

1996 **BHR/PVC** CHILD SURVIVAL

MID-TERM EVALUATION

for CS-X Three-Year Projects

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CHILD SURVIVAL and MATERNAL HEALTH PROJECT
NORTHERN DENKALIA, ERITREA

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LIST OF ACRONYMS USED IN THIS REPORT

ANC	Antenatal Care
CDD	Control of Diarrheal Diseases
CHA	Community Health Agent (used interchangeably with CHW)
CHW	Community Health Worker
CR	(Africare) Country Representative
CSP	Child Survival Program
CS/MHP	Child Survival & Maternal Health Program
DIP	Detailed Implementation Plan
EMOH	Eritrean Ministry of Health
EPI	Expanded Program of Immunization
HIS	Health Information Systems
HMIS	Health Management Information Systems
KPC	Knowledge, Practice & Coverage
MOH	Ministry of Health
NGO	Non-Governmental Organization
ORS	Oral Rehydration Salts
ORT	Oral Rehydration Therapy
PA	Project Advisor
PVO	Private Voluntary Organization
s s s	Salt Sugar Solution
TBA	Traditional Birth Attendant
TOT	Training of Trainers
1-r	Tetanus Toxoid
USAID	United States Agency for International Development
VHC	Village Health Committee
WRA	Women of Reproductive Age
ZMOH	Zonal Ministry of Health

I. ACCOMPLISHMENTS

A. BACKGROUND

The Child Survival and Maternal Health Project of Northern Denkalia, Eritrea, hereafter referred to as **CS/MHP**, represents a pioneering effort in a newly independent State. The project began in October 1994, and now in November 1996, **CS/MHP** has been in operation for 26 months, or 70% of its estimated 3-year duration. According to the Technical Review of the Detailed Implementation Plan (DIP),

Eritrea, recently independent, is emerging from 30 years of fighting and ranks among the world's neediest countries. The selected project area of North Denkalia is the most underserved of the Eritrean populations. Africare deserves recognition for accepting the formidable challenge of assisting North Denkalia to systematically rebuild basic health services delivery.

This **CS/MHP** is also unique in the official leadership role played by the Northern Red Sea Zonal Ministry of Health (ZMOH) of Eritrea in the planning and hands-on management of the program.

When the project was planned, the sub-province of Northern Denkalia had an approximate population of 18,000 people widely scattered in a desert terrain that records some of the hottest temperatures in the world. Recent administrative reorganization led to the creation of six Zones within the country. Northern Denkalia was formerly located at the far northern end of a province that had Assab as its capital. Presently, it has been renamed Ghelalo Sub-zone and is located at the southern end of Northern Red Sea Zone with Massawa as zonal headquarters. The people are mostly Afar-speaking, among whom are nomadic pastoralists.

The area lacked basic health infrastructure at the start of this 3-year project. Also a Knowledge, Practice and Coverage Survey conducted by Africare in December 1994, documented that, among other concerns, practically no childhood immunization was taking place in the area. These and other findings formed the basis of the original project objectives planned inputs and outputs as outlined below in Table 1.

The review of this CS/MHP has been conducted bearing in mind that the process of transition of the project area from one Zone to another was not officially completed until May 1996. This meant that some major decisions concerning implementation were delayed. The implications of this situation will be made evident in the body of the report.

During the review it was realized that the target numbers specified in the DIP and the objectives below do not coincide after creation of the new Zones. When Northern Denkalia Sub-province became Ghelalo Sub-zone, its borders were enlarged, and now has an estimated population of 24,604. Several villages in the new Sub-zone are closer to a health facility in Zula Sub-zone and are not within the catchment areas of the three project facilities. Thus the estimated total target population for the project is 21,754, as seen in Table 2.

TABLE 1: Original Objectives, Planned Inputs and Outputs

OBJECTIVE	PLANNED INPUT	PLANNED OUTPUT
<p>1. To help establish sustainable mechanisms to fully immunize 50 % of an estimated 1,800 eligible children in N. Denkalia who will be 0-11 months of age during a given year (compared with the present 0% coverage)</p>	<p>Full population house numbering/ registration;</p> <p>EPI training for MOH staff and CHWs;</p> <p>provision of cold chain equipment, EPI supplies and appropriate health education materials.</p>	<p>EPI/cold chain-trained MOH staff;</p> <p>regular static and outreach EPI clinics;</p> <p>functional cold chain maintained;</p> <p>CHWs trained in and providing effective EPI messages to target population</p>
<p>2. At least 50% of the mothers of an estimated 8,100 children < 5 years in N. Denkalia will be taught by project-trained MOH Health Staff, CHWs and TBAs to properly prepare and administer ORT, and at least 40% will use ORT to treat their children's diarrhoea.</p>	<p>ORT TOT workshops for MOH staff, who will then train CHWs;</p> <p>ORS packets made available (unless SSS is feasible);</p> <p>improved access to safe drinking water;</p> <p>educational materials provided to CHWs.</p>	<p>MOH staff trained to train CHWs;</p> <p>CHWs trained to teach ORT to parents and older children;</p> <p>community leaders promoting the use of safe drinking water as well as ORT among community members.</p>
<p>3. To enable at least 50% of the estimated 2,250 home deliveries per year in N. Denkalia to be preceded by at least one antenatal visit by a trained person, and at delivery be assisted by a trained TBA or other trained personnel. (None are currently aided by trained TBAs.)</p>	<p>Safe childbirth TOT workshops for MOH staff, who will then train TBAs;</p> <p>TBA kits to be provided simultaneously with training of TBAs;</p> <p>if needed, support of clinical facilities adequate to handle or transport high risk pregnancies.</p>	<p>MOH staff trained to train TBAs;</p> <p>TBAs trained in and equipped for safe childbirth, proper antenatal care, including promotion of TT, nutrition and early referral of high risk cases;</p> <p>clinic facilities adequate to handle or transport high risk pregnancies.</p>

OBJECTIVE	PLANNED INPUTS	PLANNED OUTPUTS
<p>4. To educate at least 50% of the mothers of an estimated 3,600 children < 24 months on adequate weaning practices. (Because appropriate foods may be scarce in remote desert conditions, efforts to change weaning habits will be accompanied by assistance in making such weaning foods available.)</p>	<p>TOT workshops for MOH staff, who will then train CHWs and TBAs;</p> <p>training to include health education that emphasizes use of locally available weaning foods.</p>	<p>MOH staff trained to train CHWs and TBAs;</p> <p>CHWs and TBAs trained to effectively promote healthy weaning practices emphasizing use of locally available/nutritionally adequate weaning foods.</p>
<p>5. To assure that 50 % of WRAs (i.e. at least 4,500) will receive 2 doses of TT immunization each year until completing five doses; to provide child spacing information (as possible without jeopardizing the project) to WRAs and their husbands, making available FP commodities at MOH clinics.</p>	<p>MOH staff trained to discreetly promote child spacing at clinic sites and in TBA training;</p> <p>appropriate types of contraceptives made available at clinics;</p> <p>For TT immunizations, inputs are the same as those for Objective 1.</p>	<p>MOH staff/TBAs trained to promote child spacing in a culturally sensitive manner, supported by availability of appropriate contraceptives;</p> <p>For TT immunizations, outputs are the same as for those under Objective 1.</p>

OBJECTIVES	PLANNED INPUTS	PLANNED OUTPUTS
6. Educate at least 50% of mothers with children < 5 years of age on the need to seek immediate medical treatment for child ALRI and malaria symptoms; promote community-based antimalarial activities, focusing on elimination of mosquito breeding sites and the use of impregnated bed nets.	Train CHWs to recognize and treat malaria, recognize/ refer ALRI cases , and take measures to prevent both diseases, including community-based malaria prevention education, mosquito breeding site elimination and promotion of impregnated bed net usage.	Appropriately trained CHWs effectively providing malaria and ALRI prevention education to target population. Community leaders that are informed about and who fully support malaria prevention activities.
7. Assist the EMOH to (1) upgrade its health center in Ghelalo, and (2) establish a health station at Bada, 110 kilometers away.	Africare to provide up to \$120,000 in construction funds; MOH to design, contract and supervise construction.	Upgraded health center in Ghelalo and new health station in Bada.

TABLE 2: Revised Population Estimates

Objective	Population Group	Estimated Number	Percentage used by EMOH to Calculate
1. EPI	Children 0-11 months	870	4%
2. ORT/CDD	Mothers/Children < 5 yrs.	3,916	18%
3. Safe Deliveries	Pregnant Women	1088	5%
4. Weaning and Nutrition	Mothers of Children < 24 months	1,740	8%
5. TT Immunization and Family Planning	Women of Reproductive Age	4,351	20%
6. Malaria and ALRI	Mothers/Children < 5 yrs.	3,916	18%
7. Upgrading of Health Facilities	Total Population	21,754	100%

B. MEASURABLE INPUTS AND OUTPUTS

INTERVENTION 1: *Immunization of Children Aged 0-11 Months*

INPUTS	OUTPUTS
<p>1. Training</p> <ul style="list-style-type: none"> a. training for MOH staff on EPI service delivery. b. TBAs trained in EPI promotion c. on-site training in solar fridge maintenance <p>2. Materials and Supplies</p> <ul style="list-style-type: none"> a. 3 health education posters provided to all 3 clinics b. 2 job aids provided at each clinic c. UNICEF solar fridges at each clinic placed and repaired d. immunization practice manual provided for each clinic e. EPI coverage charts at each facility f. cold boxes provided for each facility by UNICEF g. vaccine supply from zonal office monthly h. Facts for Life advocacy brochure in Tigrena and Arabic developed i. UNICEF vehicle stationed in Bada; MOH gives fuel for j. TBAs provided educational charts on EPI schedule k. steam sterilizer provided by UNICEF and kerosine by MOH l. Truck owners help carry supplies from Massawa to facilities <p>3. Other</p> <ul style="list-style-type: none"> a. technical assistance provided to zonal and facility staff on cold chain logistics b. EPI advocacy meetings for community leaders c. MOH has Open Vile Policy to reduce vaccine wastage 	<p>One MOH staff from each facility trained in 10/95, 10/96</p> <p>cold chain functioning: 3196 in Bada, 4/96 in Ghelalo; 7/96 Ingal</p> <p>Static EPI sessions have began at all 3 sites on Daily basis.</p> <p>1000 mothers reached through health education/EPI promotion by Bada staff</p> <p>41 TBAs trained 9-10/96</p> <p>Mothers being reached with EPI education by TBAs</p> <p>90 village leaders reached through advocacy meetings in each of the 3 areas</p> <p>EPI Outreach two villages monthly in Bada area</p> <p>Staff conducting health education sessions at clinics on weekly basis</p> <p>Coverage charts compiled only at Bada clinic</p>

INTERVENTION 2: Oral Rehydration Therapy for Children

INPUTS	OUTPUTS
<p>1. Training</p> <p>a. TBA training session on ORS preparation and general home management</p> <p>2. <u>Materials and Supplies</u></p> <p>a. ORS promotion kits provided to each TBA containing ORS, hand soap, jug, marker, and 2 educational cards about dehydration and how to mix ORS/home fluids</p> <p>b. WHO diarrhoea case management book provided for training clinic staff</p> <p>c. ORS packets supplied by MOH to facilities and TBAs</p> <p>d. home fluids identified during mid-term as tea, gruel, water from cooking grains, milk</p> <p>3. <u>Other</u></p> <p>UNICEF has been working in the area to provide handpumps, but not as yet coordinated with the CS/MHP</p>	<p>41 TBAs trained in ORS preparation and diarrhoea home management</p> <p>TBAs have begun teaching mothers about ORT (e.g. approximately 50 taught in first month in Bada)</p> <p>TBAs have used about half of their original ORS stock of 4 packets in first month</p> <p>ORS preparation and administration taught at health facilities at least monthly</p>

INTERVENTION 3: *Antenatal Care and Assisted Delivery by Trained Attendant*

INPUTS	OUTPUTS
<p>1. Training</p> <ul style="list-style-type: none"> a. Training of TBAs using EMOH curriculum b. Continuing on-the-job training for TBAs arranged at clinics by health staff <p>2. Materials and Supplies</p> <ul style="list-style-type: none"> a. TBA training materials provided b. TBA kits provided c. Health Education Materials and handouts provided for TBAs d. Facilities have basic equipment supplies by MOH 	<p>41 TBAs trained and kitted (9-10/96) during 2-week workshops at each of the 3 facilities</p> <p>TBAs are distributed as follows:</p> <ul style="list-style-type: none"> 14 - Bada 12 - Ghelalo 15 - Ingal <p>these trainees come from 15 of 35 villages in the area and cover an estimated 49 % of the target population; other villages were too remote from clinics where training was based</p> <p>Head nurse at Bada conducted the training and is now a valuable resource for future training</p> <p>All TBAs conducting deliveries and those in Bada have begun submitting monthly reports</p> <p>TBAs have been coming to clinics to seek advice, refer clients. In Bada and Ingal TBAs undergo continuing on-the-job training from clinics staff at scheduled times</p> <p>A few TBA referrals to the clinic have already been documented</p> <p>Antenatal care offered weekly at all three clinics; TBAs referring mothers to ANC</p>

INTERVENTION 4: *Health Education on Weaning and Breastfeeding*

INPUTS	OUTPUTS
<p>1. Training</p> <ul style="list-style-type: none"> a. UNICEF organized 3day breastfeeding promotion course for MOH staff b. TBA training on exclusive breastfeeding for < 6 months and appropriate introduction of family foods <p>2. Materials and Supplies</p> <ul style="list-style-type: none"> a. Books on breastfeeding and nutrition given to each facility <p>3. Other</p> <ul style="list-style-type: none"> a. Participated in USAID/Africare Irrigated Agriculture Project baseline survey in Bada 	<p>41 TBAs training on breastfeeding and weaning (9-10/96)</p> <p>One staff member from each clinic attended breastfeeding course</p> <p>TBAs report counseling mothers on exclusive breastfeeding for 6 months and continued breastfeeding for 18-24 months</p> <p>Baseline Survey for the Bada Irrigated Agriculture Project conducted; the project will provide a foundation on which the CS/MHP project could encourage food production and nutrition education</p>

<p>INTERVENTION 5: <i>Tetanus Toxoid Immunization for WRAs</i></p> <p style="text-align: center;">see Inputs and Outputs for Intervention 1</p>
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INTERVENTION 6: *Health Education on Child Spacing and Provision of Commodities at Health Clinics*

INPUTS	OUTPUTS
<p>1. Training</p> <ul style="list-style-type: none"> a. TBAs trained on exclusive breastfeeding only b. Some Family Planning training available from MOH and Planned Parenthood Association of Eritrea (PPAE) <p>2. Materials and Supplies</p> <ul style="list-style-type: none"> a. Contraceptives available at all clinics, including pills and condoms b. PPAE provided facilities with flipchart on family planning methods 	<p>41 TBAs trained on breastfeeding as a child spacing method</p> <p>provision of condoms occurring at all clinics for men planning to travel out of the area; only in Ingal are a few women clients coming for pills</p> <p>Efforts to offer general health education on family planning at clinics disliked by clients</p>

INTERVENTION 7: *Health Education for Immediate Treatment Seeking for ALRI*

INPUTS	OUTPUTS
<p>1. Training</p> <p>Project Manager attended ALRI workshop in Malawi</p> <p>2. Materials and Supplies</p> <p>antibiotics for treating ALRI are provided to all clinics by MOH</p> <p>3. Other</p> <p>MOH is developing for likely implementation in 1997 an integrated sick child case management policy</p>	<p>Clinic based treatment for pneumonia averages 86 per month for all ages with 87% of cases coming from Bada</p>

INTERVENTION 8: *Prompt Treatment of Malaria and Community Based Antimalarial Activities*

INPUTS	OUTPUTS
<p>Materials and Supplies Antimalarial drugs, including chloroquine and Fansidar are provided to all clinics by MOH</p>	<p>Clinic based treatment for (suspected) malaria averages 133 patients of all ages in the three clinics, most of whom are in Ghelalo and Ingal</p>

INTERVENTION 9: *Health Facility Upgrading*

INPUTS	OUTPUTS
<p>1. <u>Technical Assistance</u></p> <ol style="list-style-type: none"> a. Investigation of appropriate facility designs for hot climates b. Developed bill of quantities and specifications for fence, water tanks, VIP latrines for Ghelalo and Ingal forwarded to Zonal MOH c. Proposed furniture list for facilities provided to MOH for purchase <p>2. <u>Materials and Supplies</u></p> <ol style="list-style-type: none"> a. Provided 6-book set of public health resource books provided at all clinics as outlined above b. Supplied water barrels, basins, buckets, jerry cans and other materials at each facility c. Furniture including shelves, tables, desks, cupboards, chairs, etc. supplied to each facility. c. MOH Construction of temporary wood clinic at Bada (1995) and standard Health Station in Ingal (1996) d. Funds provided for minor upgrading at facilities to provide shade for patient waiting area and kitchens in Ghelalo and Ingal e. donkey provided in Ingal to collect water for clinic 	<p>Temporary wooden clinic in operation at Bada; new Health Station in operation at Ingal</p> <p>Shade for patients constructed at Bada</p> <p>Kitchens constructed at Ingal and Ghelalo</p> <p>Water stored in all facilities</p> <p>Facilities are all serving patients daily on both outpatient and inpatient bases</p>

c. COMPARISON: OUTPUTS VERSUS OBJECTIVES

1. Immunization

All required inputs are in place for conducting EPI at static facilities and children and mothers are being immunized on a daily basis in **Bada** and Ghalelo. Transportation is needed for outreach in Ghelalo and Ingal. Training/encouragement is needed on data recording and chart making at Ghelalo and Ingal. **TBAs** are beginning to mobilize mothers to attend. A more formal role in identifying eligible children and tracing defaulters needs to be developed for the **TBAs** so their input can be more easily measured.

Although relevant to many interventions, the issue of community health workers (**CHWs**) will be addressed here. To date the CS/MI-IP has not begun efforts to train **CHWs**. Eleven **CHWs** had been trained by the previous provincial MOH in Assab prior to the **CS/MHP**. These persons were not well integrated back into their communities and logistical and supervisory support was not developed. Consequently, most have stopped functioning. Two were fortunate to be absorbed into the clinic staff in two facilities, **Bada** and Ingal, and help with dressings and injections. Should the project decide to pursue CHW training, there is urgent need to plan community mobilization and support well in advance and to design a resource and supervisory support system at the sub-zonal level.

2. Oral Rehydration Therapy

TBAs are beginning to teach mothers about ORS/ORT. Clinic based education needs to be formalized. They understand the simple educational materials provided. There is also need for more field investigation into acceptability and feasibility of home based fluids, and incorporation of the findings into continuing education for **TBAs** and clinic staff.

Staff training in ORT/ORS/CDD is still needed to enhance clinic based and community health education.

To date, no activities or inputs have been directed at the issue of access to safe water as a preventive measure as spelled out in the DIP inputs for this objective. UNICEF is operating borehole well projects in the area and should be contacted for possible collaboration. Without such cooperation, this input should be dropped from the project plans.

3. Assisted Delivery

Based on data from Bada, the recently completed TBA training has the potential of guaranteeing the desired 50% of the births in the area with a trained attendant. Supervision of **TBAs** is progressing well in **Bada** where there is transportation. Follow up of **TBAs** in the other 2 clinics needs to be similarly planned. **TBAs** are reporting, and community leaders confirming that they are using more hygienic practices such as washing hands and cutting the cord with a new razor blade. A few referrals by the TBA to the nearest clinic have been documented.

Without transport at each facility the issue of referral of high risk pregnancies cannot be addressed. Unfortunately, the closest referral facility in Massawa is at minimum 6 hours journey over very rough roads. Provision of transport alone may not solve this problem, and attention may be needed to upgrade staff and facilities capabilities within the sub-zone in the future.

4. Nutritional Weaning Practices

The introduction of appropriate weaning foods was a small part of the TBA training. Training has not been undertaken for clinic staff. The harsh climatic conditions make the

inclusion of vegetables and a greater variety of foods difficult. Interviews with community leaders found an awareness of the need to feed children and pregnant women with nutritious food, but these same leaders acknowledged that food is scarce and expensive. The **Bada** agricultural project baseline found that many families are landless and few who have land earn enough cash to pay for their annual food and other needs. Those who farm may produce only enough to feed the family for 3 months. Food donations had been coming into the area, but these had stopped during the transition of the Sub-zone from Assab to Massawa. The ZMOH explained that locally produced weaning food supplements are now available and are being shipped out to the sub-zone within the week.

Clearly, basing weaning/nutrition education on donated food supplements is not a sustainable program. There are some potentially bright future prospects through planned activities by the Ministry of Agriculture.

Potential collaboration with the Ministry of Agriculture on locally appropriate weaning food production may be possible in the not too distant future. At the sub-zonal office in Ghelalo there is a resident home economist. A special project office in **Bada** has been set up with **USAID/Africare** assistance to experiment with irrigation and vegetable crops such as cabbage, tomatoes and okra. The **Bada** agricultural staff expressed willingness to experiment with other crops that could be used for weaning.

5. TT Immunization and Child Spacing

The combination of antenatal clinic, cold chain equipment, and daily provision of EPI has enabled full functioning of Tetanus Toxoid immunization alongside of EPI. Other comments relevant to this section are found in subsection 1 above.

Only one staff in the sub-zone has received some family planning training, and that was before the start of the CSIMHP. Progress is being made on creating awareness among **TBAs** about the importance of breastfeeding and a child spacing measure. There is a strong pro-natalist attitude in the community. **TBAs** were unanimous that it is permissible for a husband to resume having sex with his wife immediately after the 40 day traditional resting period after giving birth is over. **TBAs** believe that the “normal” space between children in the community is 6-24 months (6 months was actually mentioned). This rapid qualitative data gives a better picture of the views of mothers than the KPC Survey results where 63 % of currently non-pregnant women said they did not know about the number of years between births.

Use of family planning commodities for child spacing purposes was found only in Ingal among a handful of women who had lived in Massawa before. Although a few men obtain condoms from the facilities (e.g. approximately 20 per month in Ghelalo), this is for the purpose of protection when they travel out to Yemen or Saudi Arabia. Otherwise, the large stock of pills in the clinics are requested by women with amenorrhea who want to get pregnant and take a one-month course in order to regulate their menstruation.

Clinic groups have expressed dissatisfaction with health staff when family planning has been the subject of a health talk. During training, the **TBAs** said their husbands would not accept ideas like family planning. Health staff shared with the team the local concerns for increasing population because of intertribal conflicts of the recent past. No culturally sensitive educational materials or methods are yet available.

6. Health Education on ALRI and Malaria

Although malaria and ALRI treatment is being provided at all facilities, there is lack of a proper epidemiological profile of the conditions in the area. The environment itself is very harsh regarding mosquito breeding, so there is suspicion that many reported cases of malaria

may be other febrile conditions. Therefore, all treatments are presumptive.

Concerning specific project inputs, no training, educational material development or community based education has occurred on either appropriate treatment or community based control measures. The possible intervention of insecticide impregnated bed nets is on trial in another part of the country, and further expansion of that activity will await both study results as well as more detailed epidemiological and entomological study of the area.

Accurate prompt treatment of malaria is inhibited by the lack of laboratory staff and equipment. Finally, the issue of prompt treatment beyond the clinic will be contingent on resolving the future of CHW training.

7. Facility Upgrading

This intervention was initially justified due to the very inadequate state of basic health infrastructure in the area. In short, the health staff had no base from which CS and other preventive services could be offered. Before the project got underway, a full health center was built in Ghelalo. In 1995, the MOH built a temporary wooden facility in Bada, and based on the high level of community response, realized that it should also be designated as a health center. This year the MOH completed a Health Station in Ingal. Thus there are facilities in the north, south and center of the sub-zone, although not all segments of the population have easy access because of the great distances and poor roads in the area.

To date, some basic supplies have been provided and well as minor construction (waiting area shade, kitchens). The MOH has been requested to provide a costed plan for a permanent facility in **Bada** as well as cost estimates for any necessary upgrading at Ghelalo and Ingal. The zonal engineer is yet to provide this according to the ZMOH officials. Also, the funding status for these infrastructural needs to be ascertained, since such is covered in the private contribution section of the CS/MHP proposal. Finally, the issue of a permanent location of the **Bada** Health Station is yet to be resolved since the surrounding villages may be relocated as a result of the irrigation project.

Due to the high cost of construction work in remote areas, the ZMOH has indicated that it would be more efficient to undertake both the larger construction of the **Bada** facility and the other minor upgrading needs of Ghelalo and Ingal at the same time.

DOCUMENTS & SOURCES OF DATA REVIEWED

Field Project Detailed Implementation Plan, Child Survival/Maternal Health Project, Denkalia Province, Eritrea, April 1995.

Knowledge, Practice and Coverage Survey Report, Denkalia Province Child Survival and Maternal Health Project, December 1994.

First Annual Report, Child Survival and Maternal Health Project, Northern Denkalia Sub-Province, Eritrea, October 1995.

Summary of Progress Toward Goals and Objectives, Northern Denkalia Child Survival Project, October 1996.

Africare/Eritrea CSP Monthly Reports, December 1995 through August 1996.

Africare/Eritrea Country Representative Monthly Reports: November 1995 - September 1996.

Africare/Eritrea CS/MHP Monthly Reports: December 1995 through August 1996.

Northern Red Sea Zone, Ghelalo Sub-zone Population Estimates, EMOH, 1995.

Africare/Eritrea CS/MHP Report on TBA training: September-October 1996.

Baseline Survey Report of the **Bada** Irrigated Agriculture Project. **USAID/Africare**, August 1996.

TBA Monthly Report, **Bada** Health Center, October 1996

Summary Returns/Records of all 3 Health Facilities in Ghelalo Sub-zone.

Interviews with Health Facility Staff, **TBA**s, Sub-zonal Administrative Staff and Community Leaders (see annex 1)

Revised Work Plan, **CS/MHP**, December 1995

II. EFFECTIVENESS

Because major interventions could not begin until the status of Sub-zone Ghelalo as a part of Northern Red Sea Zone was not formally clarified in May 1996, progress has been somewhat limited overall. In addition, the number of interventions in the DIP, specifically 8 concerning health service delivery, was quite high. Some interventions, such as ALRI and malaria treatment may be premature until the MOH completes policy documents on these issues and undertakes integrated sick child case management training for health staff. Therefore, in the sections below, suggestions for revising or deleting certain **CS/MHP** objectives are offered.

A. PROGRESS TOWARD OBJECTIVES & TARGETS

1. Immunization

The target of 50 A coverage of children 0-11 months was based on the national EPI goals. With the 3 facilities operating EPI less than one year, there is visible progress. **Bada** has been providing EPI since March 1996 and has submitted returns for 8 months; Ghelalo, operating since April, has submitted for 6 months; **Ingal**, functioning since July, submitted for 3 months.

The KPC Survey documented essentially no immunization coverage in the area. With available data from the 3 facilities the following coverage by antigen has been achieved:

44% BCG
17% OPV3
17% DPT3
18 % Measles
10 % Fully Immunized

While progress is being made, it is unlikely that the target will be achieved within the coming year. We are yet to see the effect of TBA promotion of EPI, advocacy with village leaders and outreach (as only one facility does this now). Therefore, it may still be possible to make more progress within the life of the project.

Revision: This objective is viable, and the only revision would be to bring target population

figures in line with those in Table 2.

2. Oral Rehydration Therapy

It is too early, only one month after TBA training, to measure any effect of community based ORT education in terms of awareness (50% of mothers of children < 5 years) and use (40 W). Also training of clinic workers and clinic based health education is still needed. Community leaders are aware of ORT, in part because of efforts of the EPLF (**Eritrean** People's Liberation Front) Medical Corps over the years, so that they are at least receptive to ideas that TBAs are already promoting.

Revision: This objective remains relevant and requires only revision of target population figures.

3. Assisted Delivery

Based on the first TBA monthly report and facility monthly records from Bada, there were 22 home deliveries assisted by a trained attendant. This compares to 8 or less on average in previous months (Bada clinic staff previously did attend and report on some home deliveries). Based on the target population of 599 pregnant women in the area, one would have expected approximately 50 births per month, and at most 5 would have been delivered in the clinic based on records. Thus a rate of 49 % of home deliveries being attended by a trained persons in October comes close to the target of 50% in the DIP.

It is too early to calculate the percentage of home deliveries having previously received antenatal visits by a trained attendant. In order to obtain this information, appropriate forms need to be designed and utilized by local clinic staff and **TBA**s.

Revision: This objective remains relevant and requires only revision of target population figures.

4. Nutritional Weaning Practices

Intervention on this issue has not been undertaken and therefore it is not possible at this time to measure whether progress toward the objective of 50% of women with children under 24 months practicing nutritious weaning. Requests by community leaders for weaning food supplements reinforces findings in the irrigated agricultural baseline survey that local food production is inadequate. Supplemental donated foods can not form the basis for health education on the use of appropriate locally available weaning foods. Until the irrigation project makes such foods available (at least in the **Bada** area), this objective and intervention is premature.

Revision: This objective and intervention should be dropped from the CS/MHP.

5. TT Immunization and Child Spacing

Following from the EPI Objective, it was possible to calculate that to date 21% of pregnant women have had at least two **TT** contacts. At present the immunization program is focusing on pregnant women who come for antenatal or regular outpatient care. The goal of immunizing all WRAs appears premature under the present situation.

No formal education on child spacing has occurred because of community resistance. TBAs are aware of the role breastfeeding plays in child spacing, and appear willing to promote this under the rubric of proper child care. This objective should be revised in two parts, decreasing the direct emphasis on measuring family planning outcomes for the current project

(though staff should continue to provide health education on family planning as appropriate opportunities become available). Two new objectives would read as follows:

Revision: To assure that 50% of pregnant women (i.e. at least 544) will receive 2 doses of 'IT immunization during their pregnancy.

To educate at least 50 % of pregnant women and mothers of children < 24 months (2,808 total) on the need for exclusive breastfeeding for the first six months and continued breastfeeding for up to 24 months.

6. **Health Education on AT, RI and Malaria**

This intervention has neither been planned nor carried out either through clinic education or TBA promotion. Action on the bed net aspect appears unlikely until results are in from a study in the Gash Setit area of the country and until proper epidemiological study of the Ghelalo area is undertaken. Drug supplies are available at clinics to treat both malaria and pneumonia, and the possibility of incorporating prompt referral of patients by the TBAs could be considered in future continuing education efforts. The problems of clinic access and no laboratory services would still present a problem.

Revision: This objective and intervention should be dropped from the **CS/MHP**.

7. **Facility Upgrading**

Aside from a change of name and enlargement of area, the Ghelalo Sub-zone itself is also a new health entity. Approximately four years ago, there were not health facilities in the area. Now **three** are functioning, showing a commitment by the MOH to bring health care closer to the community.

Some supportive equipment (including a donkey), furniture, supplies and minor additional structures have been provided, and all are offering basic services. Further progress on upgrading awaits submission by the ZMOH of cost estimates for facility upgrades and a decision about the location of the **Bada** group of villages. The ZMO has expressed willingness to search for funds to supplement the original Africare promise for a health station so that a full health center may be built. The remoteness of the area means that it will be necessary to plan construction at all facilities in the area at one time to reduce contractor costs. A revision of this objective should reflect the fact that Ingal Health Station has opened and that **Bada** has been designated as a Health Center.

Revision: To assist the **EMOH** to (1) upgrade its health center in Ghelalo and health station in **Ingal**, and (2) establish a permanent health center in Bada.

B. HIGH RISK GROUPS REACHED

There is evidence from the forgoing that the capacity of the Ghelalo Sub-zonal health services to reach high risk groups are being enhanced. Since the TBA training has occurred, the potential for achieving the goal of reaching half of the target population is realizable. Although the potential is there generally, at present only 4 of 8 key health interventions are being implemented: EPI, **TT** Immunization, Safe Delivery and ORT.

C. CONSTRAINTS

The following constraints inhibit reaching the target population:

1. Transportation inadequate for outreach and TBA supervision
2. Lack of Afar Language skills by nearly all facility staff that limits health education and counseling interventions
3. Late start of major interventions because of administrative changeover of the target sub-zone from one zone to another
4. Wide dispersal of the target population such that only approximately half have easy access to a facility
5. Facility staff strength not up to DIP targets; no mid-level managers

III. RELEVANCE TO DEVELOPMENT

The potential exists for fruitful collaboration with other agencies in the areas of agriculture, food security, water supply and population activities.

Linkages have been established with the Ministry of Agriculture and the Ministry of Marine Resources with respect to the Nutritional aspects of CS/MHP. As noted above, Africare is undertaking an irrigation project in the **Bada** area of Northern Denkalia that could support nutrition/weaning interventions. The staff in **Bada** were interviewed and expressed willingness to experiment with a variety of vegetables and other crops that would improve local nutrition. Contact is needed with the Ministry of Marine Resources relates to the need to promote fish consumption.

Contacts have been established with the Ministry of Water Resources concerning the need for water surveys in the project area, but further work is needed if safe water inputs are to become part of **ORT/CDD** interventions. As noted, liaison with UNICEF, who are already working in the area, would be beneficial.

CS/MHP staff have worked closely with Ministry of Local Government staff in Ghelalo Sub-Zone who worked closely with village elders on TBA selection. These Local Government staff have expressed willingness to continue playing a communication and mobilization role with the project, which they see as being in line with their own outreach duties.

At present there are no national or international **NGOs/PVOs** operating in Ghelalo Sub-zone, though a very few such as Norwegian Church Aid have projects in other sub-zones. There is need to learn about the activities of the National Union of Eritrean Women, the National Union of Eritrean Youth and the Planned Parenthood Association of Eritrea (PPAE) at the **zonal** level to see if collaboration and extension of activities into the Ghelalo area is possible.

IV. DESIGN AND IMPLEMENTATION

A. DESIGN: AREA AND POPULATION

The DIP explained that the CS/MHP would work in two sub-provinces (now known as sub-zones) of the former Denkalia Province with its base in Assab. These two were Northern Denkalia, where intervention was to begin, and Araeta, which would be phased in later. Administrative reorganization resulted in the creation of 6 Zones to replace the former 9 Provinces. Northern Denkalia was assigned to Northern Red Sea Zone, and is much closer to that Zone's headquarters in Massawa, than it was to the former Provincial Capital of Assab. Araeta sub-zone remained with Assab in Southern Red Sea Zone. This change led to the dropping of Araeta from the project area. As noted Northern Denkalia has been renamed Ghelalo Sub-zone.

Within the target sub-zone, **Bada** and Ghelalo were mentioned as sites where project activities would be focused and health facilities would be upgraded. Recently, the facility at **Ingal** was built and thus included in the plans. Changes in Sub-zone size and target population were described earlier in this report.

The first annual report of the project mentioned the possibility of seeking a second project site between Ghelalo Sub-zone and Massawa, that is Zula Sub-zone, which has 4 Health Stations and One Health Center and an estimated population of 47,000. That option should be considered only if there is an additional one-year extension of the current project, because much work still needs to be done in Ghelalo Sub-zone to prove the feasibility of **CS/MHP** interventions.

B. MANAGEMENT AND USE OF DATA

1. Knowledge, Practice and Coverage Survey

The KPC survey was carried out in December 1994 under harsh field conditions. It was a fully collaborative effort between the **EMOH** and Africare, and thus the findings were fully shared with the **EMOH** during presentations. UNICEF was also present.

The team reported the following lessons learned from its field operations that will be relevant for the follow-up survey and other health surveys conducted by the Ministry in the future:

- Logistical arrangements are crucial under harsh climatic and topographical conditions with there being a need for adequate fuel, water, food, and camping equipment. Two vehicles are required in the event of emergencies.
- Participatory training is needed for local interviewers wherein they can have ample time for practice.
- Advanced mobilization through community leaders is essential; protocol must be followed; full understanding must be ensured through diplomacy.
- People will raise other concerns that could not be directly addressed in the survey or by the survey team such as eye problems and lack of facilities; the team must diplomatically explain its purpose and limitations in order to avoid non-cooperation or false expectations.

2. Health Information Systems

The **CS/MHP** is operating under the MIS system currently utilized by the MOH. The BASICS Project (USAID) is, at present, assisting the MOH to update the MIS system. During

the transition from Provinces to Zones, the Northern Denkalia MIS data were submitted to Assab. Northern Denkalia was not officially handed over to Zone 2 MOH until May 1996. Currently, facility data is sent to the **zonal** MOH office in Massawa.

No central HIS training is planned until the new BASICS HIS forms are prepared. At Zonal Headquarters the EPI Coordinator is also the HIS Coordinator. UNICEF is paying for him to take computer classes. The teachers actually comes to the Ministry and classes are conducted at the Africare office because this office has the only computer in the ZMOH at present. Fortunately, this means that the CS/MHP has access to all relevant data submitted. The BASICS Project is planning to supply the ZMOH with a computer in the near future. With technical assistance from the Project Advisor, the HIS Coordinator has used the Africare computer to produce statistics on the top 10 diseases for each facility, **EPI/TT** coverage, health education activities and other clinic functions.

At present EPI data is summarized in tabular form and blank charts have been provided to each clinic to graph their progress. A sample of the progress for the first six months was charted and provided to the staff at Bada, and they were expected to continue plotting the data in subsequent months. This had not occurred by the time the team visited Bada. The other 2 facilities have a blank chart/graph, and there is need to work with them to fill in the data. Submitted forms from **Ingal** for their first 3 months of EPI were incorrectly completed. On site training at the 3 project area facilities is therefore needed on filling existing forms correctly and graphing the data.

The **CS/MHP** did develop a TBA summary report form which was not in the existing MIS and is developing a picture based form for the TBAs themselves. The Project Advisor plans to share the work done on TBA reporting with the MOH/BASICS HMIS upgrading team to ensure uniformity.

3. Qualitative Data

Mention was made in the review of the DIP of the need for qualitative data not only to supplement that of the KPC Survey, but to provide useful formative data for planning various educational interventions. Qualitative data gathering was an integral part of TBA training. Facilitators led discussions about such topics as delivery practices, female circumcision and diarrhea treatment practices. This information was used to help the trainers know the perceptions of the TBAs and guide them toward more healthy practices. Also, informal interviews with mothers at clinic has been used to verify that there are no negative perceptions of the EPI activities.

Three additional areas where qualitative data are needed are listed below. During the field visits, discussions with TBAs and Community Leaders provided leads about these topics, and this information is also presented.

- local concepts of child spacing

TBAs confirmed that it is acceptable for husbands and wives to begin having sex again immediately after the traditional 40 day seclusion period for the new mother. They observed that the “normal” spacing between child ranges from less than one year to two years. Comments, such as, “The mother is ready for a new child once the current baby begins walking,” were made.

- perceptions, availability, appropriateness and acceptability concerning home fluids for ORT

Home fluids mentioned by TBAs and community leaders included gruel, water from

cooking grains, milk, salt-sugar solution and tea.

- local weaning practices and food beliefs

It was noted that no foods were forbidden for children, they eat whatever is available in the family. That latter point is the crux, because community leaders admit to food and money scarcity as factors that in practical terms limit what a child (or pregnant woman for that matter) may eat.

C. COMMUNITY EDUCATION AND SOCIAL PROMOTION

1. Community Education

Initially there was no need to establish village health committees (VHCs) as the existing Village Assemblies could handle a variety of health tasks. At the time TBA training was organized some of the Village Assemblies undertook the responsibility of TBA selection. Very recent administrative changes have replaced the Village Assemblies with one or two village representatives from villages/village clusters to be responsible for government activities in the area. Local government residents native to the area were also helpful in TBA selection, and for the near future, they are capable of and willing to assist in community mobilization. In the long term, the issue of VHCs may need to be revised, if programs, like the Bamako Initiative, that require community management of revolving drug funds, are undertaken.

Concerning regular service provision, there is a strong link and balance between social mobilization and service delivery. A major job of the TBAs is mobilization of mothers. Health Clinic staff also do outreach to religious and community leaders in advance of National Immunization Day campaigns. The local government administration has helped a great deal in mobilization of communities for TBA selection and has openly offered support for communication with the community on any upcoming health activity. From the foregoing, the specific community based educational activities that have occurred are as follows:

- mobilization for selection of TBAs
- mobilization in support of immunization programs
- EPI advocacy meetings for community leaders

The health education role is somewhat new for the TBAs in that it is proactive. The **CS/MHP** and staff will need to monitor closely how the TBAs adapt to this new role.

Overall, it should be noted that health education, whether at community, clinic group or individual counseling level, is difficult to implement by MOH staff in Ghelalo Sub-Zone because the health workers, are mainly Tigrena, while the clients are Afar. The only fluent Afar speaker among the health staff is the head of the **Bada** clinic, and consequently he served as lead trainer for the TBA training. At the other clinics, group health education is given only once a week, and assistance in translation is sought from local leaders who speak both Tigrena and Afar.

Two CHWs who had been trained previously have found work at the health facilities in **Bada** and **Ingal**. they are community members, but the clinic staff there feel that their communication skills are too poor either to serve as either translators or to deliver health education programs directly. The team did try to incorporate the CHW at **Ingal** into the interview of TBAs and did find that he could not cope with the translation. The use of CHWs needs further attention because health education is a major expected role of **CHWs**.

Another cultural aspect about health education was observed by health staff in Ghelalo. There it was reported that men and women do not like to sit together for health education talks.

Health workers justify the arrangement because of shortage of translators. They also believe that forcing men and women to sit together may help bring about social change.

2. Educational Materials

Technically, the **CS/MHP** has developed only one educational material, a pamphlet based on UNICEF's Facts for Life, which was distributed at community EPI advocacy meetings. Posters and job aids for the clinics have been obtained from WHO. Arabic translations were added before these posters were taken to the clinics. Photocopied mini-posters/teaching cards for the TBAs were adapted from existing books.

During the team's field visit, TBAs said that they themselves do understand the teaching cards. They also said that the mothers understand the photocopied pictures. In **Bada** a couple of TBAs appeared to have difficulty seeing a couple pictures on the ORT card. The **CS/MHP** hopes to finalize these teaching cards and laminate them for permanence. Prior to that time, mothers' feedback on the cards should be obtained and necessary revisions made.

The WHO posters obtained by the **CS/MHP** were appreciated by the clinic staff who also said that the mothers appear to understand the pictures even though these were not culturally geared to **Eritrea** or Afar people. Since most health workers do not speak Afar, these observations may not be valid. The **CS/MHP** will need to do more formal testing before producing local materials. One serious limitation to local production is the lack of a trained health educator at the **zonal** level.

In light of the language problems observed, the **CS/MHP** might consider the development of educational tape recordings. These would need proper field testing. Some could incorporate simple talks, while others could include songs about health issues. The Ministry of Information may be a resource for this activity.

3. Assessment of Learning

Since EPI activities are, on average, in operation only about 6 months in the sub-zone and TBA training occurred just one month ago, it is too early to assess learning by community members. **CS/MHP** staff have conducted some informal interviews with mothers attending EPI sessions to assess their level of satisfaction.

Informal interviews with leaders in the three communities during mid-term evaluation the field visits indicated awareness of safe delivery practices by **TBAs**, EPI, ORT and ideal nutritional practices. It is unlikely that any more formal data will be available until the follow-up KPC Survey.

D. HUMAN RESOURCES FOR CHILD SURVIVAL

1. Human Resources Available and Needed

LEVEL	AVAILABLE	COMPARED TO DIP
Zonal	<ul style="list-style-type: none"> *Project Manager, physician (Zonal Medical Officer) *Project Advisor *Project Co-Manager, nurse (Zonal PHC Coordinator) *EPI/HIS Coordinator, Health Assistant *Malaria Coordinator *Field Supervisor, Nurse *Accountant ►Office Assistant 	<ul style="list-style-type: none"> * regular ZMOH staff who manage the project as part of their normal duties . Africare paid staff <p>The fact that no project technical are hired by Africare, except the Project Advisor, is in keeping with the EMOH policy of integration and self-sufficiency.</p>
Ghelalo Health Center	<ul style="list-style-type: none"> 1 Head Nurse 1 EPI Coordinator, Health Assistant 4 EPLF-experienced Health Assistants 	<p>D I P :</p> <ul style="list-style-type: none"> 1 nurse administrator (head nurse) 2 nurse midwives 2 staff nurses 8 trained health assistants 1 lab technical 1 dispenser
Bada Health Station	<ul style="list-style-type: none"> 1 Head Nurse 1 EPI Coordinator, Health Assistant 2 Health Assistants Assistants 1 CHW assisting in dressing room 	<p>See Health Center staffing pattern above since Bada has been graded to a Health Center</p>
Ingal Health Station	<ul style="list-style-type: none"> 3 EPLF-experienced Health Assistants 1 CHW assisting in dressing/injection room 	<p>Ingal was not mentioned in the DIP, but Health Station staffing originally spelled out for Bada were -</p> <ul style="list-style-type: none"> 1 nurse administrator 1 nurse midwife 1 staff/registered nurse 4 health assistants 1 dispenser
Village	41 TBA s	<p>45 CHWs and 45 TBAs were to be trained. The present number of TBAs is close to that figure but only half of the villages are covered. 11 CHWs were formerly trained in Assab, but were not integrated into the community or health system. communities. Two subsequently found work in the facilities as mentioned above.</p>

2. Adequacy of Human Resources

At present there are few of what could be called mid-level program management positions in the ZMOH. Some zonal level staff wear several hats since there are not enough people to fill

all potential positions. For example, within the present PHC Department the EPI Coordinator also doubles as an HIS Coordinator. Although the DIP talks about the need for a Training Coordinator, there is no clear or exclusive designation of a such a person.

During interviews, the ZMO (Project Manager) and the PHC Coordinator (Co-Manager) expressed the belief that existing staff were adequate to handle the **CS/MHP** duties along with other PHC program and management responsibilities for the Zone. This is in line with a national philosophy of self-reliance. In addition, they felt that addition of positions such as MCH Coordinator under the PHC Department might be too bureaucratic. There was a perception that a project of this size did not warrant the assigning of a full time professional person to the post of Project Manager.

Also there does not appear to be a functional mid-level management system between the ZMOH and the facility. According to **EMOH** guidelines, the head of a Health Center would supervise the activities of the Health Stations within his sub-zone. In Ghelalo Sub-zone, there is no staff member designated for such oversight because there are two Health Centers, and there is concern within the ZMOH not to make it appear that one facility is superior to the other. This is an important political issue. While the Health Center in Ghelalo is centrally placed in the Sub-zone and located within the headquarters, it serves only half the population as the busier **Bada** Health Center located in the far southern end of the Sub-zone.

The present arrangement in Ghelalo Sub-zone is direct supervision of the three facilities by the **ZMOH's** PHC Coordinator based in Massawa. In reality the PHC Coordinator is directly responsible for 35 facilities in the Zone. The ZMO indicated that a former provincial headquarters, Nakfa, which is now part of Northern Red Sea Zone, has a hospital, and that the Ministry could designate a staff person there to assist the PHC Coordinator in supervising facilities in that area. Such an arrangement is recommended because of the large distances to be covered in the Zone.

At the facility level there are some important staffing gaps including the lack of a head nurse at **Ingal** and no staff with specialized midwifery training at any of the facilities. Some level of laboratory technician is needed since malaria diagnosis and treatment is being carried out at the health facilities. At present, health assistants are performing dispensing tasks, and this may be adequate for the near future.

Overall, the number of staff is below DIP target in these facilities. This has local and sub-zonal implications. For example, it would be difficult today, just two months after the TBA training, to conduct another round of training using the head nurse at **Bada** as lead trainer. With shortage of staff there now, he could not leave the facility for extended periods.

A question raised for the mid-term evaluation is whether **CS/MHP** activities create an extra workload on the available staff. Fewer staff in the facilities may mean overworking those staff available in order to supervise the TBAs and provide them with continuing education.

Finally, it is worth noting that nearly all of the **CS/MHP** interventions require health education. There is no designated, let alone trained health educator at the ZMOH level and only a small unit in Asmara. Although **BASICS** plans to upgrade the Health Education Unit in the near future, there will still be **zonal** needs especially as regards development of materials and activities that are appropriate for various cultures and languages.

3. Community Volunteers

Good progress has been made in the training of **TBAs**. Interviews with some of the recent trainees found enthusiasm and a basic grasp of knowledge. This is not surprising onyl one

month post-training. The **TBA**s are in a position to integrate all the health interventions at the village level. Their numbers (41) are close to the DIP target (**45**), but in fact, only half of the villages are covered. Expansion to the more remote villages is needed, but can only be planned in concert with increasing the number of health facility staff and providing them with transportation. The additional interventions for which the TBAs are responsible are primarily in the area of communication and education. These new duties in health education require them to be more proactive in their communities. Close monitoring **of** their activities will be necessary to see how they respond to these additional tasks.

Attention needs to be paid to the DIP strategy of training Community Health Workers. It is evident that the original 11 CHWs trained under the former provincial administration did not function as hoped. The team learned something about the historical evolution of the **CHA/CHW** concept from the MOH staff. Many started out as volunteers during the struggle for independence, but after liberation there was a move in some areas to pay them by government, donors or communities. This did not prove sustainable, and many CHAs dropped out of service.

Since team members heard local government officials and community leaders state that there was still a demand for **CHAs**, especially in the remote villages, they realized that study is needed to gain a better understanding of the situation before planning a locally viable program. The training and deployment of CHAs require community commitment for the long term. There also must be planning by the health authorities to guarantee a reliable and convenient system for providing drugs and supplies to the **CHAs**, as well as a regular supervision system. Local government authorities must be involved in any feasibility study for **CHA/CHW** programs.

4. Training **Activities**

To date, the project has assisted in the orientation of ZMOH staff and training of MOH staff in the 3 health facilities in Ghelalo Sub-zone and organized TBA training for the surrounding communities. The table below outlines the various training activities. The Section 'F' below discusses aspects of evaluation.

a. MOH Clinic Staff Training:

ZMOH facility staff training is centrally planned and administered with funds from other donors, e.g. UNICEF. The role of the CS/MHP in this centralized training has included the provision of some logistical support. The CS/MHP is not aware of formal evaluation of the facility staff training activities. There does appear to be a heavy reliance on formal pedagogical training methods such as lectures, which do not offer the stimulation and practice needed by experienced adult learners. Additional centrally planned workshops are coming **up in** the near future, e.g. integrated sick child case management. It is hoped that the workshop planners will design more participatory and practical training sessions. It is definitely not possible, for example, to teach the WHO integrated case management algorithm through lectures only.

During the field visit, the clinic staff did express some training needs to the team. These included -

- delivery skills, since there are no midwives posted to the facilities
- ▶ skills in completing monthly HIS report forms accurately
- . family planning (one has had a brief 2-week course)
- . CDD training
- . EPI training for those who could not attend the previous workshop

On the following pages are outlined one orientation workshop organized by the CS/MHP staff and three training activities sponsored by UNICEF for the ZMOH.

Type, Number and Dates	Training Topics	Topic Hours	Training Methods for Topic
Project Orientation:	Introductions	1.0	Methods:
	History of the CS/MHP	0.5	Discussion
CS/MHP 8-9 June 1995 5 MOH staff from the sub-zone	Overview of the project: planned inputs, organizational chart, role of project advisor	1.0	Presentation Small group exercises and reports to larger group
	Summary of baseline survey results	2.0	
	Overview of DIP goals and objectives training human resources	2.0	
	Work in small groups to discuss objectives, discuss group reports in plenary session	3.0	
	Administrative operations overview	0.5	
	Discussion of Issues Summary and next steps	2.0	

Type of training, Number, Dates	Training Topics	Topic HIS	Training Methods for Topic
EPI staff training in service delivery: UNICEF 2 sub-zonal MOH staff 25/9-4/10, 1995 10 days (7 for EPI) Note: WHO "Immunization in Practice" books were used as course guidelines and given to each participant	EPI target diseases	6	Lecture, slides, discussion
	Vaccines: properties, storage, administration schedule and contraindications	12	Lecture, slides, discussion
	Care and sterilization of syringes and needles	6	Lecture, slides, discussion
	How to give vaccines	12	Lecture, field practice, discussion
	Preparing and conducting an immunization session	6	Lecture, slides, discussion, field practice

Type of training Number of persons Dates	Training Topics	Topic Hours	Training Methods for Topic
Maternal and Child Health: UNICEF 2 sub-zonal staff trained 25/9-4/10, 1995 10 days (3 for MCH)	Antenatal Care, Steps in an antenatal check-up* Counseling mothers	6	Lecture and discussion
	Post natal Care, Steps in the check-up, counseling mothers	6	Lecture and discussion
	Family Planning, orientation about types of methods available	6	Lecture and discussion

Type, Number and Dates	Training Topics	Topic Hours	Training Methods for Topic
Lactation Management Course: UNICEF 2 sub-zonal MOH staff trained 10-13 March 1995	Biochemistry and immunology	1	Lecture
	Anatomy and physiology of the breast	1	Lecture, visual aids
	Management of breastfeeding in pre natal, natal and post natal periods	1	Lecture, visual aids, discussion
	Child Spacing and B.F.	1	Lecture visual aids, and discussion
	Problems and solutions during breastfeeding: regarding breast, illnesses of mothers and babies, refusing, not enough milk, working mothers,	4	Lecture, video, visual aids, and discussion
	Weaning and growth curve	1	
	Principles of counseling	1	Lecture, role play, discussion
	Practice Counseling	2	Role play, field work

b. TBA TRAINING ORGANIZED BY THE CS/MHP

The TBA training is the special strength of the **CS/MHP**. The CS/MHP is pioneering this new, much appreciated and useful program component for the Zone. Due to logistical limitations and few Afar speaking trainers, the 2-week course was admittedly short, but at two clinics, **Bada** and **Ingal**, staff have made arrangements for the TBAs to visit the clinic to work along side them to sharpen their skills and learn more about ANC. Generally, the discussions, role plays, demonstrations and (limited) practicals were appropriate methodologies for the non-literate trainees. More practical sessions would definitely be needed in future sessions, especially if community member suggestions of recruiting younger women for TBA training are followed.

A brief post-test was conducted with the **TBAs**. The Table that follows summarizes the results and indicates that while the overall average mark of 85 % was good, a few areas need revising during supervisory visits and subsequent continuing education sessions.

Type, Number and Dates	Training Topics	Hours	Training Methods
Traditional Birth Attendants 41 trainees <u>Dates:</u> Bada- 1-15/9, 1996 Ingal - 17-28/9, 1996 Ghelalo - 29/9-9/10, 1996	Role of the TBA	0.5	<u>Role Plays</u> practice of counseling skills <u>Observation and Practice</u> antenatal clinic sessions conducted by head nurse/trainer; conduct of antenatal exam, danger signs during pregnancy, etc. <u>Discussions</u> traditional practices and their effects <u>Demonstration</u> cutting of the cord using the birth box as model; preparation of ORS <u>Visual Aids</u> childbirth picture books showing reproductive anatomy, circumcision problems, pregnancy, nutrition, EPI, ORS, etc. continued..
	Health Conditions in Eritrea; problems of mothers and children	1.0	
	General Intro. to the Human Body	1.0	
	Female Repro. System	1.0	
	Conception	1.0	
	Affects of Female Circumcision	1.0	
	Physical Changes During Pregnancy	1.0	
	Care in Pregnancy/ANC	6.5	
	Danger Signs during Pregnancy	1.5	
	Preparation for Birth	1.5	
	Signs and Stages of Labor	1.0	
	Progress of Labor	2.0	
	Effects of Female Circumcision	1.0	
	Complications during Delivery	1.0	
	Immediate New-born Care including breast feeding	1.0	
Immediate Post-natal Care	1.5		
Danger Signs During Delivery	1.5		

Type	TOPIC	Hours	METHODS
TBA training continued	General Post-natal Care including breast feeding, nutrition, family planning, and immunization	1.0	WHO flipchart on neonatal tetanus poster on 6 EPI diseases and schedule
	Post-partum Complications	1.0	
	Promotion of EPI	1.0	
	How to Communicate with Health Facilities	1.0	
	Use of Health Education Materials on antenatal care, breast feeding, weaning, dehydration, making ORS, and child immunization.	1.5	
	Promotion of ORT	1.5	

TBA Post-Test Questions	Number	Percent Correct
1. When should a woman attend ANC?		
a. for the first time?	35	85
b. frequency of attendance?	10	24
2. When is TT vaccine given to pregnant women	35	85
3. Steps in cutting the umbilical cord	41	100
4. Two signs of dehydration	41	100
5. Amount of water needed for ORS packet	41	100
6. Childhood immunization schedule		
a. when to start	10	24
b. subsequent contacts	35	85
Number of Trainees	41	

E. SUPPLIES AND MATERIALS FOR LOCAL STAFF

Detailed information on materials and supplies provided to each category of staff in section I.B. above. The adequacy of these supplies is discussed by cadre of staff and type of intervention.

It should be recalled that the **CS/MHP office** is part of the Zonal MOH secretariate. The project has enabled the equipping of the PHC and project offices. In addition to providing supplies and equipment to the facilities, the CS/MHP has furnished the office of Project Co-Manager, the Zonal PHC Coordinator. The Project has bought a photocopier for the ZMOH and a set of resource books for the PHC Office. As noted, the project computer is available and used for computer training.

1. MOH Health Facility Staff

A detailed list of material inputs for each intervention were outlined in section I.B. In summary these consisted of barrels for storing, office equipment like shelves and tables, text books, and educational posters/job aids. The ZMOH provides a regular stock of basic drugs including ORS packets, antimalarial drugs, antibiotics and family planning commodities. UNICEF has equipped the facilities with cold chain equipment and sterilizers. Fuel needs (**kerosine** for sterilization and petrol for vehicles) is provided by the ZMOH. A UNICEF vehicle has been posted at Bada.

Several area of need were expressed. Should trained staff be placed at the facility, the workers at Ghelalo expressed a need for a vacuum extractor. The staff at Ingal expressed a need for anti-venom for snake bites, which they said are common in the area. They also said a lantern and torch were needed. As a health center, Ghelalo is expected to have a vehicle, and plans are in the final stages for Africare to meet this need. Community leaders in Ingal wished that their facility had an ambulance. Latrines need upgrading in all sites. Information about materials needed were obtained from reviewing the documents listed earlier, observations and through staff interviews.

2. TBAs

The **TBAs** were provided with the standard UNICEF kits at training. The system of replacing supplies needs to be clarified with the **TBAs**. In particular arrangements need to be made for replacement of razor blades and cord ties, as these are not normally supplied by the Ministry to the local facilities. The **TBAs** also requested supplies of methylated spirits. During interviews it was found that in the one month since training some have used all the 4 original ORS packets, and most have used at least half. Supervisors need to encourage **TBAs** to restock on a regular basis.

F. QUALITY

Because it was quite early in the pace of actual intervention, it was too soon to expect and document major changes in knowledge and skills. The team was able to acquire information during field visits through interview of health staff, **TBAs** and community leaders, observations at the facilities, review of clinic records and reading of project documents. Interview questions are found in Annex 1 of this report.

1. Knowledge and Skills of Mothers/Community Members

As mentioned in section IV.B., the KPC survey of mothers was conducted throughout the sub-zone. It has only been one month since the major intervention strategy that could reach mothers, i.e. TBA training, was implemented. Therefore it is too early to expect meaningful feedback from mothers and community members. Informal group interviews with the **TBAs** show that they have acquired some of the knowledge, and discussions with community leaders showed that not only are they aware of EPI, ORT and nutrition, but that some had recalled hearing about these issues from EPLF health staff during the struggle for independence.

2. Knowledge and Skills of Health Workers

It is ironic that although the mid-term evaluation guidelines mention the need for documenting levels of health staff knowledge, the USAID PVO/CS program does not have a standard KP type of study for clinic staff.

Interviews during field visits the team was able to ascertain that they are familiar with several key EPI issues. They were able to describe the national 'Open Vile Policy' that operates so that daily, integrated EPI services can be offered. They can state that, for example, BCG and measles vaccines, once opened, cannot be saved, but that others can. They were able to mention their own specific responsibilities in maintaining the solar refrigerators: cleaning the panels regularly, defrosting the fridge and keeping **the** temperature log. There was evidence that some staff had difficulty in filling out the current MIS forms.

TBA knowledge was assessed and they were found to have a good grasp of **the** following:

- danger signs of dehydration
- hygiene practices during delivery
- nutritional needs of pregnant women
(although acknowledging food scarcity)
- signs of high risk mothers who should deliver at clinic
- to refrain from "poking" to determine progress of dilation
- need to start breastfeeding immediately/value of colostrum
- importance of 6 months exclusive breastfeeding
- knowledge that breastfeeding has contraceptive value

Areas where TBA knowledge could be strengthened were -

- the actual EPI target diseases
- administration of ORS
- appropriate home fluids for ORT

3. Communication and Counselling Skills

Communication and counseling are severely hampered by the lack of fluent Afar speaking health staff based in the Sub-zone. Only in **Bada** is there one person, the head nurse, who can handle these activities, and his workload is such that he can not be expected to handle every educational need in the clinic and community. Although there is a local Afar person who became a CHW and later began to work at the Health Station, the staff have not had a good experience using **him** as an interpreter.

It can be observed in the outline of training program seen above that counseling skills are included. There was some role play scheduled, but the time was relatively short concerning practicals. More attention through on-site training will be needed in this area, but only after attention has been paid to increasing existing staff Afar language skills or transferring new staff who can speak the local language.

G. SUPERVISION AND MONITORING

1. Supervision of Facility Staff

The issue of staff shortage also influences the amount and quality of supervision possible. As noted, there is no mid-level supervisory staff and function between the ZMOH and the local facility. According to the ZMOH, the ideal frequency of supervisory visits to a facility is twice a year. A review of field visits by CS/MHP staff in the 18 months since arrival of the Project Advisor did **find** that the clinics in Ghelalo Sub-zone received a visit on average of at least once in two months. The duration and intensity of supervisors visits naturally corresponded to activities at hand, e.g. the TBA training was quite demanding. The Table below outlines the timing and purpose of field staff visits.

Date	Who Visited*	Purpose	Comment
04/95	PA	familiarization	PA arrived in Massawa in 3/95
06/95	PA	follow-up of start-up workshop	
09/95	PHC PA	needs assessment for facilities, orientation of PHC	PHC assumed duty in 9/95
01/96	PHC PA	Contractor's visit to assess needs for facility upgrading	
03/96	PA EPI	EPI supervision and planning	
05/95	PA CCT	review of EPI activities and on-site training on cold chain maintenance	
05/96	ZMO	Official handover of facilities to Northern Red Sea Zone and visit to all clinics	
07/96	PHC CCT	repair of solar fridges; EPI supervision	
09/96- 10/96	PA	TBA training	accompanied by a health assistant from the zone who could speak Afar and serve as assistant trainer

- *PA = Project Advisor
- *PHC = Zonal PHC Coordinator
- *ZMO = Zonal Medical Officer
- *EPI = Zonal EPI Coordinator
- *CCT = Cold Chain Technicians

2. Supervision of TBAs

TBA supervision is the responsibility of the facility staff and can take two forms. First, the staff should visit the **TBAs** in their villages, and secondly, the **TBAs** should come to the clinic from time to time for continuing education and observation. It appears that both are happening only in Bada, not the least because **Bada** is the only facility with transportation. Also the villages around **Bada** are relatively closer to the health center than are those villages surrounding Ghelalo. The head nurse at **Bada** (who was also the TBA trainer) has been to see all trainees and collected the first monthly reports from 12 or the 14 trainees. (1 was not active because her sister had died and the other lived so close to the Health Center that her potential clients had delivered at the facility.)

The head nurse at Ghelalo reported seeing approximately only 5 of **TBAs** in that area since training. Monthly reports had not yet been collected at Ghelalo and **Ingal**. At **Ingal**, there are a number of villages nearby the facility. A schedule for **TBAs** to come observe staff at work for continuing education has been arranged. They estimate that most **TBAs** have visited the facility since the training.

3. Perceptions of Supervisees

It was explained to the team that the normal ZMOH procedure is to make supervisory visits to a facility at least twice in a year. **Bada** staff recalled at least 3 visits in the past year and noted that on-site training occurred during these visits. They appreciated the concern shown for the difficulties they face living in such a remote station. At Ghelalo, the head nurse said supervisory visits were used to update the staff on new policies such as the Open Vile Policy. In **Ingal** the staff noted that the supervisors had been for one regular visit, but also many special visits (like the current one) in the past year. They reported receiving on-site training and discussions about the problems facing them.

TBAs at Bada say they have been encouraged by the health center staff who try to help them solve problems such as foods for pregnant women and resistance by family members to refer a mother to clinic for delivery. They enjoy coming to the clinic to observe, participate in and learn from activities there. At Ghelalo, those interviewed say their supervision occurs when they visit the health center as no one has visited them in their villages yet. In **Ingal**, the **TBAs** said that staff have visited some of the villages and given feedback and help. **All** were aware of the invitation to come to the clinic to observe and work with the staff.

4. Adequacy of Supervision & Additional Requirements

According to Ministry policy, the number and frequency of supervisory visits appears more than adequate. ZMOH officials did hint that not every sub-zone is as fortunate as Ghelalo in receiving so many visits. Clinic staff also come to Massawa on occasion to collect supplies and submit reports. Given the newness of both the sub-zone and the key intervention of TBA training, contact more frequently than twice a year is warranted. On the other hand, the logistical difficulties encountered in traveling between Massawa and Ghelalo mean that supervision for emergency problem solving would not be easy. This strongly suggests the need for a mid-level supervisor based in the sub-zonal. Long term hopes for more frequent and timely contact between the ZMOH and the facilities rests on UNICEF plans to set up a radio link network in the country.

TBA supervision is inhibited both by the number of staff working at a facility as well as lack of transportation at two facilities. **TBAs** do seem willing to take the initiative of bringing themselves to the facilities for continuing education and feedback. Staff relationships with the **TBAs** are off to a good start. It is essential for staff to maintain this good relationship with the **TBAs** so that they always feel welcome. Again, the issue of language skills of clinic staff needs improvement to strengthen the scope and quality of supervision.

5. Supervision Tools

The only formal supervisory tool **used** at present is an EPI checklist. There are plans for a more detailed instrument after the introduction of integrated sick child case management. The CS/MHP is in the process of developing a checklist for supervising the **TBAs**.

H. COUNTRY AND HEADQUARTERS SUPPORT

Over the life of the project, two Africare Headquarters public health professionals have backstopped the project. Headquarters staff have visited the project several times since the start date as seen in the Table below.

Dates of field visit	Purpose	Persons
November 1994	Arrangements for Baseline Survey	Alan Alemiau
February 1995	Negotiations with EMOH Signing of project agreement	Alan Alemian
March 1995	Draft DIP, Introduce project advisor to MOH central staff	Stephan Solat
March 1996	Visit project	Alan Alemian
October 1996	Mid term evaluation	Stephan Solat

As Eritrea was a new country for Africare, the East Africa Regional Director traveled to Eritrea in order open a country office. This included negotiating a country and project agreement, registering Africare as an official PVO, and securing office space for the country office and the PA residence.

On a subsequent visit, The East Africa Regional Director assisted the MOH and the CS/MHP to set up an accounting system that enabled the first transfer of funds to the MOH. Subsequent accounting and financial support has been provided by the Africare Country Office accountant. The Africare accountant has helped the MOH set up a system to track MOH disbursed project expenses, and has helped the PA on a number of occasions with project related expense issues.

The DIP was written with support of the East Africa Health Program Manager Stephan Solat, the Africare Project Advisor, and the Africare East Africa Regional Director. In the DIP, at the request of the government, Africare set up a management framework in which the only Africare technical staff would be a PA, who would work completely under the supervision of the MOH. All project activities would be implemented by the MOH.

For several reasons mentioned throughout the report, including reorganization of the zonal boundaries, a new Ministry of Health, and an ambitious DIP, project activities did not take place according to the schedule outlined in the DIP. The Country Office and Africare Washington took several steps to help project activities get moving. It is important to realize that neither did the current Zone exist nor were the current ZMOH staff in place at the time the DIP was written. Consequently, the Country Representative and PA have played a major advocacy role to bring the the current ZMOH staff on board and encourage them to take the leadership roles envisioned for them by the **EMOH** and the DIP.

The Africare Country Representative meets with the ZMO (Project Manager) and the Project Advisor on request to review the work plan and discuss any constraints that keep the project from moving forward. The CR also responds to issues raised in the PA's monthly reports. For example, the

CR advocated at both national and zonal MOH levels for getting a commitment **from** the ZMOH to undertake **the** TBA training. The CR is spearheading the Africare (USAID) irrigated agricultural project in Bada, which has important future links with nutrition and child survival in the project area.

Although there are periodic meetings when a need is perceived, the PA relayed a need for regularly scheduled meetings among the key players in the CS/MHP. The CR and the ZMO both felt that the present arrangement of responding to issues as they arose was adequate. Furthermore, the ZMO expressed satisfaction with the Country Representative's responsiveness to requests for meetings and for solving problems. During one of the meetings with the evaluation team, the ZMOH staff raised concerns about the PA's working relationships with some ZMOH and field staff that could have been resolved earlier. This implies that more frequent communication might be beneficial for all parties. Regular meetings is a standard management practice in most settings and help staff keep track of and be accountable for project inputs/activities and to assess progress and problems in a systematic manner.

The issue of the construction at **Bada** and upgrading of facilities appears to have caused some contention. Africare made a commitment to seek private matching funds to meet this legitimate need of the health care system from the beginning, and yet, two years into the project, the issue has not been resolved. The team was asked about the health facility upgrading consistently by community leaders, local government staff and health workers. The ZMO feels that silence on this aspect of the project should have been kept until all components were in place. In reality, this information was first discussed with the facility staff and community leaders during the baseline survey. Of course, the information cannot now be withdrawn from the community, and promises must be kept. Africare staff at all levels must ensure that funds become available for this activity in a timely manner and continue to advocate a speedy response from Zonal authorities concerning presentation of building plans. In the meantime it is hoped that the community's expectations about the health facilities will not interfere with their acceptance of the other project interventions.

I. PVO's USE OF TECHNICAL SUPPORT

1. Type Wanted

The ZMO indicated that there was no perceived need for external consultants. There is a perception that existing staff already have or could acquire any needed skills through various training programs and workshops offered by the **EMOH** on concert with various donors. This again reflects a strong desire for self-reliance.

Headquarters, at one time or another, perceived the need for consultation on the following:

- weaning food availability and appropriate community teaching
- appropriate HIS activities for nomadic populations

Under the present circumstances, the weaning food intervention is not feasible at this time. Work on HIS with nomadic populations should wait until **BASICs** finishes its current updating of the **EMOH** HIS procedures.

2. External Technical Assistance

To date no technical assistance has been requested by the ZMOH based project staff. The ZMO and other Ministry staff expressed a desire to meet technical assistance needs from within the Ministry at zonal or national levels as a first course of action, and then from other sources **within** the country as a second choice. Therefore, the CS/MHP has not requested or received external technical assistance. **The** team remind the ZMOH officials that the CS/MHP does have funds available for technical assistance should the need arise within the life of the project.

3. Constraints

The government's emphasis on self-sufficiency limits the perceived appropriateness of external technical support. Without a perceived need for external technical assistance, one could technically say there are no constraints to obtaining it.

J. ASSESSMENT OF COUNTERPART RELATIONSHIPS

It is important to recognize that work with **NGOs** is a new and evolving process for the Government of Eritrea. This applies to the **CS/MHP** and helps explain some of the delay in implementation of project activities. Another factor has been the reorganization of the old provinces into zones. At the time of the Project Proposal and even during the DIP writing, the CS/MSP office was supposed to be in Massawa, headquarters of the then Semhar Province, while the project site (Northern Denkalia Sub-province) was located in Assab Province. It was not until May 1996, that the project site, redesignated Ghelalo Sub-Zone, was allocated to the newly created Northern Red Sea Zone. Without authority over the area, the ZMOH was obviously handicapped in initiating activities. The fact that the Northern Red Sea Zone did not exist at the time of project planning, meant that the current ZMOH officers were not present to be involved in the planning. ZMOH officers not only have had to become acquainted with their new posts and duties, but with the goals and methods of the **CS/MHP** as well.

From the foregoing, it is not surprising that the role of Africare and its relationship with the ZMOH is quite different from CSP arrangements in other countries. Instead of the usual Africare sponsored Project Manager, who is often a mid-level MOH employee seconded to the project, the DIP for the Eritrean CS/MHP specifies that, "The Project will be supervised by the Provincial Health Director based in Massawa," i.e. the current Zonal Medical Officer and chief executive officer of the ZMOH. The DIP also indicated that all **CS/MHP** staff would be ZMOH employees and that the **CS/MHP** would support their salaries during the period of external assistance. In the section on sustainability, the DIP further stated that, "The **EMOH** will gradually assume responsibility for important project funded activities such as local salaries, training costs, etc." In fact the ZMOH undertook these financial responsibilities without project assistance as soon as the CS/MHP and Ghelalo Sub-zone were viably under its control.

Furthermore, the DIP recorded the intentions that, "An MOH accountant would serve as the project accountant for the period of external support only. " In fact, **THE** ZMOH Accountant manages **all** local **CS/MHP** funds directly as he would any other ZMOH activity. Therefore, the distinction that occurs in other **CSPs** between project staff and MOH staff does not exist. All staff, except the Project Advisor, an administrative assistant and a driver, are working on the **CS/MHP** as part of their **normal** MOH duties and receiving their **normal** MOH pay. This is an admirable step toward the goal of program sustainability.

The function and use of foreign counterparts is also a new and evolving process. The MOH naturally thinks in broad ranging and integrated service delivery terms. In a way, the narrow project focus of **USAID/PVO/CSPs** is somewhat an anathema, and ZMOH staff have on occasion questioned the idea that one staff member could be fully occupied giving most of his/her time to a project. The ZMOH staff are now devoting more of their time to **CS/MHP** and are realizing that a pilot project affords them an on-the-job learning opportunity that can be applied to their work throughout the Zone.

In other **CSPs** the Project Advisor and the Project Manager usually function as a team of co-managers to handle both program activities and finances. With the current CS/MPH being fully integrated into the financial and management system of the ZMOH, the PA's role is circumscribed. The situation wherein the PA would be a partner in project management, as operates in **CSPs** in other countries, is not appropriate in Eritrea since financial management, staff supervision and program decision making authority rest only with ZMOH employees. This more narrow role of advisor has been learned on-the-job by the current PA, not without some bumps along the way.

The technical assistance aspect of the PA's job is certainly appreciated, and the PA does play an important role in helping the **CS/MHP** conform with donor-required reporting procedures. The PA can be an **advocate**, but not an obvious initiator, under these circumstances. It is therefore important, when the contract of the current PA expires, that any replacement PA be well oriented about the nature, expectations and

limitations of the PA's role in this **CS/MHP**.

While the management concept of this **CS/MHP** augurs well for long term sustainability, there has been need on occasion by Africare staff to stimulate a more timely implementation of DIP activities. Both the Africare Country Representative and the ZMO independently confirmed that some Africare pressure was needed to get the TBA training underway. In fact, TBA training was actually not on the broader ZMOH agenda at the present time, but the ZMOH was willing to experiment with this important pioneering program. Fortunately, this stronger encouragement on the part of the Africare Country Office has not only led to action, but appears to have led to successful development of the centerpiece of the **CS/MHP**. Hopefully, success of TBA training will encourage the ZMOH to remain open to advocacy from Africare staff at **zonal**, country and headquarters level.

Since **the** ZMOH and the Zone itself are new, there appears to be a dearth of mid-level managers. This includes both staff below the level of departmental coordinators/heads within the ZMOH in Massawa and staff above the level of health facility head in the sub-zones. As noted above, most CSP Program Managers come from the mid-level cadres. The ability of the ZMOH to manage special projects like the **CS/MHP** should grow as more staff are trained and deployed into these mid-level positions.

One factor that should improve communication and interaction between Africare and ZMOH staff is the separation of the Zonal MOH Office from the Zonal Referral Hospital Administration. When the transition is complete, there should be greater opportunity for ZMOH and Africare staff to work on the **CS/MHP** activities.

K. REFERRAL RELATIONSHIPS

The remote nature of project area led the planners to face the need to have a good referral system between village (TBA) and clinic and Zonal Hospital in Massawa, especially as concerns the need for safe delivery. In reality, only one facility has the transportation to make referral a possibility. Even with this resource, referral is not easy because of the long distances over very rough roads would have a deleterious effect on the patient. Some local transporters have been very kind as regards helping the clinics transport medical supplies from and carry monthly reports to Massawa, and they might also be involved in the referral process.

L. PVO/NGO NETWORKING

Generally, the number of **NGOs** and **PVOs** operating in the country is limited. At present there are no other **PVOs** or **NGOs** working in Ghelalo Sub-zone. In the Zone other **NGOs** are functioning. For example, the Red Cross has supported malaria agent training generally, but none were trained since the change to the new Zonal system and none therefore exist in Ghelalo Sub-Zone. Norwegian Church Aid is working in Zula Sub-Province on an integrated development project that includes health. This is the sub-zone between Massawa and Ghelalo. They build the fence around the Foro Health Center. To date there has been no link with this PVO. The national women's and youth unions have offices in Massawa, but their offices have not been approached.

M. BUDGET MANAGEMENT

1. Expenditures Compared to Budget

By the end of Year 2, the actual expenditures since inception of the **CS/MHP** are estimated to be slightly over 42 % of the total budget consumed after 67 % of project duration.

2. Achieving Objectives with Remaining Funds

As was earlier implied in Section II, not all project objectives may be appropriate or achievable. The need to reduce or consolidate objectives and interventions was raised informally by BHR/PVC Child

Survival Office on a staff visit to the area. Subsequently a staff member from the Johns Hopkins University Child Survival Support Project Office, on a visit concerning another PVO project, discussed with staff and actually put in writing a suggestion to drop the ALRI, malaria and family planning interventions. Should these suggestions alone be followed, money would remain in the **CS/MHP** budget. Using the rough estimates of budget proportion by intervention found in the DIP, non-implementation of these three activities might reduce expenditures substantially.

A second major factor that increases the pool of unspent money is the policy of the Ministry not to use USAID/PVO money for staff salaries. This amounts to approximately US \$100,000 saved. Another cost savings would occur by remaining only in Ghelalo Sub-zone. The ZMOH feels this is a valid option in order to allow interventions and lessons learned to be implemented and consolidated fully. It is more difficult to estimate these cost savings. Clearly there would be some savings regarding field/travel expenses, if the project did not expand into another sub-zone.

In conclusion, funds should certainly be more than adequate to achieve a consolidated set of objectives that focus on EPIAT, **ORT/CDD**, Facility Upgrading and Safe Delivery. Training on ALRI and malaria could be incorporated into TBA continuing education at little cost after facility staff are sufficiently trained in integrated sick child case management skills. Furthermore, funds appear to be available to extend the project an additional year to make up for the time lost during the initial transition of the project site between Zones.

3. Country Project Pipeline Analysis

The pipeline analysis is attached as Annex 2 to this report.

V. SUSTAINABILITY

The major positive step toward sustainability taken at the insistence of the Government of Eritrea, is the full involvement of the Zonal Ministry of Health Office in the management of the Project. The experience gained directly by the MOH based project staff will enable them to sustain these activities in Northern Denkalia and replicate them in other sub-zones.

The table below outlines the steps the CS/MHP has taken to date to guarantee sustainability of the program activities. These are built on the Project's goal,

To reduce maternal and child morbidity and mortality in intervention areas and assist the **EMOH** to establish its PHC program in Northern Denkalia, by developing local management, technical, outreach and implementation capabilities.

End of Project Sustainability Objectives	Sustainability Steps Taken to Date	Mid-term Measure	Steps Needed
<p>1. 45 CHWs and 45 TBAs capable of continuing CS/MHP community mobilization, outreach, education and referral functions, each year to be tracked in terms of numbers trained, numbers performing effectively in their communities and dropout/replacement rates.</p>	<p>41 TBAs trained between 9-10196</p> <p>head nurse at Bada served as lead trainer</p>	<p>all in Bada are being supervised by health center staff</p> <p>only few near the clinic in Ghelalo are being supervised</p> <p>Most in Ingal are being supervised</p> <p>TBAs have begun providing hygienic delivery and education on EPI, breastfeeding and ORT</p>	<p>provide transportation at Ghelalo</p> <p>design supervisory checklist for TBAs</p> <p>set out in-service training schedule for TBAs</p> <p>conduct feasibility study of CHW recruitment; secure community support and ZMOH logistical support in advance of training</p> <p>develop training guidelines to serve as model for other sub-zones</p> <p>identify additional Afar speaking trainers</p> <p>designate a mid-level staff person to be responsible for training and field supervision responsibilities within ZMOH</p>

End of Project Sustainability Objectives	Sustainability Steps Taken to Date	Mid-term Measure	Steps Needed
<p>2. EMOH PHC staff in place capable of continuing within existing intervention locales the CS/MHP basic management and support functions, and also capable of expanding the project system into new intervention areas.</p>	<p>ZMOH has integrated all program, management and financial aspects of the CS.MHP into the normal staff patterns and duties of the Ministry</p>	<p>Staffing patterns as reported in Section 1V.D. above were observed</p>	<p>post head nurse to Ingal</p> <p>bring staff strength up to DIP levels as spelled out in Section 1V.D. including midwives for all clinics</p> <p>provide Afar language training for staff or post at least one Afar speaker per facility</p> <p>appoint a Zonal MCH/FP Coordinator to guarantee more frequent supervision</p>

End of Project Sustainability Objectives	Sustainability Steps Taken to Date	Mid-term Measure	Steps Needed
<p>3. Basic facilities in place for service delivery and community education, enabling the government to maintain key maternal health and child survival services.</p>	<p>Health Station established in Ingal</p> <p>temporary wooden building provided for health center in Bada</p> <p>furniture and other materials supplied to all facilities</p> <p>regular drug and vaccine supplies provided to each facility</p>	<p>All 3 facilities in the sub-zone are operating all clinic and services including outpatient care, ANC and EPI</p>	<p>submit detailed plan for Bada health facility to Africare by ZMOH</p> <p>continue external fundraising by Africare</p> <p>develop of culturally appropriate health education materials</p> <p>make transportation available at all three facilities</p> <p>send staff for CDD training, or more specifically, integrated sick child case management training</p>

End of Project Sustainability Objectives	Sustainability Steps Taken to Date	Mid-term Measure	Steps Needed
<p>4. The Government will assume all recurrent project implementation and maintenance costs at the health facilities.</p>	<p>ZMOH already pays for all staff salaries (no technical staff employed by Africare or ZMOH staff salaries supplemented by Africare)</p> <p>Government also supplies fuel for vehicles, kerosine for sterilizers, etc.</p> <p>Government supplies all drugs for clinic pharmacies</p>	<p>same as steps taken to date</p>	<p>Continue payments of staff per diem</p> <p>continue support of vehicle operating expenses</p> <p>guarantee continued restocking of TBA kits</p> <p>liaise with UNICEF to supply kits for additional trainees</p>

VI. RECOMMENDATIONS

1. Traditional Birth Attendants

The TBA strategy is a strong, integrative force in all project interventions. Effort should be made to consolidate TBA activities by doing the following:

- a. Plan a continuing education schedule that reviews issues like home fluids for ORT and introduces new skills such as recognition of pneumonia.
- b. Expand TBA training to reach more women in existing villages (e.g. younger ones) and representatives of the villages not already covered.
- c. Finalize the TBA health education cards through field evaluation and production using more permanent materials.
- d. Ensure that the system for replacement of supplies and materials in their kits is operational.
- e. Post persons with training in midwifery and antenatal care at all three facilities who can provide primary professional supervision of the **TBAs**.
- f. Develop a set of guidelines and lessons learned that can be used to promote TBA training in other sub-zones and zones.
- g. Conduct on-site training of all facility staff in support, supervision and continuing education of **TBAs**.
- h. Finalize TBA activity reporting forms and system and monitor performance, especially their new health education roles.

2. Mid-Level Management

At present the project is being implemented through top level ZMOH managers (Zonal Medical Officer and PHC Department Coordinator) and front line facility staff (in Ghelalo Sub-Zone). Mid-level managers are needed to attend to the day-to-day needs of program implementation, provide both technical supervision and coordinate distribution of materials, supplies and HIS data. At the sub-zonal level it may mean designating a senior member of a health center staff to serve as a local PHC Coordinator as well as consider other ways to implement strong district level management procedures.

It is highly recommended that a mid-level person be designated by the ZMOH to serve as the Program Manager. Any extension of the CS/MHP, as may be needed to complete outstanding activities and guarantee transfer of lessons learned, should be made contingent on designation of a full time Program Manager.

3. Community Health Workers

Even though the previous training of **CHWs** prior to the creation of the new zones did not appear successful, there is still a community perceived need for this volunteer cadre of health workers, especially in the more remote villages. Therefore, effort should be made to determine the feasibility of instituting a CHW network in Ghelalo sub-zone by undertaking the following:

- a. Conduct an assessment of 5-10 remote villages to determine whether community understanding of and support for the CI-IW concept exists.

- b. Determine whether there are individuals in these villages who have the attitude, personal resources and inclination to serve their villages in a volunteer capacity.
- c. Design a reliable and convenient system for **CHWs** to restock their basic drugs and supplies at the sub-zonal level.
- d. Based on positive results of the above steps, design and implement a pilot CHW training program in 5 villages each in the Ghelalo and **Bada** areas.
- e. The Local Government must also be fully involved in the process of recruiting and supporting the activities of **CHWs**.

4. Consolidating Interventions

The present set of 8 health interventions (that is excluding facility upgrading) are wide and range among prevention (water supply, bed nets) and treatment (ORT, malaria). Some of the preventive activities are not feasible at this time due to various factors, e.g. waiting for lessons **learned** after the completion of a bed net study in another part of the country. The family planning interventions are not culturally acceptable and therefore not achievable in the remaining time for the **CS/MHP**. A suggested set of revised program objectives is provided under the section on project effectiveness and will not be repeated here.

Although it is recommended that objectives on malaria, nutrition and ALRI treatment and health education are not achievable in the present lifespan of the **CS/MHP**, aspects of these interventions could later be incorporated TBA training after clinic staff have proceeded on integrated sick child case management training.

5. Language Skills

Most of the interventions are hindered by a lack of Afar language skills among the sub-zone health staff. Health education and counseling does not take place on a frequent basis, and **TBA/CHW** training and supervision can not be sustained. Effort is needed to post Afar speaking staff to the sub-zone or to provide simple language training on a in-service basis to existing staff.

A short term measure to address the language problem, at least for clinic based health education sessions, would be to develop, with assistance of the Ministry of Information, a set of Afar Language tape recordings.

6. No Second Sub-Zone

Expansion of program activities into another sub-zone is **not recommended** at this stage in the project. There is need to determine the feasibility and sustainability of interventions in the current area, especially as there less than one year left in the official project schedule.

7. Remaining Implementation Activities

In addition to the above recommendations, the attention of the CS/MHP staff should be drawn to **the** following activities that were planned but not yet achieved:

- a. Upgrading facility staff numbers and cadres, especially as concerns the placement of midwives.
- b. Local design and production of culturally relevant health education materials.
- c. Provision of transportation at the Ghelalo Health Center.

- d. Undertake some immediate and needed upgrading of the temporary facility at **Bada** (e.g. cement the floor of the delivery room), and continue to pursue construction of the permanent health facility at Bada.

8. USAID Concerns

USAID has technical resources in a variety of health and development areas. It would be helpful if PVO projects were more aware of and had greater access to these technical resources. In this particular CS/MPH, assistance in the areas of water resources, nutrition and health information systems would have been helpful.

VII. SUMMARY

The Mid-term Evaluation of the Northern Denkalia Child Survival and Maternal Health Project of the Eritrean Ministry of Health and Africare was conducted between 25 October and 12 November 1996, 26 months into the project. The project area with a catchment population of 21,754, is located in a remote, dry and rugged area at the south end of the Northern Red Sea Zone, and has recently been renamed Ghelalo Sub-zone. Three health facilities and their surrounding villages are focal points of intervention. The program is unique in that all management and programming responsibilities are assumed directly by the Zonal Ministry of Health in order to foster integration and sustainability.

The team consisted of William R. Brieger, **DrPH**, a Health Education Specialist from the University of Ibadan, Nigeria, as external evaluator/team leader. Other members included **Ato** Teclai Estifanos, MCH/FP Coordinator of the EMOH; Ms. Ann Hirsche, Africare Project Advisor based in Massawa; **Ato** Rezene Araia, PHC Coordinator of the ZMOH and Co-manager of the Project; and Stephan Solat from Africare, Washington. The evaluation was estimated to cost US \$12,650. The team divided its time between the target facilities (5 days), the project office at Zonal Headquarters in Massawa (7 days) and the Africare Country Office/Ministry of Health in Asmara (6 days).

Evaluation methods consisted of reviewing all project documents since the Knowledge, Practice and Coverage Survey was conducted in December 1994. Facilities were visited and inspected. In-depth group interviews were held in the field with trained **TBA**s, community leaders and clinic staff. Updated clinic record sheets were obtained to determine EPI coverage and health service provision. Key Ministry officials were interviewed in Massawa and Asmara.

The main project accomplishment has been the training of 41 trained **TBA**s. They have learned the value of hygienic delivery procedures, signs for referral, the EPI schedule, the importance of breastfeeding for nutrition and child spacing and ORT, which are among the project's main interventions. In the short time they have been working, the **TBA**s have shown the potential of reaching the project target of 50% of home deliveries being undertaken by a trained attendant. The second major accomplishment is bringing EPI coverage, which was 0% at baseline, to 10% with only 6 months immunization service provision. In remote areas with inadequate health staff, the TBA intervention has proven to be a valuable way to reach out to the community. It is hoped that training guidelines will be written based on this pioneering experience in Ghelalo Sub-zone and serve as a model for other parts of the Zone and nation.

Key recommendations include 1) strengthening TBA training and supervision, especially through the provision of continuing education; 2) identifying mid-level program management staff at Zonal and Sub-zonal levels to handle daily supervisory and programming needs of the project; 3) investigating the feasibility of community support and ZMOH technical backstopping for volunteer community workers in the more remote villages; 4) improve Afar language skills of facility staff to enhance health education; and 5) integrating the sick child case management interventions at clinic level and in TBA training.

The final report was authored by the external evaluator. Debriefing meetings were held with the ZMO in Massawa, the Vice-Minister for Health in Asmara and the USAID Mission health personnel.

ANNEX 1

MID-TERM EVALUATION INTERVIEW QUESTIONS GHELALO SUB-ZONE

A. QUESTIONS FOR TBAs

1. General Comments on the Program

2. EPI

- What promotional/educational activities are you doing?
- Have you used the educational card on EPI?
- If yes, how did mothers respond to the pictures?
- How many mothers have you referred for EPI this month?
- What are Mothers' opinions about immunization?
- What are the EPI diseases?
- What is the EPI schedule?
- What is the **TT** schedule?

3. Supervision

- Since the training have you visited the health clinic?
- If yes, what was the reason; who did you talk to?
- Since the training, has anyone from clinic visited you?
- If yes, who? What did he/she do during the visit?

4. Oral Rehydration Therapy

- What are the dangers of diarrhoea in small children?
- How do you recognize dehydration?
- Describe how to mix and use ORS.
- Are there any drinks or fluids in the home that could be given to a child with diarrhoea?
- Have you tried to teach mothers about ORS/ORT?
- If yes, how did **they** respond to the idea?
- Did you use the Picture Cards?
- What did the mothers think of the pictures?
- Have you or mothers actually used ORT for diarrhoea?
- Number of packets left with each TBA

5. Delivery

- See training curriculum and consult with trainer in **Bada** to develop detailed questions on the following:
 - Steps in safe delivery.
 - Recognizing danger signs.
 - Immediate care of the newborn. etc.
- Since your training, how many babies have you delivered?
- How has the training affected your practice?
- Have you referred any mothers to the clinic for delivery?
- If yes, explain circumstances.
- Have you met with mothers who are still pregnant?
- If yes, what have you discussed with them?

6. Breastfeeding

- When should a mother begin to breastfeed? Why?
- For how long (how many months) should a mother breastfeed?
- When should a mother introduce other foods/fluids?
- What are some of the benefits of breastfeeding?

Are there any problems for mothers to breastfeed?
What are the usual first foods given to a child? Why?
Are any foods forbidden for a small child? Which? Why?

7. Child Spacing

In this community, what is the normal space of time
(months, years) between children?
After a mother gives birth, when is it acceptable for her
to “meet” (have sex) with her husband again?

8. Other Problems

In addition to the things you learned during training, are there other concerns that the mothers and
community members bring to you?

B. QUESTIONS FOR HEALTH CLINIC STAFF

1. General Impressions of the Program

2. EPI

Use the EPI Supervisory Checklist,
and also ask the following:
What is the EPI and **TT** schedule practiced in this clinic?
What are the maintenance procedures for the solar fridge?
Tell us about the Open Vile Policy?
What outreach activities have been going on in this clinic?
What health education activities taken place here?
What do mothers think about the pictures on the posters?

3. General Supervision

When did you receive a supervisory visit from the Zone?
If visited, what happened on that visit?
Have staff visited the TBAs in the villages since training?
Have the TBAs come to the clinic for assistance/questions?
Any thoughts on the need for CHW training

4. Antenatal Care & Delivery

Tell us about the antenatal activities of this clinic.
How adequate is this clinic to handle deliveries?
Comment on equipment, staff training, etc.
Have TBAs referred any mothers to this clinic for delivery
or ANC - if yes, please describe.
For complications, how are referrals **from** this clinic
handled?

5. Family Planning/Birth Spacing

What family planning commodities are available here?
What staff have received family planning training?
Comment on the level of demand for FP commodities?
Are there any community beliefs that affect child spacing?

6. Communication

Generally, what kind of group health education activities
take place in this clinic?
What difficulties are there in doing health education?
On the individual level, please tell us about efforts to

counsel mothers? Talk about EPI, ORT, ANC.

C. QUESTIONS FOR COMMUNITY LEADERS

1. General Observations on the Program

2. Immunization

Please tell us what you have learned about childhood EPI.

What has been your experiences with the EPI program?

Has the **midwife/TBA** in your village talked with you or members of your family about EPI?

Are TBAs encouraging mothers to take children for EPI?

If not, why not?

3. Oral Rehydration Therapy

What have you heard about the dangers of diarrhoea?

Have you been taught about taking care of a child who has diarrhoea? If yes, please describe.

If yes, who gave you the information?

4. Antenatal Care and Delivery

Are you aware that TBAs from this village have recently gone for additional training?

Do you know what they were taught? If yes, please explain.

How has the local **TBA(s)** performed since she went for the training? Please explain.

What care should a pregnant women receive?

ANNEX 2

PROJECT PIPELINE ANALYSIS