individual and group meetings with the PPHC committee members orienting them to the project and reviewing future plans. Being on site enabled the staff to have more frequent contacts with counterparts, hold more in-depth discussions and thus build stronger relationships.

The BCHP was coordinated by an expatriate team leader and managed by a Sudanese project manager (PM). The manager was technically very qualified being a medical doctor with a specialty in community medicine and PHC. Unfortunately, due to the stringent labour laws and perhaps the unattractiveness of working in Bara, the project was unable to recruit a second PM to manage the BMHP. Due to the integrated nature of the two projects, the BCHP PM assumed managerial responsibilities for the BMHP. Although the best solution in a difficult situation, this did overtax the PM. An extension coordinator (EC) who also assumed responsibilities for training, was responsible for coordinating the schedules of the field coordinators, reviewing their work, advising them on extension approaches, and providing training opportunities to improve their skills. The EC had a key role in having the bigger picture of all that was happening in the field so as to provide advice to the PM and field staff. The field coordinators (FC) had the biggest role of all in implementing activities of initially BCHP and eventually all three projects (BMHP and CWSP). They not only implemented activities themselves, but also worked through a number of bodies for the implementation of others eg. the VHCs, RC PPHC committees, health cadres, etc. The quality of their facilitation and human relations skills was critical to their success. Hence a good deal of attention was focussed on selecting staff who had some predisposition to such skills, and on further developing them. Although they were not health staff per se, the FCs were given periodic training throughout the life of the project on the technical intervention areas to increase their understanding

and effectiveness. This was an information area they felt weak in. The role of the monitoring and evaluation officer (M&E) was an evolving one but essentially focussed on coordinating the baseline surveys and analysis of the data, supporting the evaluations and assisting in any exercises involving statistical analysis or data organization. The M&E was loaned on several occasions to the MOH to assist them in such exercises.

As is evident from the project organigram (Annex G) the initial project staff served as a nucleus for not only BHP but also BMHP and CWSP. The intent was to maximize integration amongst all three complementary projects starting with the management structure. This was achieved. However, the addition of CWSP did distract staff from some BHP activities which consequently never got implemented eg. introduction of home visits, more time on VHC training, etc. The need for a revised integration strategy arose when the other four projects were added to the Bara portfolio. Such a strategy never came into being during the life of BHP which did not negatively impact on BHP as much as preventing the other projects from benefitting from some of BHP's successful community and counterpart approaches. This discussion was started towards the end of the project's life.

In addition to the project program staff were a number of administrative and financial staff who provided support to both this project and eventually seven others. It should be mentioned that transferring staff from other projects to BHP was a preferred strategy to hiring new staff from outside. This was because of the strict labour office hiring procedures and security clearances required which not only unduly delayed recruitment but was at times obstructionist.

As a means of assuring the project's close collaboration with the MOH, PHC committees were established at both the provincial and RC level. They were intended to provide forums for joint planning, problem solving, and monitoring of the project's activities. Such a forum was successfully set up at provincial level which fostered a common understanding of project strategies, ensured interventions were in line with MOH policies and guidelines, secured necessary inputs from the MOH, and will no doubt contribute to the MOH's continued support to the project's interventions when it has phased out. The only noted drawback of these committees is their seeming over dependence on the project to "solve" all their logistic problems, both health and non-health ones. The same committees have not yet taken hold at the RC level. This is partly due to lower motivation at this level, which could be increased with the relocation of field staff bases to the RC level. This has happened only at the end of the project and so could only be measured in the next phase of the project. The final evaluation emphasizes the need for some such forum to be firmly established which would enable sharing of problems common to villages in an RC so that appropriate solutions could be found. With further devolution of

responsibility to the RC level within the MOH structure, such a strategy would appear to be directly in line with GOS policy.

The attempt to set up a state advisory committee was also not a successful one as already described in a previous section of this report. The two greatest constraints appeared to be the inability of MOH representatives to adhere to meeting schedules even when they were rescheduled several times, and their lack of "incentive" to attend. It was common practice, both in GOS and NGO circles, to provide financial incentives for members to attend such steering or advisory committee meetings. This usually took the form of a per diem, transport arrangements, etc. As the meeting was held in El Obeid where all members were based, the project did not feel it appropriate to provide such incentives. The result was abandoning the idea of a state advisory committee.

J. STAFF DEVELOPMENT AND TRAINING

The BCHP is representative of CARE Sudan as a whole in its strong belief that staff development is one of the keys to project sustainability. Without a well-oriented staff (project or counterpart) to the philosophy of community management, the skills and attitude to promote it and the programming and managerial skills to carry a program, there is little likelihood of project success let alone continuity. This is CARE Sudan's general philosophy towards programming in Sudan, and has guided efforts made during the project's lifetime to develop the staff and counterparts involved in the BCHP. The major areas of staff development fall into the following categories: community management/organization; facilitation skills; programming; project management; and training.

Community Management/Organization

As already clearly described in the afore-mentioned sections community management (CM) is an implicit goal of this project for all those activities within the sphere of the community's capability, be it through the VHCS, health cadres, promoters, or community leaders. There has been some difference of opinion by extension consultants visiting the project that CM in its pure sense is not achievable within a deteriorating economic and politically complex context such as Sudan. This may be true. However, the project's approach has always been to set targets that are as realistic to the changing context as possible. The same would apply to CM. Molding a project ethos on the philosophy of CM is perhaps the most critical thing the project had to do. Ensuring staff, counterpart and communities' attitudes are all pulling in the same direction, one of community management and self-reliance, is a critical foundation block for such a project. To a great extent this block has been moved into place, although there is

still much fine tuning of its "position" that could take place. So despite the experts' opinions, the project is confident that pursuing a CM approach is both appropriate and necessary in the Bara context.

With this orientation in mind, the BCHP became one of the focus projects of CARE's RTA/CM. The two visits he made, one in March 1990 and the other in September, were important staff training and orientation events to the concept of CM, what the project should be aiming for, some of the methods and tools which could be used in promoting more CM within the planned activities, the development of training manuals, to mention a few. During the September visit, the RTA assisted the staff to design and conduct a CM echo workshop to the one which several staff members attended in CARE Egypt. Although counterparts did not travel to Egypt, the echo workshop involved both counterpart and project staff. This workshop reviewed material advocating the advantages of using a CM approach and how the communities can be involved in all steps of the project cycle. The outcome was a strategy of working through VHCs to promote CM in all the intervention areas.

Some staff also visited a small enterprise development project in Egypt from which they borrowed some elements of the project's CM approach for use with the VHCs. The same was accomplished from a cross-visit to Kenya to see in practice PRA techniques being successfully used by a water, sanitation and health project. This has led to the holding of a large workshop for all CARE Sudan extension staff in PRA techniques using a trainer from Kenya.

The project has had an equal chance to share some of its own experiences at two important international Child Survival conferences which took place in Nigeria ("Sustainability - the Challenge we face") and USA ("Integrating Maternal Health in Child Survival projects"). The project manager attended both of these and not only made useful contributions in formal presentations, but gathered information on other approaches being applied around the globe.

It has been evident from the numerous trainings and meetings which have transpired during the life of the project, that both MOH and project staff together with the VHCs and other community members have learned enough about community organizing to effectively conduct fund-raising exercises, organize preventive health campaigns, organize communities for immunization and VAD campaigns, organize gala days, etc. These are all skills inherent in the communities but which needed to be tapped and used in a strategy for supporting health interventions.

Facilitation Skills Development

This skill area is part and parcel of promoting a CM approach. Without facilitation skills it is impossible to enable others to

share their knowledge and in so doing assume more decision-making responsibility. During the RTA/CM's March visit, he took the staff through a practical exercise with Gerejikh community (already described under the Project Accomplishments section) focussed on community needs identification/prioritization/solution generation. Apart from being an important step of any CM approach, this exercise gave the FCs first hand exposure to the steps in facilitating such a process and an idea of some of its pitfalls. Although the exercise was not replicated in all communities, the staff have since used what they learned in other contexts eg. VHC discussions, training of MOH staff, both of which have incorporated problem-solving discussions. The staff have had the added benefit of direct observation and co-training exercises with the mission Training Manager, who himself is an excellent facilitator. Other opportunities in which the staffs' facilitation skills have been exercised is during a number of provincial and national workshops including the community management echo workshop, project design workshop, monitoring and evaluation workshop, the mission MBO workshops, the December workshops, etc. It is recognized that more formal training in this critical skill area is needed. For this reason CARE Sudan's traditional "December Workshop" for 1993 was devoted to "Facilitation Skills Development". Unfortunately, due to funding constraints the workshop has had to be postponed.

Programming

A participatory management approach extended by the project management team and further supported by CARE Sudan's program department has resulted in a good deal of exposure to a range of programming skills. Two project design workshops took place, one in Khartoum attended by the project manager and the other being an echo of the first, to design the third phase of this project. This echo workshop was attended by all project and key counterpart staff, both MOH and other. The workshops were comprehensive in their outlining the project design process, the steps to be taken and practical exercises of "how to". The echo workshop further experimented with a community exercise with eleven villages to ensure their participation in the project design process. There have been a number of review meetings of the draft proposal since but the document has still to be finalized given changes in mission program strategy and donor support to Sudan.

The staff have been involved in developing activity plans and monitoring checklists as described earlier in the bi-monthly MBO meetings. This has not only exposed them to the skill of using these management tools, but also to the discipline. The project manager was also involved in the planning of the BCHP although did not assume any responsibility for writing the implementation plan (DIP). Similarly, he has been critically involved in compiling information for the PIRs but has not been responsible for their writing. This has been a prevailing weakness amongst all management staff to which inadequate attention has been given to

date. With proper guidance and a good deal of practice, all staff are capable of producing well organized and readable reports. This is evident from the contributions made by the project manager to this final report. However, in future a more structured program to develop staff skills in report writing is needed.

Staff and counterparts received some training in developing project monitoring frameworks and intensive exposure to evaluation methods and tools during the two evaluation workshops. The value of these workshops to the development of the staff and counterparts' understanding of the evaluation process and methods and tools appropriate for use with BHP has already been discussed earlier.

Project Management

Although this area is a broad one, and one in which on-the-job training is the most widely used approach to develop these skills, there were a number of special training events organized to further develop staff skills in this arena. These included: performance management (Dec. 1992) and staff appraisal (May 1993); leadership, supervision, delegation, time management, problem solving (Dec.1990/91); budget preparation (Jan 1992, Feb 1993) and financial management (several workshops during 1991/92); procurement (April 1993); personnel (several meetings during 1992/93); mission philosophy (April 1992) to mention the more noteworthy ones. Although participants in these workshops tended to be the more senior project management, for a good many of the above events echo workshops were conducted either in Bara or El Obeid to which other project staff and counterparts attended. In this manner staff gained exposure to a whole range of management skills and areas all of which had some direct relevance to their project work. There did remain some weak areas, some of which have been mentioned above, and others which include decision-making, logistical coordination, strategic planning, problem-solving.

Training

What will be focussed on in this sub-section is the development of staff and counterpart's TOT skills not the number of trainings undertaken or attended as these have been amply described above. The TOT approach of the project was a conscious strategy chosen and appears to have been successful in extending health messages and skills. The final evaluation and survey results viz mothers level of KAP in all of the targetted health interventions suggest that health cadres have been successful in their training of these mothers who in turn have trained other mothers. This implies that the original MAs and staff trained by the project to conduct these TOT sessions at the community level have been well trained. This is not to say that more specialized training in selected TOT skills is not needed - facilitation skills have already been highlighted as an area for further development. However, the basics have been achieved. This has been done primarily through the TOT training of

MAs as part of the initial CDD training. This was followed by a refresher TOT with the trainings in ARI, malaria and VAD. These same MAs underwent another exposure to TOT during the VHC trainings which they also participated in. It was these MAs who then transferred their TOT and technical skills to the VHWs, nurses, VMWs, TBAs, who then trained the promoters. The training component of the project is considered to be one of the stronger ones as it successfully trickled all the way down to the community members, particularly mothers. It has been reported that many mothers who have benefitted from the project's training have become much more vocal in discussing hot issues such as family planning and the different methods which in the past they were too shy to raise. It is hoped a similar trend might be seen with female members of the VHCs if given the right type of encouragement and support.

K. STRENGTHENING LOCAL INSTITUTIONS

BCHP is built on two main strategies - strengthening the MOH and strengthening local community groups. Thus the whole project is focussed on strengthening local institutions. Much has already been said in the foregoing sections on accomplishments in this area. What these local institutions are now able to do more effectively as a result of the project's interventions will be summarized in this section.

Village Health Committees: VHCs have been established through the project. They are continuing as committees with some improved committee management skills. More important they have become a focal point for organizing other development activities and generally recognized as such by their communities. They have developed a good understanding of key health problems facing their women and children and what's needed to address them. As a result they are extending more informed and therefore needed support to the health cadres serving their communities. They have certainly developed an appreciation of the need to develop a financial base to continue to support their health activities, and most have taken steps to begin to build up such a fund (cash boxes). The VHCs will fill a vital role in future project efforts to build greater community management capacity for health services.

Provincial PHC Committee: This committee comprised of mostly provincial MOH representatives (Medical Inspector, SMA, HV, Public Health Inspector, EPI Operations Officer), the provincial Executive Director and the CARE project manager and team leader has persisted throughout the life of the project. It continues today as an effective forum to discuss project matters. Members have proved to be generally supportive in their handling of project matters. Although they appear to have grasped the importance of CM particularly as their capacity to support is waning, they have not been always realistic and creative in advocating alternative

solutions that fall outside of MOH policy in order to maximize service delivery. An example of such is the MOH's resistance to include volunteers in immunization trainings. They have been exposed to a range of practical CM approaches within their ability to promote and sustain. Certainly the SMA has a good understanding of village level conditions given his extensive contact through project visits. It is presumed they have benefitted from the programming training events as many participated. This committee is playing a key role in developing the project's phase-over plan to ensure as much continued support as possible from the MOH.

State Advisory Committee: Now defunct, this committee never really played a key role in the project. Its purpose and reasons for disbandment have been described above. Without this committee the project still enjoyed considerable support and participation from some key state MOH authorities. One of them participated in the final evaluation, which no doubt benefitted him as well as the project.

Rural Council PHC Committees: Although intended to serve the same purpose as the PPHC committee but at a more local level, these committees existed but were not very functional. This was due to insufficient time being exerted by the project staff and PPHC committee to adequately motivate these representatives to play a role. Their potential value to the communities and the MOH is great and they would be targetted for more support and encouragement should a third phase of the project materialize.

Ministry of Health: Certainly the technical diagnosis and treatment skills of the MAs, medical officers, CHWs, VMWs, TBAs, and nurses have all been upgraded in CDD, VAD, ARI and malaria. Additionally, the MAs have an increased ability to conduct effective training as do most of the others mentioned above. Of great significance for the communities these health cadres serve is the closer links between them through the development of more understanding relationships. These have been forged by the project through the participatory approaches used in the numerous training events. This is true not only between the health cadres and the VHCs and promoters, but also between the MAs and their health workers.

On the more nuts and bolts side has been the extension of the cold chain to six additional sites. This has enabled the MOH to service an additional 40 VHCs.

Overall, the project's greatest impact has been in establishing a local support system for health services extending down to the community level which is complementary to the GOS but is not wholly dependent on it.

L. KEY CONSTRAINTS, SOLUTIONS AND LESSONS LEARNED

Numerous constraints have posed constant challenges to the project over its lifetime. Those that could be overcome have been so albeit exerting more time and effort than the project could sometimes comfortably afford. Some have persisted and constitute challenges for the next phase of the project. All of these have been described in detail throughout this report. What follows here is a summary of only the key ones, many of which pose as important lessons learned for consideration in a new phase.

Geographical location: Bara happens to be located in a drought prone area of the country which subjects it to periodic and sometimes devastating droughts. Witness the 1984/85 drought to be followed by the 1990/91 drought which was marked by a high death toll of people, particularly children who greatly suffered from malnutrition which made them vulnerable to the killer diseases. The result was people moved from their villages and often out of the area altogether in search of food and employment. To curtail the movement of people, the relief program provided free food distribution to all villages. The project assisted them in setting up relief committees to assist in this activity. An emergency VA capsule distribution was organized and a nutrition surveillance project developed on the initiation of BCHP. The need for an integrated health information gathering system became very apparent during this period, as both an early warning mechanism and to monitor health status during a time of great stress. This was attempted through PRONISS but failed and is now being re-approached through the Food Assistance Program.

A second major constraint is Bara's unique natural land barriers of sand dunes which cut the province in half and make movement from one side to the other extremely difficult. It was for this reason a cold chain system serviced from El Obeid was set up on the western side. Bara is not a small land area being the size of Swaziland and hence poses considerable logistical challenges to field operations. Deploying staff to be based at the RC level is a must for maximum contact with the communities.

MOH policy/capacity: Although advocating a PHC strategy of "Health for all by the Year 2000", the MOH has resisted making the shifts in policy to promote maximum community involvement in, and responsibility for, realizing this strategy. This is reflected in the training of volunteers issue which was only recently approved. As GOS resources become tighter in the future more responsibility will automatically fall on the shoulders of the community to provide whatever support they can. It would be to the MOH's advantage to prepare the communities for this increased role.

MOH has found it increasingly difficult to maintain its infrastructure. Salaries to staff are low, benefits are few and consequently attrition is high. The project has encouraged VHCs to

try to provide cash incentives to health workers to offset this deteriorating economic situation. Operational costs are not being sustained (stationary, vehicle maintenance, fuel, perdiems) and drug supplies are dwindling. The mobile immunization teams cannot be kept operational and the cold chain system has already experienced disruptions through lack of maintenance. The project's strategy to promote more community awareness and responsibility for their health services is a sound one. However, they cannot go it alone, hence solutions will have to be found to enable the basic MOH services, particularly medical supplies and health staff, to remain intact.

Government relations: The project had enjoyed good relations at both central, state and provincial levels during the three years of its four year life span. Early in 1993 Kordofan state received a new Deputy Wali who was not favourably disposed towards NGOs let alone large, well-established, international ones like CARE. Due to a misunderstanding over a donor contract CARE had which involved a large number of vehicles, the Deputy Wali confiscated eight CARE vehicles and unilaterally closed the El Obeid office. Although the office re-opened a week later, a strong distrust prevailed. It has taken close to nine months to begin to forge more positive relations and to secure the return of all eight vehicles. This temporary deterioration in state GOS relations brought other GOS relationships into question. CARE questioned the commitment of the GOS to facilitating CARE's work in Sudan in accordance with its principles and procedures, one of which is to safeguard donor assets for use for the beneficiaries intended. The result was a change in overall program strategy which called for a slow-down in BCHP's activities. Since that time dwindling donor resources have further forced CARE into a major restructuring exercise and the phase out of many projects, one of them being BCHP. Although state relations seem to be on the mend, steps are being taken with caution on both sides.

Decentralisation of GOS and CARE: The policy of decentralisation on the part of the GOS to the state level for both policy decisions and resource generation has only served to further burden an already financially weak state and provincial MOH. It would appear now that the provincial level is being bypassed viz resource allocation in favour of the RCs. Although in principle a positive move, without sufficient resources being allocated to all levels will result in one level being unable to do its job. The system thus weakens and could fall apart. Already we have seen the greater demands being placed on the communities to not only raise money for state affairs, but to assume responsibility for a range of services which absorbs their time and resources.

CARE similarly decentralized its operations to the provincial level thus placing considerably more responsibility on the shoulders of the team leader. Although also a positive move in line with GOS policy and CARE's management philosophy, the result was

overburdened the team leader leaving her with less time to oversee some areas eg. timely reporting, field oversight. This happened during the last one and a half years of the project's duration.

Project Personnel: Going hand in hand with the above point was the weak administrative management and less developed monitoring and writing skills amongst the senior project management staff. Technically the staff were sound but the above areas proved to be gaps with the result that the team leader shouldered most of these additional responsibilities. Recruitment of new staff was both time consuming because of the labour office and security regulations, and did not turn up very qualified candidates. The BCHP project manager, therefore, continued to be burdened with managing two projects. As much support as was feasible was provided from CARE Khartoum office on the program side, and the El Obeid office on the administrative side, but neither could completely compensate for the daily management support which only the project could provide. Such support was extended for the important things but at great cost to the individuals involved and often in a crisis management mode.

Project design and planning: During the initial design of the BCHP the communities were not involved, nor was their input solicited during the preparation the DIP. This is contrary to both the philosophy of the project and CARE as a whole. Part of the reason may have been because the project was building on strategies already experimented with during the first phase in which many communities were involved. Although more of a weakness than a constraint, community involvement may have contributed ideas overlooked in the project design but learned later during implementation eg. promoters enthusiasm to be trained in more than just CDD.

A flaw in project planning which greatly strained project resources for some time, was the start-up of the CWSP drawing on BCHP resources i.e. vehicles, personnel which drew them away from their BCHP responsibilities. The start-up of the CWSP was a very demanding job and inevitably certain BCHP activities went by the wayside. This problem was eventually resolved when the necessary CWSP resources were made available. Careful thought must be given to the time demands on staff when implementing an integrated program.

Monitoring plan: The project's monitoring plan needed much more development, checklists to be prepared, and more integration with the other projects to be built in. Both senior management staff and MOH provincial level staff needed to spend more time in the field on joint supervisory visits. Similarly the field staff should be based at the RCs to ensure maximum time is spent with the communities and less time travelling. Better pin-pointing of villages which required more support and subsequent prioritization of village level work should be done in future.

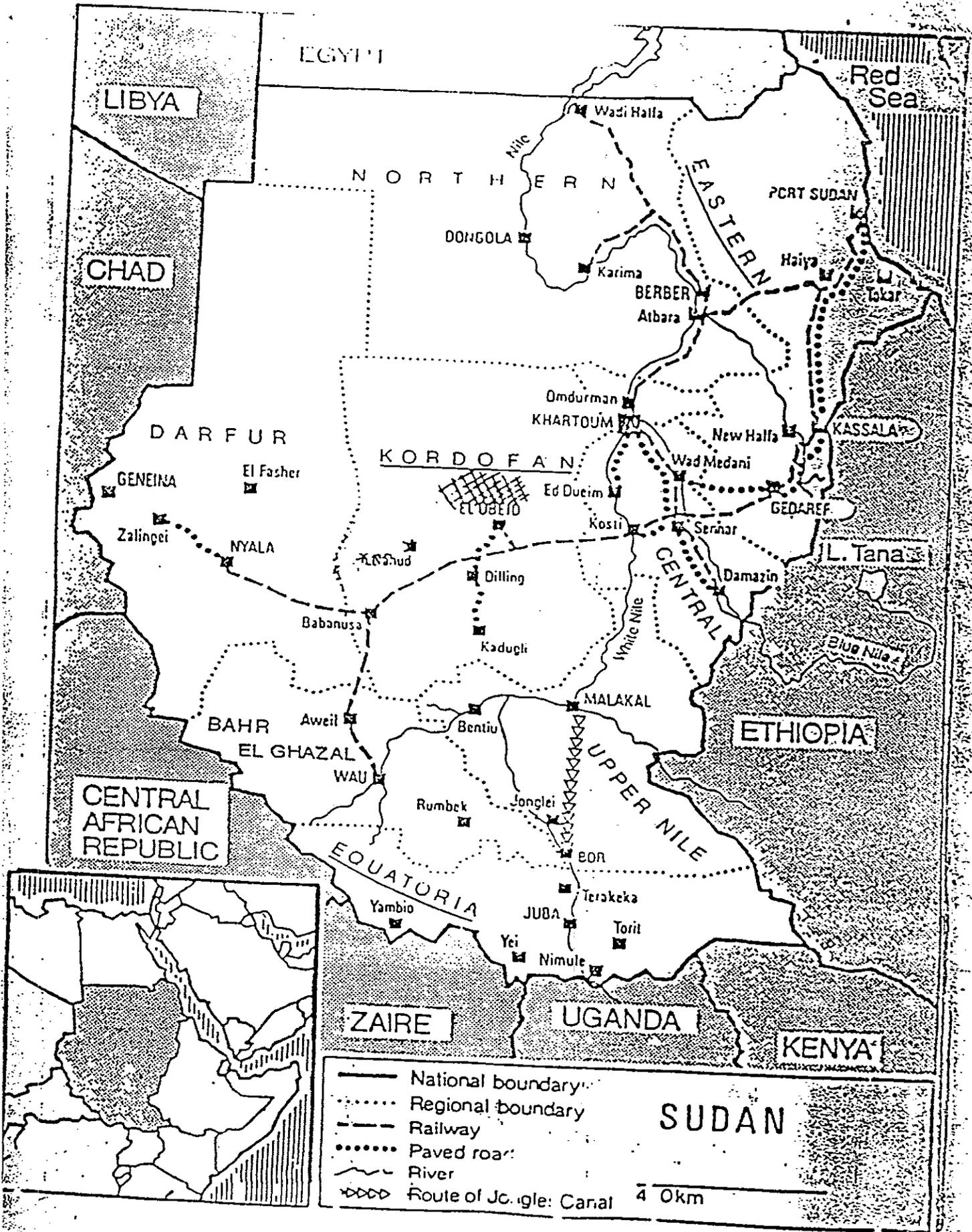
Donor support: Finally, an institutional strengthening project of this nature calls for a much longer time frame than three to four years. Without the political will on the part of the donors to both sustain their levels of support and provide renewed support to build on what has already been put in place, the question could be asked - What was all this for? The project experienced drastic side-effects from the significant reduction of UNICEF's support to the Bara MOH EPI program. This has less to do with UNICEF than it does with donor support to Sudan. CARE has been very fortunate to enjoy the support of USAID and Comic Relief and other smaller donors during a period of massive reduction in financial and in-kind support to programs of this nature in Sudan. But the question now looming before us is who will continue to support such a program to enable it to move into an equally critical but exciting third phase?

M. RECOMMENDATIONS AND CONCLUSIONS

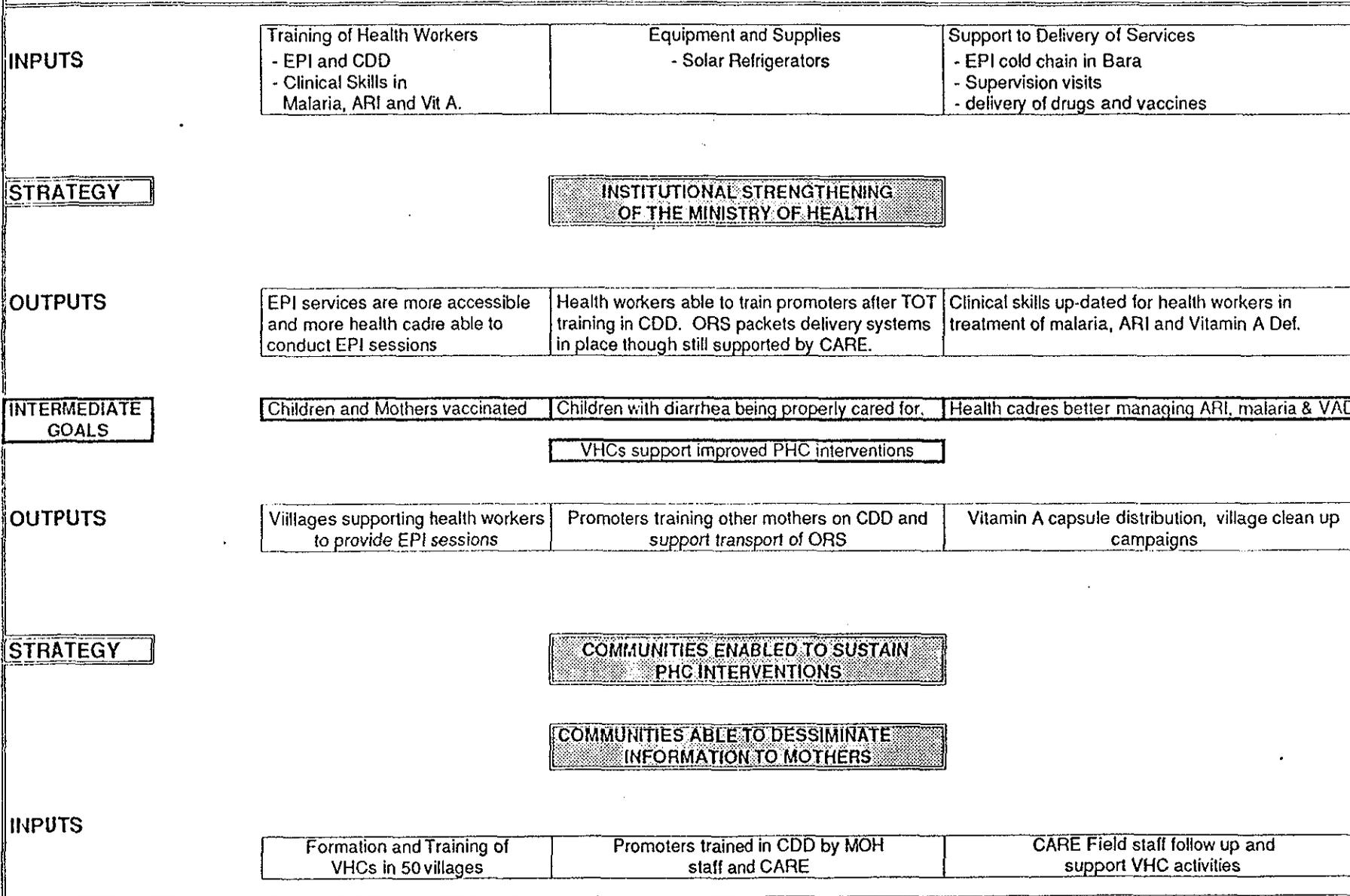
Overall, the Bara Child Health project has seen considerable success in a climate of great uncertainty, deteriorating health infrastructure, drought, and waning donor support. Its achievements are not those of the project but rather of the MOH staff and the communities for being able to effectively translate a vision and ideas into practical application. There is much ingenuity and commitment out there in the field and within crowded Ministry offices. What is greatly needed is the hard cash and resources to keep it alive and supporting the development of a rural PHC infrastructure. There is no doubt that a third phase of the project is both desirable and needed. This is by no means in contradiction with the sustainability objective of the project. There is still much work to be done with the VHCs, health promoters and mechanisms to generate resources to support even a very basic health service. Similarly, support must be provided to the MOH to ensure provision of essential services such as basic medical equipment, drugs, curative services, maintenance of the cold chain, and a low cost supervisory network. Until the GOS has sufficient resources to support these elements of a health service themselves, they cannot be expected to be sustainable. So the choice is to let them fall into decrepitude which only serves to plunge the rural population into a rapidly declining health situation, or provide the interim support in a low key but responsible manner. This is the choice the donors have to make.

A number of recommendations have emerged from the final evaluation which will prove useful in designing the third phase of the project. These are provided in Annex F.

ANNEXES



SCHEMATIC REPRESENTATION OF BARA CHILD HEALTH PROJECT IGs, STRATEGIES, INPUTS AND OUTPUTS



WORLD BANK

BARA CHILD HEALTH PROJECT - FINAL EVALUATION - ACHIEVEMENT OF INTERMEDIATE GOALS

PROJECT INTERMEDIATE GOALS	INDICATORS	ACHIEVEMENT
<p>INTERMEDIATE GOAL #1 By August 1993, 65% of children under five years of age in operational areas of 7 rural councils in Bara Province who had diarrhea in the past two weeks and received proper ORT.</p> <p>Note: CS project guidelines targets <2 year olds for CDD.</p>	<p>1.1 Percent of children <5 years who had diarrhea in the last two weeks and received proper ORT as reported by mothers.</p> <p>1.2 Percent of trained health workers actively training mothers and promoters in ORT.</p> <p>1.3 Percent of health facilities that have 100 or more ORS packets in stock.</p> <p>1.4 Percent of health facilities in operational areas receiving semi-annual supervisory visits using established checklist.</p>	<p>EPI cluster 30 x 7 conducted May/June 1993 = 63%.</p> <p>Baseline as determined for the 5 of 7 RCs in Sept 1989 (NKCHP) is ORS use rate = 65%</p> <p>Baseline for 2 new RCs (June '90) = 29% ORS Use Rate</p> <p>- During Final Evaluation 75% of health facilities visited had 100 packets of ORS</p> <p>- During Final Evaluation 75% of health facilities received semi-annual supervision visits</p>
<p>INTERMEDIATE GOAL # 2 By August 1993, 65% of children <1 year in operational areas of Bara Province are fully immunized against the six immunizable diseases and 40% of new mothers are adequately vaccinated with tetanus toxoid.</p>	<p>2.1 Percent of children under 1 year who are completely vaccinated.</p> <p>2.2 Percent of women who delivered in the last 11 months who were completely vaccinated against tetanus.</p>	<p>EPI cluster 30 x 7 conducted May/June 1993 = 47%.</p> <p>Baseline for 5 of 7 RCs determined in Sept 1989 = 45% <1s fully vaccinated</p> <p>Baseline for 2 new RCs (Um Sayala and Um Garfa) June 1990 = 29% fully vaccinated</p> <p>Baseline coverage of TT in new mothers is unknown.</p>

PROJECT INTERMEDIATE GOALS	INDICATORS	ACHIEVEMENT
<p>IG #2 Continued</p>	<p>2.3 Percent of health cadres supported by VHCs to provide regular immunization services.</p> <p>2.4 Number of empty sites converted to static sites</p> <p>2.5 Percent of villages in operational areas receiving regular EPI services. (N=52 villages)</p>	<p>- During Final Evaluation 50% of VHCs support their helath workers to provide regualr EPI sessions.</p> <p>unknown</p> <p>unknown</p>
<p>INTERMEDIATE GOAL # 3 By August 1993, 50 Village Health Committees and 60 trained health cadres in Bara Province take steps to control malaria, ARI and Vitamin A deficiency in children under 5 years in selected operational areas in 7 Rural Councils.</p>	<p>3.1 Percent of health cadres appropriately diagnosing and treating malaria, ARI and VAD cases according to MOH protocols</p> <p>3.2 Number of health units with adequate stock of relevant essential drugs for treating malaria, ARI and VAD.</p> <p>3.3 Number of VHCs promoting malaria preventive measures in their villages.</p> <p>3.4 Percent of mothers or caretakers that have correctly managed the most recent episode of ARI in their children <5.</p> <p>3.5 Number of villages where Vit A capsules are distributed on a quarterly basis.</p>	<p>From Final Evaluation: 82% for malaria, 55% for ARI and 90% for VAD of health cadres interviewed.</p> <p>From Final Evaluation: 38% had stock of chloroquin, 20% had antibiotics for ARI amd 63% had Vitamin A capsules.</p> <p>From Final Evaluation: 100% of villages said they conducted village clean up to reduce malaria.</p> <p>CARE has not targeted caretakers with ARI messages.</p> <p>Vitamin A capsules have not been regularly distributed in the last year.</p>

PROJECT INTERMEDIATE GOALS	INDICATORS	ACHIEVEMENT
<p>INTERMEDIATE GOAL #4 By August 1993, 50 Village Health Committees have the capacity to manage and support regular and sustainable services in their villages.</p>	<p>4.1 Number of VHCs efficiently managing their regular meetings on village health development.</p> <p>4.2 Number of VHCs that have established efficient ways to raise funds and organize village self-help activities.</p> <p>4.3 Number of VHCs that fully fund the transport of vaccines and ORS to their villages.</p> <p>4.4 Number of VHCs that initiate and facilitate the training of villagers on health related problems.</p>	<p>From Final Evaluation: 55% of VHCs are achieving this indicators.</p> <p>This indicator is not currently being monitoring.</p> <p>From the Final Evaluation: 66% have been funding the transport but due to breakdowns in the cold chain, villages have not had EPI sessions in the last 5 months.</p> <p>This indicator is not being met. VHCs are not initiating the training of villagers.</p>

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ANNEX D

PROJECT ACTIVITY ACCOMPLISHMENT CHART

Project Activity Targets (PATs)	Life of Project		Deviation	Explanations
	Plan	Actual accompl.		
<p>Note: PAT # corresponds as far as possible to the PATs of the original DIP. However, as goals & PATs were modified during the course of implementation so have the PAT #s changed. This is particularly evident for IG 3 and 4</p>				
<p>IG # 1 : By August 1993, 65% of children under 5 years of age in the project operational area who had diarrhoea in the past 2 weeks and received proper ORT</p>				
1. Conduct training of health cadres in CDD	9	7	-2	# training sessions conducted
2. Conduct follow-up meetings with trained health cadres and CDD promoters to phase over CDD activities to them	800	636	-164	# meetings conducted
3. Finalize & distribute the CDD manual in Arabic	x	x	0	
4. Develop & institute an integrated supervision plan for each RC	7	6	-1	# RC
5. Attend meetings with the provincial & RC PHC committees on a regular basis	58	42	-16	# meetings conducted
6. Develop distribution plans for ORS and EPI vaccines for targetted RCs with PHC committees	7	6	-1	# RCs
7. Establish ORT corners in rural dispensaries	16	0	-16	# dispensaries
8. Establish an ORT centre in Mazroub hospital	1	0	-1	# hospitals
9. Conduct community education sessions in village councils with no health cadres	250	150	-100	# villages
10. Work with the state & provincial MOH & VHCs to ensure that each community has adequate supplies of ORS	50	52	+ 2	# communities

Project Activity Targets (PATs)	Life of Project		Deviation	Explanations
	Plan	Actual accompl.		
IG # 2 : By August 1993 65% of children less than 1 yr old in the project's operational area are fully immunized against the six immunizable diseases and 40% of new mothers are adequately vaccinated with tetanus toxoid.				
11. Conduct basic training for health cadres in EPI	2	1	-1	# courses conducted
12. Conduct refresher training for health cadres in EPI	7	6	-1	# courses conducted
13. Update EPI rosters of under ones & women of child bearing age with VHCs in each static site	50	52	+2	# static sites
14. Reformulate & distribute written guidelines for EPI target group calculation	x	x	0	
15. Order & procure 3 solar refrigerators	3	3	0	# units
16. Install 3 solar units	3	3	0	# units
17. Train health cadres & selected VHC members in maintenance & operation of the solar units	7	9	+ 2	# trained MAs
18. Hand over regular maintenance for solar units to the state cold chain Officer, VHCs and PHC committee	6	2	-4	# tours made
19. Assit the provincial EPI authorities with a catch-up campaign to cover VCs not covered by static sites	x	x	0	
20. Establish a sub-cold chain system in Um Keredium dispensary	x	x	0	

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Project Activity Targets (PATs)	Life of Project		Deviation	Explanations
	Plan	Actual accompl.		
IG # 3 : By August 1993, 50 VHCs and 60 trained health cadres in Bara Province take steps to control malaria, ARI and VAD in children under 5 years in selected operational areas.				
21. Facilitate the holding of refresher courses in diagnosis and treatment skills for health cadres	8	7	-1	# courses conducted
22. Review and distribute MOH treatment protocols and manuals to health cadres	115	73	-42	# health cadres
23. Distribute copies of Facts of Life and Were There is No Doctor to all health workers	150	200	+ 50	# copies distributed
24. Conduct follow-up meetings with VHCs to ensure that they are promoting preventive measures in their communities	800	600	-200	# meetings
25. Establish drug revolving systems within each VHC	50	52	+ 2	# VHCs
26. Hand over trimesterly spot-checks for VAD to trained health cadres	900	500	-400	# children surveyed for VAD

Project Activity Targets (PATs)	Life of Project		Deviation	Explanations
	Plan	Actual accompl.		
IG # 4 : By August 1993, 50 Village Health Committees have the capacity to manage and support regular and sustainable health services in their villages				
27. Select and orient VHCs to the project & community management principles	50	52	+2	# VHCs
28. Develop the VHC training manual	x	x	0	
29. Conduct the training of VHCs in collaboration with the provincial and RC authorities	50	52	+2	# VHCs trained
30. Monitor VHC activities on a bi-monthly basis through meetings in the community	50	52	+2	# VHCs receiving visits
31. Arrange cross-visits between VHCs/health cadres to share experiences and lessons learned in supporting PHC interventions	15	2	-13	# cross-visits
32. Develop a simple book-keeping and financial management system for VHC drug funds	x	0	-x	
<u>GENERAL</u>				
33. Conduct KAP and coverage surveys (baseline, mid-term, final)	3	3	0	# surveys

BARA CHILD HEALTH PROJECT MID-TERM EVALUATION

MOH/CARE/Community Collaboration

MAJOR RECOMMENDATIONS

PROJECT RESPONSE

1. Project trip reports, minutes of State level meetings and summaries of Bi-Monthly Reports should be translated into Arabic and shared with Provincial level counterparts.

The project Extension Coordinator is currently producing a monthly summary of project activities in both English and Arabic. The Arabic report is distributed among all Provincial counterparts. Minutes of the State Advisory Committee meeting are produced in English, but the meeting is usually conducted in Arabic, with the Bara Medical Inspector and the Bara Senior Medical Assistant in attendance. There is currently no one with the project who is able to devote the time necessary to summarize and translate the bi-monthly reports, which are lengthy documents. The monthly reports in Arabic are serving the same purpose as the bi-monthly report would.

2. CARE should continue to have an active role in conducting monthly meetings of the Bara PHC Committee.

The project continues to encourage the Bara Medical Inspector to call the PHC Committee meeting each month. As he is the only senior medical officer in Bara, his work at the Bara Hospital often prevents him from taking an active role in PHC activities. He usually delegates his responsibilities with the Committee to the Senior Medical Assistant, who works in cooperation with the project to call and conduct the meetings and implement actions recommended during the meetings.

3. Organize a State level workshop to address problems of drug supply and determine appropriate channels of distribution in Bara Province.

State level counterparts have been approached several times on the subject of this and other workshops. Response has always been that they are too busy to take one to two days off for a workshop. Meetings have been held with individual State counterparts on the subject of ORS and vaccine supply to Bara Province. These meetings have not proven helpful; health cadres on the western side of Bara still face problems in transport of supplies. The project will attempt to hold this workshop during next calendar year, in conjunction with the recommended community management workshop (see Recommendation # 22).

Control of Diarrhoeal Disease

MAJOR RECOMMENDATIONS

PROJECT RESPONSE

4. CARE should conduct follow-up sessions for trained health workers and mothers on CDD messages, especially those related to the use of home available fluids. CARE staff should use monitoring checklists and track the performance of health workers and women's groups.

Follow-up of trained health workers and mothers is carried out through the normal course of the Field Coordinators' work. The use of home available fluids is stressed during this follow-up. A checklist that was developed during the previous child health project has not been used regularly by project staff for monitoring. The project will hold a workshop in January 1992 to develop a project-wide monitoring system, which will include checklists for the child survival interventions.

5. CARE should encourage health workers to increase the number of health education sessions on CDD.

No action has been taken on this recommendation yet. Two approaches will be taken -- Field Coordinators and MOH health workers will conduct these sessions as a team, and Field Coordinators will identify those villages in the project area that have no health worker and have not yet received training in CDD. The project will provide transport for health workers from other villages to train mothers and to hold public education sessions on CDD in the unserved villages. This second strategy is being undertaken currently.

6. CARE should facilitate increased availability of CDD education materials at village level (e.g., posters, brochures, CDD Newsletter and training handouts).

The Project Manager brought a small number of posters and CDD Newsletters from the CDD Department in El Obeid. These were distributed to health workers in one Rural Council, but the available amount was not sufficient to serve the entire project area. Sources of educational materials will be investigated in Khartoum. The project has produced a CDD manual for training mothers and a Training of Trainers manual for training health workers. These manuals have been distributed to Medical Assistants and village level health workers throughout the project area.

7. CARE should ensure that there is an initial three-month supply of ORS available at all Rural Dispensaries. In the meantime, CARE extensionists should work with MAs and VHCs to develop sustainable solutions to supply problems.

CARE and the Bara Senior Medical Assistant were able to secure 20,000 sachets of ORS, in addition to the Province's regular allotment. CARE's Supplementary Feeding Program brought 24,000 sachets to Bara, which have been allocated to the Senior MA for distribution where needed. The Rural Dispensaries in Bara now have adequate stocks of ORS, and the Senior MA has a buffer stock that will last for

approximately four months. The main obstacle to the establishment of sustainable supply routes is lack of funds. The Medical Assistants on the western side of Bara Province are eager to set up supply routes using the market lorries that travel between El Obeid and the area, but claim that the Village Health Committees are unable or unwilling to provide the necessary funds.

- 8. The project should provide basic materials for the establishment of ORT corners at Rural dispensaries and Supplementary Feeding centers as soon as possible.

The project has decided to drop this target, as Medical Assistants have shown low levels of interest in establishing ORT corners in their dispensaries, and the objectives of doing so have never been clear. During the Mid-Term Evaluation, it was discovered that fewer and fewer cases of diarrhoea were being seen at the Dispensaries and Primary Health Care Units, as trained mothers were managing mild cases at home. The number of acute cases seen by the Medical Assistants do not justify setting up a special treatment corner. The experience with the Bara Hospital is also discouraging -- an ORT corner that was built and equipped by the previous child survival project in 1988 has not been functioning since 1990. All the supplies have disappeared and no one is trained to manage the corner. The project will procure the necessary supplies to set up treatment corners in the supplementary feeding centers in Bara Province. Center volunteers will be trained in CDD and proper use of ORS. The supplies can be turned over to the rural dispensaries when the feeding centers are phased out.

Expanded Program for Immunization

MAJOR RECOMMENDATIONS

PROJECT RESPONSE

9. In cooperation with the EPI Provincial Operations Officer and the Senior MA, CARE should strengthen supervision and follow-up during service delivery to determine further training needs.

No action has been taken on this recommendation yet. The project-wide monitoring system that will be developed during the next two months will incorporate EPI activities. Simple indicators will be developed for performance that can be used to determine further training and technical assistance needs.

10. CARE should include EPI staff in project training on other PHC issues and interventions.

The P00 was included in a Provincial MCH workshop in July 1991. A CDD training is planned for the second trimester of this fiscal year that will include the Province EPI staff.

11. CARE should assist vaccinators in targeting all children under five from groups of displaced for immunization.

No action was taken during the time that displaced were camped outside of Rural Council towns. Since June, the numbers of displaced have decreased significantly. If numbers increase due to repeated food shortages and drought during 1992, the project will take a more active role in assisting health workers to target the children of the displaced for immunization.

Vitamin A

MAJOR RECOMMENDATIONS

PROJECT RESPONSE

12. Follow up trained MAs in knowledge and practice of Vitamin A prophylaxis and treatment. Develop a checklist and track activities of MAs.

The MAs are now in the process of training the health workers in their catchment areas in clinical skills for Vitamin A. They are being assisted by project staff in this training. Indicators for monitoring and supervision will be developed and put into use along with the project-wide monitoring system.

13. Support MAs in training the CHWs in their catchment areas in Vitamin A as soon as possible.

See response to Recommendation # 12. Thus far, four out of the ten planned training sessions for CHWs have been conducted. The remaining six will be conducted within the next two-month period.

14. Investigate the possibility of linking supply of Vitamin A with ORS to promote regular distribution to target population.

The problem of sustainable ORS supply has not yet been solved, so the opportunity does not yet exist to link Vitamin A supply with supply of ORS. Bara has not faced any shortages of Vitamin A; there is ample supply at state level. Project staff and MOH staff carry Vitamin A with them whenever they go to the field and supplies are distributed as needed.

15. Facilitate provision of available educational materials (posters and brochures) on Vitamin A to the village level.

Visual aids and educational materials on Vitamin A are not available at State level. The Project Manager and Team Leader plan to investigate whether or not such materials are available in Khartoum with the Department of Nutrition or organizations such as UNICEF. The Team Leader will also communicate with the RTA for PHC to see if educational materials in Arabic are available internationally.

Community Management

MAJOR RECCMMENDATIONS

PROJECT RESPONSE

16. Facilitate cross-visits for VHCs and health cadres to observe community management in action and share experiences and lessons learned.

The cross-visits will be facilitated after Village Health Committee community management training is completed. Twenty-three out of the fifty VHCs have now participated in training. The remaining twenty-seven will be trained during this trimester.

17. Add ARI/Malaria/Vitamin A to VHC curriculum. MAs and Field Coordinators should convey the basic messages on these three subjects to VHCs that have already participated in training.

Prevention and treatment of Vitamin A has been added to the curriculum. The project still plans to develop basic messages for malaria and ARI. These will be communicated to the MAs and health workers, and through them to the VHCs.

18. CARE should hold a one-day workshop in Bara to orient the Rural Council Officers to PHC issues.

This recommendation has not been acted on. The training, extension and workshop schedule of the project over the past four months has prevented staff from adding this workshop into the plan. The workshop will be scheduled for the third trimester of this fiscal year.

19. CARE should purchase and sell essential drugs at a subsidized rate to VHCs for the establishment of revolving drug funds.

Research has just been completed to develop a concept paper for establishment of revolving drug funds managed by the VHCs. CARE will seek funding for implementation of this plan. Drugs will be supplied through the Community Pharmacy rather than directly by CARE.

20. VHCs should be trained in bookkeeping and maintenance of drug inventory.

This will be done as part of the revolving drug fund activity.

21. CARE should explore avenues of re-supply of essential drugs with UNICEF and the State Community Pharmacy.

This has been done. UNICEF has given preliminary agreement that, upon approval of CARE's plan to support establishment of the drug funds in Bara, they will be able to increase the amount of essential drugs they are importing for the Community Pharmacy.

22. CARE should hold a Community Management workshop at the State level for counterparts and related officials.

Counterparts have been approached several times, without success, in an attempt to schedule such a workshop. Please see response to Recommendation # 3. We will look into the possibility of conducting this workshop jointly with staff and counterparts from other CARE projects.

23. CARE should be prepared to support VHCs in their efforts to strengthen PHC services by making technical assistance available when required.

The project currently provides technical assistance in those areas addressed by project interventions. When developing the next phase of the project, we will try to develop a strategy by which technical assistance needs in all sectors can be met, through liaison with government extension departments and local expertise. Some of this technical assistance may become available through food security activities that will be launched next year in Bara Province.

Monitoring and Supervision

MAJOR RECOMMENDATIONS

PROJECT RESPONSE

24. Support the Senior Medical Assistant in maintenance and simple repair of his vehicle.
- The SMA's vehicle requires a major overhaul and numerous spare parts to make it roadworthy. The parts have been ordered from abroad, and the vehicle will be repaired as soon as the parts arrive. In the meantime, the project is supporting the SMA whenever possible in his field travel.
25. Post monthly field travel plans in advance so that Bara MOH officers can plan for integrated supervisory visits.
- The project has just established a system by which staff and vehicles are scheduled on a monthly basis for field travel. This is working well for project staff, but it has proven difficult to get counterparts to plan for their field travel on a monthly basis. The SMA, the Senior Health Visitor and the EPI Operations Officer have scheduled a joint supervisory visit for three days at the end of each month. the project has agreed to provide a vehicle for this until the SMA's vehicle is repaired.
26. In collaboration with Gezira University, conduct a workshop for CARE and MOH staff to strengthen supervisory skills and to develop checklists and a supervision plan for Bara Province.
- Project staff are planning a workshop for mid-January during which a monitoring and supervision system for the three MACHI Bara projects will be developed.

General Recommendations

MAJOR RECOMMENDATIONS

PROJECT RESPONSE

27. The project should be extended through the end of 1994, given the present emergency situation in Bara Province.

A proposal for the third phase of the project will be developed next month and CARE will seek funding to continue PHC activities in Bara after the current funding cycle ends in August 1992.

4. RECOMMENDATIONS

4.1 GENERAL

1. CARE should review the current activities in each Rural Council and develop a plan on the level of effort needed in each participating village. A phased approach to work at the village level needs to be implemented. When entering new communities, CARE should let the village know of the time and efforts they can expect from CARE.
2. Depending on the number of active villages in a RC, CARE should employ more Field Coordinators. Field coordinators should be based in the rural council.
3. CARE develop and implement a monitoring plan with appropriate village checklists. FCs be involved in developing these checklists. A summary monitoring form be attached to the trimesterly reporting format.
4. Project Management staff should spend 50% of their time in the field. The job descriptions should be revised accordingly.
5. CARE Khartoum programme staff need to work with Machi Bara staff to identify an action plan for how recommendations from the two evaluations are to be met. A short term consultant should be considered if CARE staff feel they so not have the expertise to implement the recommendations.

4.2 INSTITUTIONAL STRENGTHENING

1. CARE and the MOH should reinforce holding meetings of health cadre at the dispensary level. These meetings could be used as a forum for in-service education. The first refresher topic should be the treatment of ARI. Treatment of malaria should also be refreshed.
2. CARE and the MOH should establish an action plan for encouraging health cadres to conduct more CDD training for promoters and mothers.
3. MOH State and Provincial levels should do the following to support and sustain EPI services in Bara Province:
 1. Provide timely maintenance and repair services to solar cold chains
 2. Effectively train health workers so as they can perform regular maintenance and minor repairs and recognize danger signals for malfunction.
 3. Allow western side of Bara to collect vaccines and supplies directly from El Obied as has already been decided.

4. Field Coordinators should identify the villages not receiving EPI services on a regular basis and assist them to develop an action plan so that the communities share with the CHW in collecting vaccines and supporting regular immunizations sessions.
5. MOH and CARE should develop strong comprehensive monitoring systems so as to follow up health cadres in an integrated visit. (FC, SMA, POO)
6. CARE should work with the community and health cadre to establish an organized system for keeping registration books. (see Um Kerdium as an example)
7. CARE and community need to establish a clear policy on how the promoters can have access to ORS sachets on a regular bases.
8. CARE and the MOH should continue the development of the revolving drug fund proposal to begin to establish sustainable supplies of essential drugs at the community level.

4.3 COMMUNITY MANAGEMENT

1. CARE should facilitate the formation of forums within which VHC and MOH representatives participate in planning and monitoring of activities such as transport of vaccines. The project should determine if the most appropriate forum may be within the Rural Council PHC Committees. Whatever the forum, the critical idea is that villages share common problems to which common solutions may be found. Sharing of resources (and ideas) may lead to reduced costs as well.

The role of CARE would be to ensure that these committees are formed and to provide technical assistance and guidance. Logistical support (sending of invitations, pens & papers for taking minutes, securing a meeting room, lunch for participants, etc.) may also be an area that CARE could assist with in the beginning of the process.

2. CARE/MOH should conduct a training needs assessment for health promoters and create a revised training curriculum accordingly. Promoters indicated to the evaluation team that they would like more information specifically in FP and ARI; other topics could and should follow. Promoters should be assisted in developing plans for training of other community members as well as means for monitoring and evaluating their own activities.

CARE should utilize promoters for facilitating the training of other promoters (ditto for VHC members training their peers). Not only is this a great motivator for the concerned promoter or VHC member, these people can communicate with their peers much more effectively than outsiders, including CARE FCs. The TOT approach has been seen to be successful and should continue to be utilized by the project.

Operating on the same principle, CARE should make much more use of cross-visits of VHCs and promoters. This is a fairly cost-effective means for promoting a great

deal of learning and useful idea-swapping. It also is a tremendous motivational device for both the visitor and "visitee". The same applies for Gala Days - CARE should facilitate VHCs on either a village or RC level to organize their own.

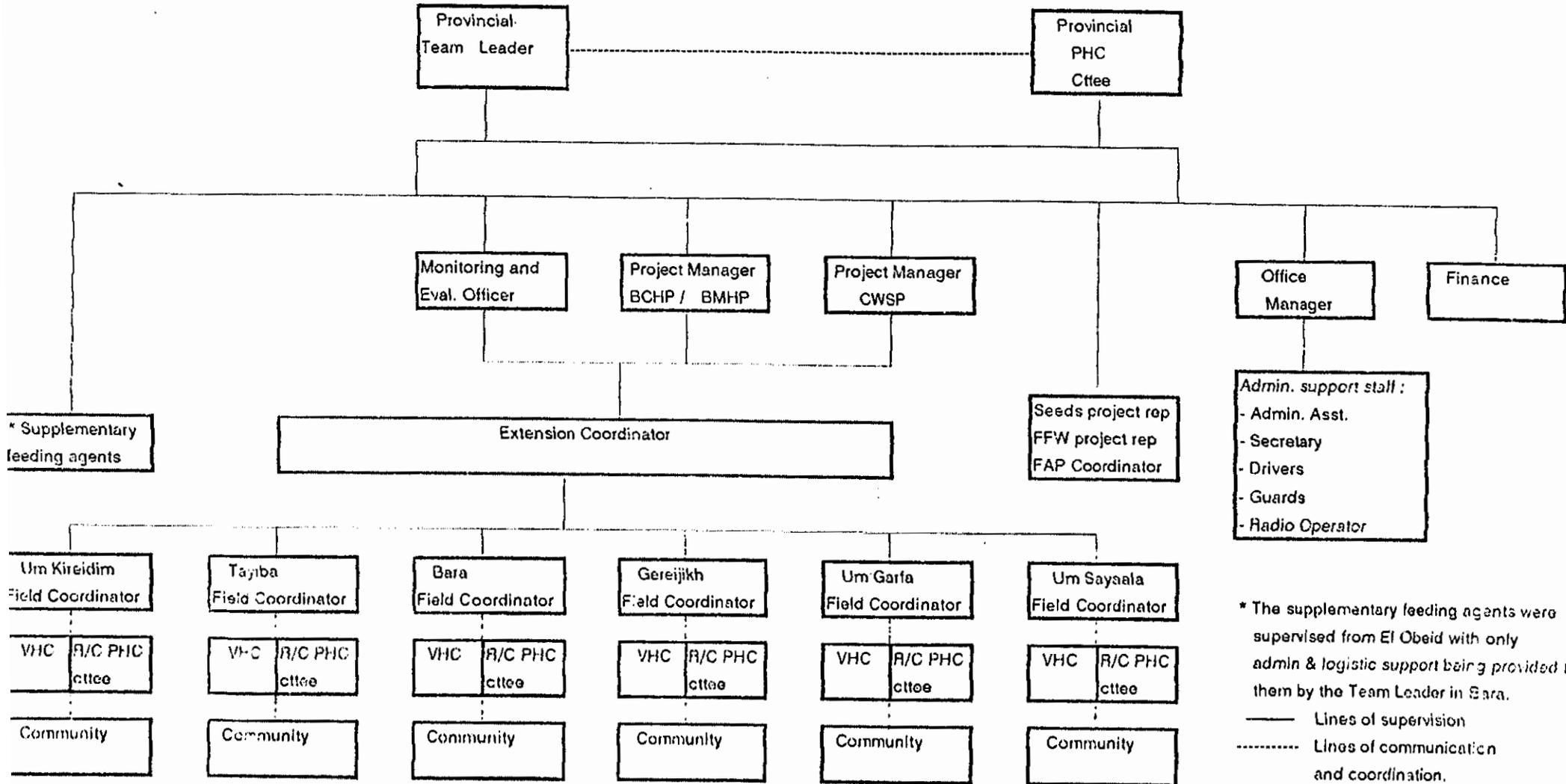
3. CARE should hire a consultant to train their staff in the desirability and use of visually-oriented, non-directive training and extension methods. Participatory Rural Appraisal (PRA) and the PROWESS/UNDP-developed SARAR methodology are just two examples of visually-oriented, participatory extension and training methods. CARE should look for local examples of materials and methods as well (evidently the Ministry of Health has developed some FP visual aids). A planned field trip to CARE-Kenya in May 1993 should expose several MACHI-Bara field staff to methods which may be applicable in the Sudanese context.

Participatory methods or tools are not difficult to use and the field staff are certainly capable. However, if the staff - and especially management - do not appreciate the desirability and utility of participatory approaches, then the tools will be of little use. An attitude of openness to learning on the part of the development agent is critical to the correct use of the extension or training tools. This should be focused on by CARE before attempting to implement any new methodologies.

The development of new extension and training methodologies should incorporate a component of gender awareness and analysis. Gender awareness of staff members themselves should be addressed first of all.

4. CARE should set up a plan to incorporate gender awareness into all staff training and extension activities.

PROJECT ORGANIGRAM



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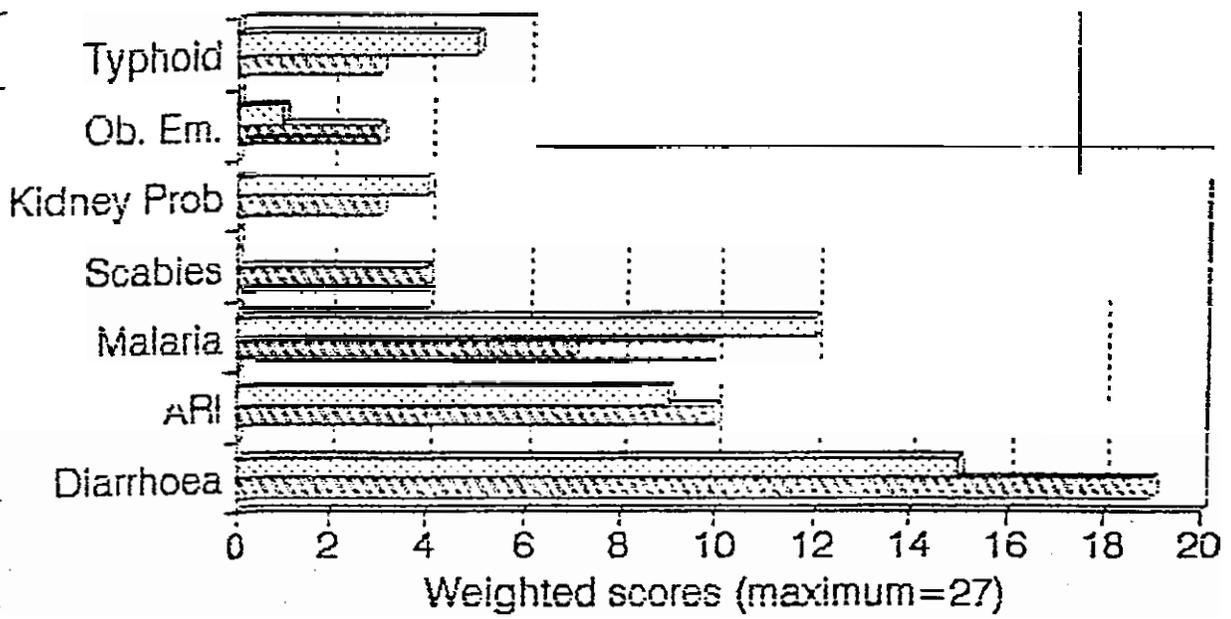
1993 ANNUAL REPORT FORM A: COUNTRY PROJECT PIPELINE ANALYSIS, CSV
SUDAN

	Total Agreement Budget 10/1/89 - 31/8/93			Expenditures to Date 10/1/89 - 31/8/93			Amounts spent Total less than/(in excess of) Remaining obligation		
	AID	CARE	TOTAL	AID	CARE	TOTAL	AID	CARE	TOTAL
I. PROCUREMENT									
A. Supplies	3,000	0	3,000	3,248	20,375	23,623	(248)	(20,375)	(20,623)
B. Equipment	17,500	54,000	71,500	19,190	144,568	163,758	(1,690)	(90,568)	(92,258)
C. Services/Consultants	2,652	7,002	9,654	780	20,711	21,491	1,872	(13,709)	(11,837)
SUBTOTAL I	23,152	61,002	84,154	23,218	185,652	208,870	(88)	(124,650)	(124,718)
II. EVALUATION/SUBTOTAL II	18,784	0	18,784	2,800	0	2,800	15,984	0	15,984
III. INDIRECT COSTS/SUBTOT. III	48,291	31,396	77,687	30,015	56,977	86,992	16,278	(25,581)	(9,305)
IV. OTHER PROGRAM COSTS									
A. Personnel	206,878	111,448	318,324	158,252	248,875	407,127	48,624	(137,427)	(88,803)
B. Travel/Per Diem	130,796	0	130,796	66,506	89,730	156,236	84,290	(89,730)	(25,440)
C. Other Direct Costs	124,101	169,188	293,289	141,441	207,265	348,706	(17,340)	(38,077)	(55,417)
SUB-TOTAL IV	461,773	280,636	742,409	366,199	545,870	912,069	95,574	(265,234)	(169,660)
TOTAL FIELD	550,000	373,034	923,034	422,232	788,499	1,210,731	127,768	(415,465)	(287,697)

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Rating of Top 3 Health Problems by VHC Members According to Gender



Women Men

List of Persons Contacted*Donors*

Dr. Haidar AbAhmed	USAID
Mr. Alio Bello	UNICEF
Mr. Campman	Royal Dutch Embassy
Dr. Tag Elasia	SFPA
Mr. Mohammed El Sheik	SFPA
Mr. Ahmed Mohammed Yousuf	SFPA

Federal Ministry of Health

Dr. Atiat	MCH
Dr. Mohammed Hussan Khamees	EPI
Dr. Osman Mohammed	CDD
Mr. Adam Babikir	EPI

State Ministry of Health

Dr. Taha AbdelHameed	DG of Health Services
Dr. Mustafa Abubakr	Deputy DG

Province Ministry of Health

Dr. Mohammed El Fadil	Medical Inspector
Dr. Hamid Dhaw El Bait	Community Pharmacy
El Tahir Karam El Dien	Senior Medical Assistant
Mr. Khogali Babikir	Provincial Operations Officer
Mr. El Sadiq El Nour	Public Health Officer
Mrs. Badria Osman	Provincial Health Visitor

CARE-Khartoum

Mr. Rudi Ramp	Country Director
Ms. Karen Moore	ACD Programmes (Non-Food)
Jamal Mohamed	Acting Non-Food Coordinator

CARE-Bara

Ms. Ellen Pierce	Provincial Team Leader
Dr. AbdelRahim Ahmed	Project Manager
Mr. Santino Gum Muwat	Assistant Project Manager
Osama Gaafar	Monitoring & Evaluation Officer
Farouk Mohammed El Amin	Field Coordinator
Adil Ebeid Abaker	" "
Arafa Fadlatta	" "
Nawal Widaa	" "
Abbas Abaker	" "
Mohammed Bashir	" "
Hind Osman	" "

Bara Rural Councils

Health Cadre

Village

Rural Council

MA, nurse

El Moghnus

Um Garfa

Siraj

Um Garfa

Geregikh

Gerigikh

El Tina

Gerigikh

Demira

Tayba

CHW

El Nazir

Tayba

MA, CHW

Tayba

Tayba

MA, CHW, Nurse, VMW

Um Sadoon Sherief

Tayba

MA, CHW, VMW

Hidayat

Bara

MA, VMW

Um Keredim

Um Keredim

CHW, VMW

MA

PROJECT INTERMEDIATE GOALS	INDICATORS	ACHIEVEMENT
<p>INTERMEDIATE GOAL #4 By August 1993, 50 Village Health Committees have the capacity to manage and support regular and sustainable services in their villages.</p>	<p>4.1 Number of VHCs efficiently managing their regular meetings on village health development. 4.2 Number of VHCs that have established efficient ways to raise funds and organize village self-help activities. 4.3 Number of VHCs that fully fund the transport of vaccines and ORS to their villages. 4.4 Number of VHCs that initiate and facilitate the training of villagers on health related problems.</p>	<p>From Final Evaluation: 55% of VHCs are achieving this indicators. This indicator is not currently being monitoring. From the Final Evaluation: 66% have been funding the transport but due to breakdowns in the cold chain, villages have not had EPI sessions in the last 5 months. This indicator is not being met. VHCs are not initiating the training of villagers.</p>

PROJECT INTERMEDIATE GOALS	INDICATORS	ACHIEVEMENT
G #2 Continued	<p>2.3 Percent of health cadres supported by VHCs to provide regular immunization services.</p> <p>2.4 Number of empty sites converted to static sites</p> <p>2.5 Percent of villages in operational areas receiving regular EPI services. (N=52 villages)</p>	<p>- During Final Evaluation 50% of VHCs support their health workers to provide regular EPI sessions.</p> <p>unknown</p> <p>unknown</p>
<p>INTERMEDIATE GOAL # 3</p> <p>By August 1993, 50 Village Health Committees and 60 trained health cadres in Bara Province take steps to control malaria, ARI and Vitamin deficiency in children under 5 years in selected operational areas in 7 Rural Councils.</p>	<p>3.1 Percent of health cadres appropriately diagnosing and treating malaria, ARI and VAD cases according to MOH protocols</p> <p>3.2 Number of health units with adequate stock of relevant essential drugs for treating malaria, ARI and VAD.</p> <p>3.3 Number of VHCs promoting malaria preventive measures in their villages.</p> <p>3.4 Percent of mothers or caretakers that have correctly managed the most recent episode of ARI in their children <5.</p> <p>3.5 Number of villages where Vit A capsules are distributed on a quarterly basis.</p>	<p>From Final Evaluation: 82% for malaria, 55% for ARI and 90% for VAD of health cadres interviewed.</p> <p>From Final Evaluation: 38% had stock of chloroquin, 20% had antibiotics for ARI and 63% had Vitamin A capsules.</p> <p>From Final Evaluation: 100% of villages said they conducted village clean up to reduce malaria.</p> <p>CARE has not targeted caretakers with ARI messages.</p> <p>Vitamin A capsules have not been regularly distributed in the last year.</p>

BARA CHILD HEALTH PROJECT - FINAL EVALUATION - ACHIEVEMENT OF INTERMEDIATE GOALS

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PROJECT INTERMEDIATE GOALS	INDICATORS	ACHIEVEMENT
<p>INTERMEDIATE GOAL #1 By August 1993, 65% of children under five years of age in operational areas of 7 rural councils in Bara Province who had diarrhea in the past two weeks and received proper ORT.</p> <p>Note: CS project guidelines targets <2 year olds for CDD.</p>	<p>1.1 Percent of children <5 years who had diarrhea in the last two weeks and received proper ORT as reported by mothers.</p> <p>1.2 Percent of trained health workers actively training mothers and promoters in ORT.</p> <p>1.3 Percent of health facilities that have 100 or more ORS packets in stock.</p> <p>1.4 Percent of health facilities in operational areas receiving semi-annual supervisory visits using established checklist.</p>	<p>EPI cluster 30 x 7 conducted May/June 1993 = 63%.</p> <p>Baseline as determined for the 5 of 7 RCs in Sept 1989 (NKCHP) is ORS use rate = 65%</p> <p>Baseline for 2 new RCs (June '90) = 29% ORS Use Rate</p> <p>- During Final Evaluation 75% of health facilities visited had 100 packets of ORS</p> <p>- During Final Evaluation 75% of health facilities received semi-annual supervision visits</p>
<p>INTERMEDIATE GOAL #2 By August 1993, 65% of children <1 year in operational areas of Bara Province are fully immunized against the six immunizable diseases and 40% of new mothers are equately vaccinated with tetanus toxoid.</p>	<p>2.1 Percent of children under 1 year who are completely vaccinated.</p> <p>2.2 Percent of women who delivered in the last 11 months who were completely vaccinated against tetanus.</p>	<p>EPI cluster 30 x 7 conducted May/June 1993 = 47%.</p> <p>Baseline for 5 of 7 RCs determined in Sept 1989 = 45% <1s fully vaccinated</p> <p>Baseline for 2 new RCs (Um Sayala and Um Garfa) June 1990 = 29% fully vaccinated</p> <p>Baseline coverage of TT in new mothers is unknown.</p>

ANNEX - ACHIEVEMENT OF IGS

WORKSHEET TO DETERMINE MINIMUM RECURRENT COSTS FOR NOM BARA
 (\$SD 1 = 150 Sudanese pounds)

ACTIVITY	COST PER UNIT SUDANESE PDS	COST PER UNIT US \$	TIMES/ YEAR	ANNUAL COST SUD. PDS	ANNUAL COST US \$	COST FOR 3 YEARS US \$
DELIVERY OF VACCINES AND SUPPLIES TO ALL BCs Includes fuel and lubricants	32,000	\$213	12	384,000	\$2,560	\$7,680
SUPERVISION VISITS & COLLECTING VACCINES FROM EL OBIED	32,000	\$213	12	384,000	\$2,560	\$7,680
VEHICLE MAINTENANCE AND SPARES (Assumes a reasonable new vehicle)	750,000	\$5,000	1	750,000	\$5,000	\$15,000
RUNNING COSTS OF COLD CHAIN IN BARA (Assumes CARE turnover generator)	32,000	\$213	12	384,000	\$2,560	\$7,680
STAFF PER DIEMS FOR FIELD VISITS	20,000	\$133	12	240,000	\$1,600	\$4,800
TOTAL	866,000	6,778		2,142,000	\$14,200	\$42,840

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ANNEX I

SUSTAINABILITY QUESTIONS AND ISSUES ADDRESSED BY THE
CHILD SURVIVAL PROJECT FINAL EVALUATION TEAM

CARE INTERNATIONAL IN SUDAN'S
BARA CHILD HEALTH PROJECT
APRIL 1993

A. Sustainability Status

- A1. At what point does A.I.D. funding for child survival project activities end?

The Bara Child Health Project (BCHP) plans to complete project activities in August 1993. A no-cost extension was given to CARE International in Sudan to complete the child survival project awarded in 1989. The BCHP is a CS VI project.

- A2. At what point does the organization plan to cease child survival project activities?

CARE has been implementing child survival activities in Sudan since 1986. CARE in Sudan was awarded a USAID CS I project which was known as the North Kordofan Child Health Project (NKCHP). The project area for NKCHP included Bara. The BCHP is considered a Phase 2 CS project. CARE is planning to continue to implement child health activities in Bara. As a result of the final evaluation of BCHP, CARE plans to design a Phase 3 proposal to seek funding for expanded child health interventions in Bara Province.

CARE is currently implementing the Bara Maternal Health Project (BMHP) which supports interventions in family planning, antenatal care and obstetric emergencies.

- A3. How have major project responsibilities and control been phased over to local institutions? If this has not been done, what are the plan and schedule?

The three major components of the BCHP, support to EPI, CDD and improved clinical skills of MOH health workers in ARI, malaria and Vitamin A deficiency, have been implemented completely with and through the Ministry of Health at the Provincial Level in Bara. Therefore, the majority of the project responsibilities have been in the hands of MOH counterparts from the initiation of the project.

CARE's focus on community management at the village level has placed responsibilities and control of project interventions in the hands of the community throughout project implementation.

Due to the crumbling economic situation in Sudan, CARE has been called upon to provide support to maintenance of the cold chain in Bara Province and to transporting some vaccines and supplies to Rural Council depots (cold chains). It was not in CARE's original plan to provide this support, but due to severe resource shortages experienced by the MOH, CARE was requested to fill the gap. During the final evaluation, a recommendation was made for CARE and the MOH to plan phase over of these two major responsibilities. In all likelihood, however, the Bara Provincial MOH will not be able to adequately support these activities. However, a phased turnover plan should be established.

B. Estimated Recurrent Costs and Projected Revenues

- B1. Identify the key child survival activities that project management perceives as most effective and would like to see sustained.

The project staff consider the control of diarrheal diseases component to be the most effective of all activities undertaken by the project. This is due to the fact that the CDD activities have enabled villagers and health cadre to improve the management of diarrhea at the home level. The CDD intervention is the least dependant on the MOH. The effective implementation of EPI is totally dependant on the MOH to supply key elements. The malaria, ARI and Vitamin A deficiency (MAV) component relies upon the adequate supply of essential drugs which at present is grossly inadequate to meet the needs of the population.

- B2. What expenditures will continue to be needed (i.e. recurrent costs) if these key child survival activities are to continue for at least three years after child survival funding ends?

EPI: The role of the Provincial MOH is to support the running costs of the EPI services in the province. The bare minimum expenditures that are necessary to support the very basic level of services includes costs for running and maintaining the generator for the cold chain at the health center in Bara, transporting vaccines and supplies from the state level in El Obeid to Bara and delivery of vaccines and supplies to the 6 sub-cold chains at the rural council level. The estimated expenditures for a three year period are \$42,840. (This assumes that the state and federal MOH supply all EPI materials and support salary costs for key staff.) (Annex 1)

CDD: Adequate ORS packet supply and its transport to rural council depots are the key ingredients needed to continue CDD activities. ORS packets are supplied by the MOH federal level. Transport of ORS is coordinated with vaccine delivery.

MAV: An adequate supply of essential drugs is needed to continue appropriate management of malaria, ARI and VAD. At present less than half of the health units surveyed during the final evaluation has adequate supply of chloroquine, antibiotics and Vitamin A capsules. The lack of drugs is a critical problem in Bara and Sudan as a whole. UNICEF and the MOH are implementing the Bamako Initiative. CARE plans to support this initiative by implementing a revolving drug supply system project which is in the concept proposal stage.

- B3. What is the total amount of money in US dollars the project calculates will be needed each year to sustain the minimum of project benefits for three years after CS funding ends?

The calculation of the total amount of funds needed to sustain project benefits depends on many assumptions primary among these is the question of whether or not the MOH in Sudan can support PHC activities, vis a vis maintenance of cold chains, supply of adequate quantities of vaccines, ORS packets and essential drugs as well as continuing to support the basic infrastructure of the MOH, i.e. staff salaries. The support to mobile teams for intensive vaccination sessions will most likely not be supported by the MOH as a means to boost immunization coverage. Therefore, project benefits regarding EPI coverage will more than likely drop. EPI sessions will be held and project benefits sustained in only those areas where the VHC supports the health cadre to transport vaccines to the villages and mobilize communities to immunize children and women.

Assuming that the MOH can supply the needed materials, vaccines, drugs etc, the project calculates that funds needed to sustain project benefits to be the same as supporting running costs of the services in Bara at \$42,840.

- B4. Are these costs reasonable given the environment in which the project operates? (e.g. local capacity to absorb cost per beneficiary)

These costs are reasonable but they may be beyond the capacity of the Provincial Government to absorb.

- B5. What are the projected revenues in US dollars that appear likely to fund some child survival activities for at least three years after A.I.D. CS funding ends?

The MOH is responsible for continued funding of CS activities as part of the GOS's PHC programme. Communities collect resources for supporting transport of vaccines, ORS and essential drugs.

- B6. Identify costs which are not likely to be sustainable.

The Provincial government in Bara will most likely assume responsibility for maintaining the cold chain in Bara. Delivery of vaccines to Rural Council towns will more than likely not be sustained unless the federal MOH supplies vehicles and fuel for this transport.

- B7. Are there any lessons to be learned from this projection of costs and revenues that might be applicable to other child survival projects, or to A.I.D.'s support of those projects?

When a NGO works to support the implementation of a government programme, many assumptions are made concerning the ability of that government to sustain activities in the future. In the case of Sudan, where resources in support of health care are at the bare minimum and major donor support is at a near standstill, it is difficult to calculate costs and revenues.

In addition, the GOS is in a phase of decentralization, where State, Provincial and Rural Council levels are being asked to take on the burden of paying for health care costs, especially running costs. These peripheral level budgets are already being severely strained to support even basic needs.

C. Sustainability Plan

- C1. Please identify number and position of project staff interviewed, and indicate the extent of their involvement in project design, implementation and/or monitoring/evaluation.

The entire staff of BCHP was interviewed during this evaluation. This includes the Team Leader (1) and project management staff (4), Extension Coordinator (1), Field Coordinators (6), Monitoring and Evaluation Officer (1), and key counterpart staff (10). In addition, CARE's Country Director (1), senior programme staff in Khartoum (3), and finance director (1) were also interviewed during the evaluation. Other counterpart (MOH) staff were interviewed at state and federal level (8). See annex 3 for contact list.

The project management staff in Bara (4) and the CARE Khartoum programme staff (3) are the people primarily responsible for project design. Many of the ECHP staff (4), however, played a role in project design as they were staff during the Phase I NKCHP project.

All project staff and counterparts (15) are involved in project planning, implementation, monitoring and evaluation.

For this final evaluation a participatory process was used involving all BCHP staff and key project counterparts.

- C2. Briefly describe the project's plan for sustainability as laid out in the DIP, or other relevant A.I.D. reports.

The BHP approach to sustainability is based on increased community involvement in and support of CS activities.

Specifically, BHP recognized the futility of the MOH's support to mobile EPI teams, which though effective, are not sustainable due to their high cost. CARE's approach in BHP was to establish more cold chains in the province which would be depots for distribution of vaccines and supplies to nearby health care workers. In this way, dependency on the MOH and mobile teams was reduced. However, the MOH is still responsible for providing EPI services and supplies and maintain cold chains to at least the Rural Council level.

Communities were also called upon to transport, from strategically placed depots, ORS packets and essential drugs.

CARE's support to strengthening the KAP of health workers in the diagnosis and treatment of key diseases was geared to improving the quality of services delivered. Through education and mobilization of the community, CARE's strategy was to increase the demand for and utilization of improved services.

- C3. Describe what sustainability-promoting activities were actually carried out by the PVO over the lifetime of the project.

BHP's sustainability-promoting activities are based on its two main strategies. First BHP supports institutional strengthening of MOH by improving the knowledge and skills of the health care providers to provide improved quality services. This is done in a Training of Trainers approach which leaves resident in the MOH staff the ability to continue training and in-service education of health cadres.

The second strategy of BHP is the enabling of the community to support PHC interventions. This is done through the formation, training and facilitation of Village Health Committees to plan, collect resources in support of and mobilize the community to access CS interventions. Emphasis is also placed on training village level promoters who actively disseminate information to mothers about management of diarrhea in the home. Both of these initiatives supports and encourages communities to take responsibility for meeting their health care needs.

- C4. Indicate which aspects of the sustainability plan the PVO implemented satisfactorily, and which steps were never initiated. Identify any activities which were unplanned, but formed an important aspect of the PVO's sustainability effort.

CARE's work in training village promoters appears to be the most successful component of the project and one which has the greatest potential for sustainability. In combination with

this, the formation and training of VHCs was implemented satisfactorily as evidenced by the fact that 50% of VHCs support health workers in providing routine EPI sessions.

The main unplanned area of CARE's support to the MOH which negatively affects the NGOs sustainability efforts regards support to the MOH's EPI cold chains and vaccine delivery systems.

- C5. Did any counterpart institutions (MOH, development agencies, local NGOs, etc.) during the design of the project (proposal or DIP), make a financial commitment to sustain project benefits? If so, have these commitments been kept?

The support given to the MOH by the BCHP was designed to improve the quality of services delivered. BCHP assumed that the MOH would continue to support the deliver of services as part of its national programme. No financial committment was made specifically to this project.

- C6. What are the reasons given for the success of failure of the counterpart institutions to keep their commitment?

As stated previously, the counterpart institution, the MOH is experiencing severe constraints in meeting basic health needs. In fact the situation is deteriorating annually. At the beginning of BCHP, the GOS, with major support from UNICEF, was providing adequate support to CS activities, especially EPI. Now, however, this support has been significantly reduced and the results of this reduction are apparent in the inability of the provincial MOH to support even running costs of the cold chain at the provincial health center in Bara.

D. Monitoring and Evaluation of Sustainability

- D1. List the indicators the project has used to track any achievements in sustainability outputs and/or outcomes.
D2. Do these indicators show any accomplishments in sustainability?

See Annex 2 - which reviews BCHP's Intermediate Goals, indicators and achievements of these indicators to date.

- D3. What qualitative data does the PVO have indicating a change in the sustainability potential of project benefits?

The final evaluation team's group discussions with 180 community leaders and women health promoters provides qualitative information on the potential for sustainability of project activities. Most VHCs interviewed said they could sustain the activities, transporting vaccines and ORS, distributing Vitamin A capsules, conducting clean up campaigns

for malaria vector reduction etc, that they are currently doing. Women promoters continue to train mothers in CDD.

- D4. Identify in-country agencies who worked with the PVO on the design, implementation, or analysis of the midterm evaluation and this final evaluation.

The primary agency involved in project design, implementation and evaluation has been the Ministry of Health. On the final evaluation team, two senior MOH staff were full time members. The midterm evaluation was conducted by a local health consultant group headed by Dr. Magda Ali, who is the previous Director of CDD Unit in the MOH. Save the Children US, also supported by USAID CS and CARE have held periodic meetings to share lessons learned on project implementation.

- D5. Did the PVO receive feedback on the recommendations regarding sustainability made the technical reviewers of the proposal and DIP? Did the PVO carry out those recommendations? If not, why not?

DIP review comments were not readily available in Eara for review.

E. Community Participation

- E1. Please identify community leaders interviewed and indicate which group(s) they represent.

The team interviewed members of 9 Village Health Committees (VHC) from 3 Rural Councils in Eara Province. A total of 106 VHC members were interviewed, of whom 41% were women. Including those members who were not present at the interviews, 38% of all VHC members in the nine villages are women. (See annex 3)

- E2. Which child survival activities do community leaders perceive as being effective at meeting current health needs?

The interviewers utilized a methodology whereby VHC members were asked to list the child survival activities which they felt were most effective in their villages. For each of the activities, the VHC members selected symbols (for example, an ORS sachet might represent control of diarrhoeal diseases) and placed the symbol in front of an empty container or rolled-up piece of paper. Members were then given one piece of paper each, one color for women and one for men. They were asked to leave the room (along with the facilitators) and return one-by-one to put their slip of paper into the container representing the activity which they felt was most effective.

This methodology was used in an attempt to get relatively unbiased results which could then be analyzed according to gender.

The large majority of both men and women VHC members felt that EPI was the activity which was the most effective in terms of child survival. Reasons given included the sentiment that EPI produced immediate, visible and long-lasting results.

Other interventions which were mentioned by the VHC members included child hygiene, nutrition/breastfeeding, clean-up campaigns and CDD.

- E3. What activities did the PVO carry out to enable the communities to better meet their basic needs and increase their ability to sustain effective child survival project activities?

CARE implemented two activities which had a direct impact on the ability of communities to sustain child survival activities: formation and training of VHCs in 52 villages; and, the training (in liaison with the MOH) of women health promoters in CDD.

Although the formation of the VHCs was done at the initiative of CARE, committees as a form of organization are not new to the people of Bara, the GOS having initiated the formation of Salvation, Water, Education and Relief Committees in each village. Perhaps because of this, people seem to readily accept the concept of committees as a forum for identifying and addressing problems.

The roles of the VHCs (as determined by CARE) are four:

- * decision-making
- * sharing information with community members
- * linkage with relevant GOS departments
- * collect resources for implementation of PHC (and/or other) projects

Three members of each VHC attend a five day training course by CARE on roles and responsibilities of the VHC. They also receive training on PHC interventions such as the causes, prevention and treatment of Vitamin A deficiency and malaria; EPI; CDD; and, leadership and communication techniques. The latter is supposed to assist them in training other VHC and community members in what they have learned.

VHCs assist CHWs in organizing community members for EPI and Vitamin A campaigns, including registering of the names of target or at-risk populations. VHCs are also expected to assist in the procurement of drugs and transportation of vaccines and ORS. 77% of the VHCs interviewed provided evidence that they had assisted in the transport of drugs, vaccines and/or ORS sachets. These are encouraging signs that the VHCs have the capacity to support PHC activities.

VHC members utilize public sessions for passing information to other community members. These sessions are characterized by a large number of community members being introduced to a topic by an imam or sheik and explanations being offered by the trained VHC members. The impact of public sessions has not been measured by CARE; however, the structure of these forums suggests that they would be most useful in terms of introducing topics to the community which would be followed-up and reinforced with more intensive methods, e.g. home visits, small group discussions, etc.

CARE and the MOH have trained over 500 women in project villages to be health promoters. The women are trained specifically on control of diarrhoeal diseases and nine basic messages to remember about home management of diarrhoea. These nine messages are to be passed by each of the health promoters to other mothers in their village. Oftentimes songs or poems are utilized for passing the messages.

The promoters whom the evaluation team interviewed (76 total) were enthusiastic and interested, although less than half could recall all of the nine messages. Several committees had created their own songs or poems for remembering and passing on the messages. Some of them had been trained as long as five years ago without any significant follow-up. It was also not clear exactly what was expected of the promoters besides teaching mothers about CDD. None of the promoters was used as a source for mothers to obtain ORS sachets from, for example.

The promoters expressed the desire to be trained in other topics, especially ARI and FP, and to continue playing a role as a trainer for other mothers and community members. They are obviously a valuable resource to be utilized at the community level.

- E4. How did communities participate in the design, implementation and/or evaluation of child survival activities?

The communities did not participate significantly in either the design or evaluation of the child survival activities. However, both men and women VHC members identified diarrhoea, ARI and malaria as being the most serious health problems in their villages (see graph attached). Thus, the project as it was designed appears to be addressing identified felt needs.

When asked how they were able to know if their activities benefitted them, the VHC members in 89% of the villages interviewed could give at least two means of measuring impact. Examples included the decreased incidence of children with diarrhoea being treated at the clinic and the decreased incidence of immunizable diseases.

In terms of this evaluation, participation by the communities was largely passive. However, attempts were made to

incorporate non-directive and participatory exercises which would allow participants to express themselves freely. In addition, it is recommended that VHC members and health promoters be actively involved in collecting household information on coverage of selected interventions during the upcoming standardized coverage survey.

Community participation in the implementation phase of the project has been outlined in response to question E3.

- E5. What is the number of functioning health committees in the project area? How often has each met during the past six months? Please comment on whether committee members seem representative of their communities.

The project has assisted in the formation of 52 VHCs. VHCs interviewed for the evaluation had met an average of three times in the last six months.

The team found that members of 77% of the VHCs interviewed had been selected during a village meeting in which discussions were held and general consent was given by community members to nominated VHC candidates. Of the remaining two villages, in one village the sheik had appointed members and in the other village the process of selection was not made clear by the members.

On the whole, committee members seem representative of their communities.

- E6. What are the most significant issues currently being addressed by these health committees?

The most significant issues being addressed by the health committees are the organization of community members for EPI and Vitamin A campaigns, and the provision of transport (and procurement) of drugs, vaccines and/or ORS. The significance of the latter point lies in the fact that supplies may not reach the villages at all if the community relies on the MOH for procurement and/or delivery. The evaluation team estimates that 50% of the project villages are holding routine EPI sessions.

All of the VHCs interviewed identified village clean-up campaigns as an important activity that they routinely undertake. They associate this activity with preventing the transmission of diseases, especially malaria.

- E7. What resources has the community contributed that will encourage continuation of project activities after donor funding ends?

The communities, through the VHC, contribute cash, labour and transport. Indications are that this is within the capacity

of most communities to continue doing. Cash is used for purchasing supplies, labour for constructing a health center and housing for health cadres, and transport for bringing PHC supplies to the village. Each VHC has a "savings box" which is used for keeping collected revenue in.

- E8. What are the reasons for the success or failure of the committees to contribute resources for continuation of effective project activities?

Success may often be attributed to the presence of dynamic leadership of a village and/or VHC. Training and follow-up by CARE and the MOH serves to reinforce and complement such a presence, increasing the management capacity of a VHC.

Training of a VHC (and others) creates a demand for services and supplies. In the case of drugs, external forces have resulted in scarcity of drugs and extremely inflationary prices of those drugs which are available. The same goes for fuel for transportation. Having created a demand, if the supply is such that the demand cannot be met then community members may become discouraged and contributions to resources may dry up.

Willingness to contribute resources may also vary in direct proportion to the distance from supply points, for example a cold chain. Bara Province, having a total area of approximately the 19,000 km² (the same size as Swaziland), has only 7 cold chain depots to serve over 700 widely scattered villages.

It is also worth noting that Bara is a marginal area which is subject to periodic droughts and where food distributions are not uncommon. Food distributions, no matter what their merit, may reinforce a sense of dependency on outsiders which can be difficult to overcome when making the transition to development programming. Under such circumstances, willingness to contribute resources may wither.

F. Ability and Willingness of Counterpart Institutions to Sustain Activities

- F1. Please identify persons interviewed and indicate their organization and relationship to the child survival project.

Refer to the contact list in Annex 3. The primary counterparts at the MOH in Bara, the Medical Officer, the Senior Medical Assistant and the Health Visitor, along with the Provincial PHC committee were interviewed. State and Federal MOH staff were also contacted. The Sr. Medical Assistant was a member of the evaluation team and was involved in designing, implementing and analyzing results of the evaluation.

- F2. What linkages exist between the child survival project and the activities of key health development agencies (local/municipal/district/provincial/state level)? Do these linkages involve any financial exchange?

As stated, ECHP supports the Ministry of Health in all aspects of the project. No financial exchange took place nor was it included in the design of the project.

- F3. What are the key local institution the PVO expects to take part in sustaining project activities?

The Ministry of Health at the Provincial and Rural Council levels, as well as MOH health cadres at the dispensary and health unit levels.

- F4. Which child survival project activities do MOH personnel and other staff in key local institutions perceive as being effective?

EPI is perceived as being most effective eventhough it consumes the majority of resources of the MOH. The support CARE has given in the CDD component is seen by MOH counterparts as being very effective.

- F5. What did the PVO do to build skills of local MOH personnel or staff of key counterpart NGOs? Did they teach them to train CHWs, or manage child survival activities once A.I.D. funding terminates?

Support to training of health cadres in EPI, CDD, malaria, ARI and VAD was done by ECHP as part of its institutional strengthening strategy. A TOT approach was used. Medical Assistants were trained as Trainers to train CHWs and EPI vaccinators as well as village promoters. The project supported the training in solar refrigerator maintenance.

As stated the current ability of the MOH or other relevant local institutions to provide the necessary financial, human, and material resources to sustain effective project activities once CS funding ends?

As stated in sections E and C, the MOH is severely constrained to provide the necessary financial, human and materials resources necessary to sustain effective project activities once CS funding ends. The MOH's ability is dependent on donor support especially in the provision and delivery of materials and supplies and maintenance of equipment such as the cold chain system.

In the case of support to human resources, the MOH is already experiencing severe shortages in manpower, especially in remote areas. The vacancy rate is nearly 50% in some areas. Low salaries and incentives plague the ability of MOH to

adequately staff and support health services delivery. The lack of hard currency prohibits the GOS in procuring essential spare parts and drugs.

- F7. Are there any project activities that counterpart organizations perceive as effective? See F4.

G. Project Expenditures

- G1. Attach a pipeline analysis of project expenditures.
- G2. Compare the budget for planned expenditures identified in the DIP with the actual expenditures at the end of the project. Were some categories of expenditures higher or lower than originally planned?
- G3. Did the project handle the finances in a competent manner?
- G4. Are there any lessons to be learned regarding project expenditures that might be helpful to other PVO projects, or relevant to A.I.D.'s support strategy?

H. Attempts to Increase Efficiency

- H1. What strategies did the PVO implement to reduce costs, increase productivity, or make the project more efficient?

By basing of the project in Bara, CARE reduced costs for transportation and support of project staff. (The NKCHP was based in El Obeid). CARE support to staff training and cross visits to other similar projects in Egypt and Kenya increased the motivation and productivity of CARE staff.

- H2. What are the reasons for the success or failure of the attempts to reduce costs, increase productivity or efficiency of this project?

Staff training and exposure to other projects in other countries improves staff morale as well as sharing and learning from others implementing similar projects.

- H3. Are there any lessons to be learned regarding attempts to increase efficiency that might be applicable to other PVO child survival projects?

Staff training and study tours should be an integral part of all CS projects and supported by donors.

I. Cost Recovery Attempts

No cost recovery initiatives were conducted by the project to reduce project expenditures.

J. Household Income Generation

The project did not implement any household income-generating activities?

K. Summary

K1. Please give a brief (no more than one page), succinct summary of the responses to the previous questions concerning:

- the project's accomplishments (in terms of outputs and/or outcomes) in enabling communities to meet their basic health needs, and in promoting sustainability of effective child survival activities;
- the project's competence in carrying out its sustainability promoting activities;
- any lessons to be learned regarding sustainability that might be applicable to other FVO child survival projects, and/or relevant to A.I.D.'s support of these projects.

K2. Attach a list of all members of the final evaluation team and indicate institutional affiliation.

CORE EVALUATION TEAM MEMBERS

1. Dr. Nawal Mahmoud - Director of PHC - MOH Khartoum State
2. Dr. Ismail Awad Allah - Director of MCH - MOH Kordofan State
3. David Adriance - Project Coordinator - CARE Kenya
4. Kate Burns - Freelance Consultant - WHO/GPA Technical Officer

CO-EVALUATORS

1. Ellen Pierce - Provincial Team Leader - CARE Bara
2. Marco Menses - Provincial Team Leader - CARE Bara (replacing EP)
3. Dr. AbdelRahim Ahmed - Project Manager - BCHP
4. Mr. El Tahir Karam El Dien - Sr. Medical Assistant - MOH Bara
5. Osama Gafir - Monitoring and Evaluation Officer - CARE Bara