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Registered Charity Number CHY 6271

FINAL REPORT

(With emphasis on last quarterly period 1st January 2001 – 31st March 2001)

EMERGENCY HEALTH CARE PROGRAM MALAKAL & SOBAT RIVER BASIN

(GRANT NO. AOT-G-00-00-00089-00)

UPPER NILE STATE

UPPER NILE REGION

SUDAN

SUBMITTED TO:	USAID/OFDA, 08 June 2001
SUBMITTED BY:	GOAL
REPORTING PERIOD:	01 APRIL 2000 – 31 MARCH 2001

GOAL SCORES AGAINST POVERTY

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1. GLOSSARY OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ANA	Annual Needs Assessments
ARI	Acute Respiratory Infection
BCG	Bacillus Calmette Guerin
CSM	Cerebro Spinal Meningitis
CHPS	Community Health Promoters
CHW	Community Health Worker
CTC	Child to Child
DG	Director General
DIG	Development Initiative Group
DSM	Dried Skimmed Milk
EPI	Expanded Program of Immunisation
FAO	Food and Agriculture Organization
FGM	Female Genital Mutilation
GMP	Growth Monitoring Program
GAM	Global Acute Malnutrition
GoS	Government of Sudan
HAC	Humanitarian Aid Commission
HEM	High Energy Milk
HIV	Human Immune Deficiency Virus
HP	Hygiene Promoters
IARA	Islamic African Relief Agency
IARO	Islamic African Relief Organization
IDP	Internally Displaced Person
INGO	International Non Governmental Organization
IRC	International Rescue Committee
KAP	Knowledge Attitudes and Practices
MA	Medical Assistant
MCH	Mother Child Health
MoH	Ministry of Health.
NCPA	National Congress Peoples Army
NGO	Non Governmental Organization
NIDs	National Immunization Days
NNGO	National Non Government Organization
OLS	Operation Lifeline Sudan
ORT	Oral Rehydration Therapy
SCC	Sudanese Council of Churches
SD	Sudanese Dinar
SFP	Supplementary Feeding Program
SNCTP	Sudan National Council against Traditional Practices
SRC	Sudanese Red Crescent
STD	Sexually Transmitted Disease
SIDO	Sub Saharan International Development Organization
SWD	Severe Watery Diarrhea
TB	Tuberculosis
TBA	Traditional Birth Attendant
TFC	Therapeutic Feeding Center
TT	Tetanus Toxoid
UN	United Nations
UNFPA	United Nations Family Planning Association
UNICEF	United Nations Children's Fund
VHF	Very High Frequency
WES	Water and Sanitation (NGO)
WFP	World Food Program
WHO	World Health Organization

2. GENERAL INFORMATION – FINAL REPORT

Organization:	GOAL	Date:	08 June 2001
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Program Title: Emergency Health Care Program, Malakal & Sobat River Basin
Grant No: AOT-G-00-00-00089-00
Country/Region: Upper Nile Region, Sudan
Disaster/Hazard: Recurrent disease outbreak and inadequate Primary Health Care
Time Period Covered by this Report: 01 April 2000 to 31 March 2001

3. EXECUTIVE SUMMARY

The overall goal of this program was to provide improved basic emergency health care for the vulnerable population of 98,658 in Malakal town and the 115,175 people living in villages along the Sobat River Basin where epidemic disease outbreaks have been common.

The GOAL program places a strong focus on prevention and consists of the following components:

- Expanded Program of Immunization (EPI)
- Growth Monitoring Program (GMP)
- Reproductive Health (ante/postnatal care and family planning)
- Nutritional Screening
- Supplementary Feeding Program (SFP)
- Curative Care (diagnostic laboratory, pharmacy, dressing room and an oral rehydration therapy (ORT) clinic.
- Volunteer teams of Community Health Promoters (CHPs), Child to Child (CTC) workers and Traditional Birth Attendants (TBAs) enhance the preventative components of the program.
- The SFP was established in July 2000 and has the capacity to feed 150 moderately malnourished children and their caretakers.
- Support to the Therapeutic Feeding Program (TFP) in the pediatric hospital in Malakal town, from July 2000, initially through food supplies and later via training and technical support.

Progress achieved:

At the end of this quarter, 30 members of staff were employed at the clinic and community program with 36 community volunteers and 18 TBAs. A Sudanese National supervises the clinic and a Health Visitor supervises the reproductive health section. A Khartoum based nutritionist monitors the nutrition program and 2 expatriate staff supports the overall program. All staff recruited in Khartoum commenced training local counter parts from the Malakal area to facilitate the hand over of responsibility to the local staff. Achievements attained in each objective are summarized separately. The terms of the four program objectives have largely been achieved in this funding period.

Objective 1: Prevalence of moderate and severe malnutrition among children under five reduced to less than 10% over the program period.

Activity 1 Establish a Wet Supplementary Feeding Program.

Since mid July 2000, 587 moderately malnourished children (11% of children < 5 years of age in Malakia) were seen in the SFP program, of which 267 were discharged - 209 fully discharged after two consecutive weighings and 58 after six week's follow-up (post discharge). All were discharged within a 30-60 day period. In February 2001, 62% of the exits reached over 85% wt/ht on 2 consecutive weighings, an increase from 45% in August 2000. No deaths were reported in the SFP in this period.

In March 2001, the method of supplementary feeding was changed from the provision of cooked meals in a wet feeding system to a dry take home ration. This decision was made after careful monitoring of the attendance and defaulter rates, the changing food security situation in the area and the living circumstances of the mothers of malnourished children. It was observed that half of the beneficiaries were coming from areas other than GOAL's target area, due to the lack of services at other locations. Defaulter rates were rising and mothers were sending older siblings to accompany the malnourished child as they were busy in the fields. The distance was further and it was difficult for mothers to stay at the feeding center all day. A food for training program was set up in collaboration with World Food Program (WFP) to increase nutritional awareness among mothers and a dry take home ration which includes an extra amount to cater for the practice of sharing food within the family is given in the new system.

Activity 2 Provide essential additional manpower and training for the Therapeutic Feeding Center (TFC) at Malakal Pediatric Hospital and refer severely malnourished children under five years old to the center for treatment.

GOAL began supporting the TFC in July 2000. Since then, 172 severely malnourished children (3% of the children < 5 years old) were admitted. In this quarter, 50 children were admitted and 23 discharged, 7 children died and 4 defaulted. Most of the children that died suffered from Kala-zar and were admitted in the late stages of their illness. Cases of Kala-zar are now admitted directly to the TFP and then return daily to the Kala-zar ward, where they receive their medications. In January 2001 GOAL employed a General Medical Technician (GMT), from Khartoum for a 2-month period to work closely with the local GMT from the Ministry of Health (MoH), establish close links with the pediatric Doctor and provide intensive training for the nurses. A nurse from the TFP will be identified to be responsible for overall nutrition management at the TFP during the next quarter.

Activity 3: Train health staff in nutritional wellbeing and establish a growth-monitoring program (GMP) for children under five years old.

56% of the children in Malakia were weighed and assessed by a Mother Child Health (MCH) worker in a one-year period. In this quarter 45% were weighed for the first time and 55% for a second/subsequent time. On average, 410 beneficiaries were seen per month. 88% were adequately nourished in this quarter compared to 84.5% last quarter. A nutrition survey conducted in April/May 2000 found a Global Acute Malnutrition (GAM) rate of 13% in Malakal town. A repeat survey planned for November 2000 had to be postponed due to insecurity.

Activity 4: Mobilize 50 trained Community Health Promoters (CHPs) and 50 Child to Child Health Educators to promote health awareness campaigns.

There are 40 active CHPs (including 3 CHP Team Leaders and 1 Assistant CHP Supervisor) at the end of this reporting period and 40 CTC health workers trained who cover all 'hillas' (neighbourhoods) in Malakia. During this period, 290 cases of malnutrition were referred to the GMP through the CHPs compared with 127 in the last quarter.

Indicator and current measure:

- 90% of all under five year old children registered at the GOAL wet supplementary feeding program reach over 85% wt/ht within a 30 day period. All children were discharged in a 30-60 day period.
- The number and percentage of moderate and severely malnourished children under five admitted to feeding centers. 11% of the target population < 5 years were seen in the SFP program and 3% were seen in the TFP.
- The number of CHP referrals of cases of malnutrition in the community over the program period. 290 cases of malnutrition were referred by the CHPs.

Budget for Objective 1: US\$ 98,964
Cumulative Expenditures to Date: US\$ 98,363

Expended This Period: US\$ 35,276
Balance: US\$ 601

Objective 2: Vaccination coverage in children under five for measles, polio, pertussis, diphtheria & BCG increased from the current 41% to at least 70% over the program period. Eligible women attending antenatal care vaccinated with tetanus toxoid.

Activity 1: Train health staff in EPI and cold chain maintenance. 2 Staff were given EPI training.
Activity 2: Establish an effective cold chain link with the main EPI center. In 1999 EPI coverage, of fully vaccinated children in Malakia was 41%, this increased to 57% in November 2000. A repeat EPI survey is required to measure the overall coverage rate achieved at the end of the program.

Activity 3: Assist UNICEF and the MoH in maintaining an effective cold chain and assessing an outreach EPI center. 92.5% of those fully vaccinated in this quarter were under one year old, compared to 75% in the last quarter. 10% of the children under five were fully vaccinated and 87% were up-to-date in their vaccination schedule at the Malakal clinic during this funding year. There were 1,187 vaccines given in this quarter with a monthly average of 395, in comparison to 2679 vaccinations with a monthly average of 876 last quarter. The reduction was due to the Upper Nile State acceleration campaign coinciding with the program. The number of BCG vaccines administered this quarter was 77. As measles vaccines were administered during the acceleration campaign the number of children vaccinated against measles in the GOAL program decreased from 247 children last quarter to 95 this quarter.

In this funding year 2,801 women of child bearing age received Tetanus Toxoid (TT) vaccine which is 81% of the eligible women. This represents a substantial increase from the September 1999 baseline survey, which found that 27% of the women in Malakia received TT. This quarter clinic assessment found that 88% of women were up to date in their vaccination schedule.

Activity 4: Co-ordinate vaccination campaigns with UNICEF and the MoH. The GOAL vaccinator was responsible for supervision of the 8th round Polio campaign in Malakal town in March 2001, which achieved 94% coverage. A total of 25,253 people, between the ages of 2 and 30 years received Cerebro Spinal Meningitis (CSM) vaccine in Malakal town and the outreach areas in February/March 2001 (21% of the target population in Malakal town, while 38% had received it in the April 2000 campaign). An EPI acceleration campaign took place in the Upper Nile State in January - February 2001, and a total of 752 children were vaccinated and 1,075 women received TT vaccine.

Indicator and current measure: 80% of under fives visiting the clinic will be up to date on their vaccination schedule. 87% were up-to-date in their vaccination schedule in this quarter GOAL cold chain continuously maintained and monitored. GOAL have monitored and maintained the cold chain system to support the MoH.

Budget for Objective 2:	US\$51,353	Expended This Period:	US\$18,687
Cumulative Expenditure to Date:	US\$53,017	Balance:	US\$(-1,664)

Objective 3: Access to basic essential/emergency health care and essential ante/postnatal services among target population increased.

Activity 1: Recruit train/refresh TBAs and midwives. An average of 28 TBAs report to the GOAL clinic on a weekly basis with up to 10 TBAs from the Bam area (south of Malakal town) attending the weekly training sessions.

Activity 2: Establish TBA community outreach services. In this quarter 218 (97%) of the deliveries reported by the TBAs were attended by trained TBAs and 7 (3%) were unattended, which shows a great improvement from the last quarter. There were 26 neonatal deaths reported in this quarter, most of which were unattended deliveries and also the number of deaths is highlighted due to the improved reporting systems. The causes of neonatal mortality included malaria, fever, jaundice and syphilis (1 case). There were three maternal deaths reported in the funding year due to complications including malaria, unattended delivery and retained placenta.

Activity 3: Provide ante/post natal services. A total of 3,959 beneficiaries were seen in the reproductive health clinic since the beginning of the funding period. In this quarter 25.5% attended for their first antenatal visit, 13% attended for their 4th visit and 11% came more than five times during their pregnancy. A total of 659 women, a monthly average of 55, were seen in the postnatal clinic during this funding year. Family planning is part of the overall reproductive health program and a monthly average of 121 beneficiaries attended for this service, 51% who were continuous users and 49% new beneficiaries.

Activity 4: Provide essential medical supplies and equipment for delivery. GOAL assists the TBAs to keep their delivery kits stocked.

Activity 5: Establish links/procedures with Malakal hospital for complicated deliveries. A total of 20 women were referred from the midwifery section to Malakal hospital, in this quarter.

Activity 6: Train/refresh PHC workers. Training of health workers in Primary Health Care and assessment of their performance is carried out on a quarterly basis. In this quarter 94% of beneficiaries were prescribed the correct drugs. 100% of the beneficiaries could describe correct usage as prescribed by the Medical Assistant (MA).

Activity 7: Rehabilitate existing PHC facility. PHC rehabilitated.

Activity 8: Establish basic preventative and curative health services at Malakia health center. In this quarter a total of 7,323 beneficiaries were seen in the clinic many that were from outside the catchment area. Of the total beneficiaries seen in this quarter 29% attended the clinic for preventative care, 71% came for curative services while also receiving preventative care.

Activity 9: Provide essential medical supplies and equipment. Medical supplies provided by UNICEF and basic clinic equipment was purchased by GOAL.

Activity 10: Establish regular feedback from CHPs to meet the community's identified needs. During this quarter, the CHPs and CTC health educators actively promoted preventative health messages to the community. There were 11,521 home visits in this quarter and 6,250 homes visited by the CHPs.

Indicator and current measure: Number and percentage of target population using the health facility. 80% of women of reproductive age seen at the clinic will be up to date in their Tetanus Toxoid vaccinations; 88% of women were up to date in their TT schedule in this quarter. Maternal and infant mortality rates within the target population; there were 26 neonatal deaths reported in this interim period and 3 maternal deaths. Number of CHPs home visits and referrals to appropriate centers; There were 11,521 home visits in this quarter and 6,250 homes visited by the CHPs. Number and percentages of women in target community accessing ante/postnatal services. A total of 3,959 beneficiaries were seen in the reproductive section since the beginning of the funding period.

Budget for Objective 3: US\$72,163

Expended This Period: US\$21,848

Cumulative Expenditures to Date: US\$69,324

Balance: US\$2,839

Objective 4: Reduction of case fatality rate to less than 1% in severe watery diarrhea (SWD) / cholera outbreak in Malakal town and Sobat River Basin area.

Activity 1: Train rapid response health teams on the prevention of spread, and treatment of disease outbreak. Two workshops took place to train teams in rapid response techniques during the month of January 2001. GOAL reactivated the Emergency Preparedness Interagency group on SWD. The committee increased community awareness and community participation in environmental hygiene in the Upper Nile State using local radio messages. There were weekly meetings to identify supplies available and to co-ordinate refresher training.

Activity 2: Establish Oral Rehydration Clinics and provide essential medical supplies. There was an increase in the number of cases of diarrhea diseases from 725 in last quarter to 1,308 cases in this quarter. Throughout the funding year, no cases of SWD have been reported from Malakal or surrounding villages.

Activity 3: *Identify and chlorinate water sources used by the community.* GOAL and the International Rescue Committee (IRC) had discussions to establish a plan for water chlorinating in the event of any outbreak. The assessment of the CHPs in the last quarter showed that 66% of the community knew how to make their drinking water safe.

Activity 4: *Initiate environmental cleaning campaign.* In this reporting period, the CHPs in coordination with Malakia health committee and staff from the IRC conducted 22 cleaning campaigns in Malakia.

Indicator and current measure: *Mortality and morbidity rates of target population relevant to disease outbreak.*

Budget for Objective 4: US\$ 40,300

Expended This Period: US\$ 16,758

Cumulative Expenditures to Date: US\$ 36,230

Balance: US\$ 4,070

4. PROGRAM OVERVIEW

A. Program Goal

The overall goal of this program was to provide improved basic emergency health care for the vulnerable population of 98,658 people in Malakal town and 115,175 people in villages along the Sobat River Basin who habitually suffer from epidemic disease outbreaks.

Program Objectives:

1. Prevalence of moderate and severe malnutrition among children under five reduced to less than 10% over the program period.
2. Vaccination coverage in children under five for measles, polio, pertussis, diphtheria & BCG increased from the current 41% to at least 70% over the program period. Eligible women attending antenatal care vaccinated with tetanus toxoid.
3. Access to basic essential/emergency health care and essential ante/postnatal services among target population increased.
4. Reduction of case fatality rate to less than 1% in severe watery diarrhea/cholera outbreak in Malakal town and Sobat River Basin area.

B. Target Population

The current estimated population figure for Malakal town is 98,658 based on the 1999 National Immunization Days (NIDs – UNICEF/MoH) records, while that of the Sobat River Basin area is estimated at 115,175 (UNICEF Barge census reports, 1999). The population of the catchment area for Malakal Health Center has been revised down from 40,000 in the original proposal to 32,382 in line with UNICEF 1999 figures. The main ethnic tribes are the Nilotic tribes of Shilluk, Nuer and Dinka. Other tribes include Burum, Murele and Anyak.

C. Geographical locations of all major program activities

Malakal, which is the main town of the Upper Nile State and the capital of Tonga Province, lies on the eastern bank of the White Nile. The GOAL Primary Health Care (PHC) center and Supplementary Feeding Center are located in Malakia area, the northern section of Malakal town. This program also supports the Therapeutic Feeding Center (TFC) at the Pediatric Hospital, situated in the center of the town, adjacent to the main general hospital.

5. PROGRAM PERFORMANCE

The Operating Environment

The security situation in Malakal town, though volatile at times in the first 3 quarters, remained stable in the last quarter with few serious incidents. However, despite difficulties faced in the operating environment, the objectives of the GOAL Malakal program were largely achieved during the funding period.

The UN Annual Needs Assessments (ANA) Operation Lifeline Sudan (OLS) report in November 2000, indicated the need for food assistance to the Upper Nile State due to food deficits of 41% predicted for 2001. During 2000, insecurity has often prevented the movement of food supplies along the White Nile and in particular the Sobat river basin. Also negotiations for the release of hostages from the February 2000 plane hijacking, by pro-government militia in the town of Fangak (50 miles southwest of Malakal) caused reductions in the food distributions to this area and the population were demanding their due ration throughout mid 2000. WFP barge activities were suspended from August 2000 following an attack on a UNICEF motorboat. A UN field security assessment on the Southern Corridor in January 2001, however, noted relative calm in the IDP camps outside of Malakal town and surrounding areas thereby allowing re-commencement of river transport for the UN in early 2001. Despite indications that the WFP food barge would resume, it was held up for one week during January due to complications from local Government and the Humanitarian Aid Commission.

The late onset of the rains in June 2000 combined with below average rainfall increased the fears of low harvest yields. Sorghum, the staple-diet, has doubled in price from 3,400 Sudanese Dinar (SD) in 2000 to 8,000 SD (approx. US\$30 per bag) in 2001, following a poor harvest and increases in exports. The WFP and Food and Agriculture Organization (FAO) continue to monitor the food security situation in the Upper Nile closely.

Recurrent inter and intra tribal fighting between Nuer/Dinka groups, clashes between the rebel groups, the Government of Sudan (GoS) and the militia impinged on humanitarian activities during this funding year. The nutrition survey planned for November 2000 had to be cancelled due to persistent insecurity. Though the warring parties announced a period of tranquility, a team of vaccinators was attacked during the National Immunization Day (NIDs) polio campaign in October – November 2000 losing personal property and cold chain equipment. Furthermore in December 2000 a NNGO, SIDO (Sub Saharan International Development Organization) was attacked by the SPLA, who attempted to take radio equipment while operating in Nagdiar, an area on the Sobat. Even now no mobile communication equipment has been approved for UN vehicles and boats. Though this did not affect humanitarian activities in Malakal town humanitarian assistance to outreach areas in the Upper Nile and Jonglei States was disrupted (the ANA OLS was conducted but the activity was limited to Malakal town due to lack of access). The cattle raiding along the Sobat Corridor infringes on Bam locality in the south of the town, affecting local food security. This prevented the return to normal livelihood status for the population with only a minority of people managing to retain even a small herd of cattle. It was also reported that there were a number of women and children abducted during the cattle raids, many of which occur during daytime.

On a positive note, though these tribal clashes continued along the Sobat Corridor in February 2001 greater efforts were made by the GoS to promote peace and harmony. The Walis from both States advocated peace talks between Nuer 'brothers'. Nuer of Jonguli (*Lau Nuer*) and Nuer of Upper Nile States (*Jokong Nuer*) were looting each others cattle while grazing in areas along the Sobat. Also the United Nations (UN), International Non Governmental Organizations (INGOs) and National Non Governmental Organizations (NNGOs) were requested by the "Walis" (Commissioners) to provide food drops in these areas, 'similar to those in the Southern sector' in order to alleviate tensions exacerbated due to food insecurities. INGOs (OXFAM) and NNGOs conducted an assessment in this area in late February 2001, which resulted in the UN subsequently securing access routes for transporting food via waterways. Militia clashes with the Government forces north of Malakal, however, caused an increase in the daily military movement within the town in February 2001. Fortunately March 2001 was quiet with no incidents reported along the Sobat Corridor.

Daily radio contact has been established between GOAL Malakal and the GOAL Khartoum office since January 2001, which is particularly important considering the poor standard of the phone system at present. HAC Khartoum personnel operate Very High Frequency (VHF) radio communication, 5 days a week between the hours of 7.30am to 3.30pm. WFP and UNICEF continue to operate a flight-bridge at least twice weekly to Malakal and improvements have been noted in both the time requested to process travel permits, and the length of their validity.

Many of the women in Malakal depend on brewing alcohol as their only source of income. Much alcohol is consumed in the town of Malakal itself. The Wali of Malakal State, enforced imprisonment penalties in January 2001, for the brewing of alcohol creating much unrest amongst the population in the town. SOS, an NGO, has commenced work following an assessment that noted the high number of street children in Malakal. This was reported as being due to the imprisonment of mothers, and/or fathers involved in the war and also mothers often do not have sufficient skills to support their children or have gone outside the town to find work.

In the last quarter due to Governmental changes in Khartoum, there was an overnight change of all government positions in Malakal town, including the position of Wali. However no major incidents were noted other than increased tension in the town and a more visible internal security presence on patrol.

During March 2001, a meeting took place between commanders and leaders of the main southern factions (signatories of the Khartoum Peace Agreement) and Pro-Government groups in an attempt to unify the numerous factions under one umbrella.

Objective 1:

Prevalence of moderate and severe malnutrition among children under five reduced to less than 10% over the program period

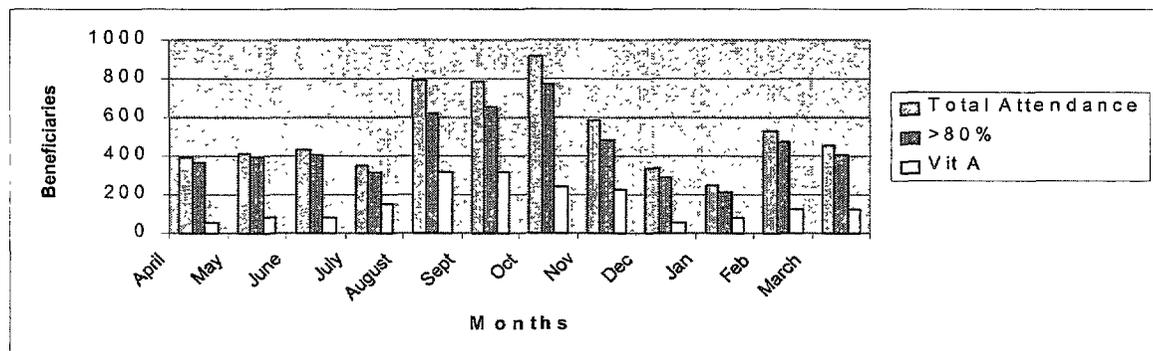
Growth Monitoring Program: All under fives seen at the clinic attend the GMP, which allows early identification of nutritional problems through weighing, and assessment of the child by a MCH worker. GOAL encourages the community to attend the clinic on a monthly basis to assess the growth of each child and receive health education on good nutritional practices. 1,232 children were seen in the GMP in this quarter. This represents 22% of the target population under 5 years, 45% of whom were weighed for the first time and the remainder for a second/subsequent time.

Of the total number of children seen, half were less than one year old. The average monthly attendance was 410 compared with 612 in the previous quarter. This reflects a general decrease in overall attendance at the clinic. However, 56% of the children in Malakia under 5 years of age were weighed and assessed by a MCH worker in a one-year period, while prior to the GOAL program only 9% were being weighed.

From the total number of beneficiaries attending the GMP in this quarter, 88% were adequately nourished, compared to 84.5% last quarter. Children <70% weight for height were referred to the TFP, while those between 70-79% were referred to the GOAL SFP. Of the 12% who were malnourished in this quarter, 2% suffered from severe and 10% suffered from moderate malnutrition. The CHPs received refresher training in nutrition, conducted by the GOAL nutritionist, and actively identified and referred malnourished children from the Malakia area to GOAL's health center. During this period 290 malnutrition cases were referred to the GMP by CHPs, which increased from 127 in the previous quarter.

A significant increase in GMP attendance was seen in August 2000, (see Figure 1), which coincided with the commencement of the SFP.

Fig 1: GMP Attendance in Malakia PHC from April 2000 to March 2001



A prophylactic dose of vitamin A is administered to children aged between 6 and 59 months, according to the World Health Organization (WHO) guidelines. In this quarter, 331 doses were administered at GOAL's clinic. The increase in the previous quarter was due to the more aggressive vitamin A administration during the Polio campaign of November 2000.

To evaluate the quality of health care given at the clinic, GOAL carried out quarterly assessments, which noted that regular attendance at the GMP had improved. 92% of the children registered in the GMP had been growth monitored within the last month and 90% had their weight plotted on the road to health card, similar to the last quarter.

GOAL has observed that the general diet in Malakal is very poor with the population consuming very little fruit and vegetables. This is linked to the community's lack of knowledge of the nutritional value of foods and to certain food taboos within their culture. The CHPs produce regular radio education programs, which inform listeners on the causes of malnutrition, the associated problems faced in the community and how good nutrition and diet can ensure a strong and healthy child. The radio education sessions are broadcast on the local Malakal radio station by the CHPs three/four times a week.

Supplementary Feeding Program (SFP): In May/June 2000, GOAL constructed a SFC to cater for a total capacity of 150 children at the Malakia health center. This center has been operational since July 2000. A clinical assessment of all new admissions is routinely carried out and the EPI status of each child is systematically checked and their vaccination schedule is updated. A Medical Assistant (MA) reviews the children daily and provides prophylactic treatment for underlying infections such as malaria, worms, anemia and vitamin A deficiency. A nutritionist recruited in Khartoum supervises four nurses, two cooks and two cleaners who work at the wet SFP in Malakia.

In March 2001, the method of supplementary feeding was changed from the provision of cooked meals in a wet feeding system to a dry take home ration. This decision was made after careful monitoring of the attendance and defaulter rates, the changing food security situation in the area and the living circumstances of malnourished children's mothers. It was observed that half of the beneficiaries were coming from areas other than GOAL's target area, due to the lack of services at other locations. Defaulter rates were rising and mothers were sending older siblings to accompany their malnourished children in the center. The distance was further (outside the immediate target area proposed) and it was difficult for mothers to stay at the feeding center all day. Presently there are 2 nurses working in this section.

A nutrition survey took place in April/May 2000 showing a GMR of 13% in Malakal town. A repeat survey planned for November 2000 was postponed due to insecurities. This will be conducted in the coming quarter.

Since the establishment of the wet SFP in July 2000, through to February 2001, 587 children (11% of the < 5 years in Malakia) were seen in this program. Of this number, 267 children were discharged, 209 of whom were fully discharged from the program (after two consecutive weighings above 85% weight /height) and 58 continued for follow up (for six weeks receiving food rations every two weeks). All were discharged in a 30-60 day period. In this quarter there were 70 new moderately malnourished (between 70% and 80 % wt/ht) children admitted which is a reduction from 205 in the last quarter. The reason for this may be that mothers returned to outside villages at harvest time and for the Christmas/Ramadan celebrations. The center has observed an increasing trend in the number of malnourished children accessing the SFP from areas other than Malakia reflecting the lack of sufficient services or poorly run SFP in these areas. Almost half of the beneficiaries in this quarter came from surrounding villages, similar to the findings of the last quarter. Difficulties were experienced in tracing defaulters from these areas. GOAL worked closely with the hygiene promoters from IRC to trace defaulters from the south of the town.

Table 1: Evaluation of SFP by the Proportion of Exits, August 2000 - February 2001

Proportion of Exits	August 2000	November 2000	January 2001	February 2001
Recovery rate (as % of exits)	45%	46%	57%	62%
Mortality rate (as % of exits)	0%	0%	0%	0%
Default rate (as % of exits)	50%	42%	36%	24%

There were no discharges from the program until August 2000. Table 1 shows that 45% of the exits reached over 85% wt/ht on 2 consecutive weighings, in August 2000, which increased to 62% in February 2001.

No deaths were reported in the SFP in this quarter, consistent with last quarter. In an assessment of the SFP in this quarter, many mothers, (often being the sole breadwinners in the family), cited working outside the home or caring for other siblings at home as reasons for irregular attendance. Often they are involved in petty trading (tea, water, firewood and charcoal) during which time daily attendance to the center would further impinge on their financial and time constraints. It was noted that many of the mothers were dependants of the military where the mother has many children and has little or no assistance in the home. Mothers would send very young siblings to the center with the malnourished child and they may only attend irregularly, due to the long distance to travel although they did not default from the program. This led to slower recovery times and inhibited the nutrition education given at the center from effectively reaching the intended target group. For the dry SFP mothers attend weekly thereby easing the burden of daily attendance. Furthermore as it is expected that the family would also share some of the child's take home rations a training program for the mothers was set up in partnership with WFP which allows participating mothers to acquire a bigger ration to share with the whole family. This training highlights the necessity that the malnourished child receives the entire ration allocated for him/her and that it is also only a supplement to the regular family diet. It is intended that the mothers will be empowered to take the responsibility for their child's feeding in the home.

During this quarter the nutritionist handed over responsibility for running the SFP to a local staff member. Each moderately malnourished child received a ration of 1000 -1200 kcals daily at the wet SFP. In a further effort to prevent malnutrition, cooking demonstrations have been given weekly, using locally available nutritious food and vegetables. The clinic garden produce is utilized when possible although the soil in this area has been found to be infertile. The location of the garden is to be changed in the coming quarter. GOAL aims to encourage and assist the mothers to cultivate similar gardens in their respective areas and to understand the link between cultivation of vegetables in preventing malnutrition.

GOAL is co-ordinating with the FAO to assist in identifying people in the community (especially those registered in the SFP/TFP) to cultivate household gardens. The CHPs will distribute seeds and tools to households who have prepared their land, and will be involved in improving knowledge about the importance of homegrown food. The mothers of malnourished children are encouraged to participate in this program. To enhance knowledge about nutrition within the community, beneficiaries registered in the dry SFP can avail of these services six days a week in small groups whereby each group can attend once a week.

The Knowledge Attitudes and Practices (KAP) survey of Feb/March 2001, found that 57.5% of the mothers introduce complementary feeding/weaning from the age of 4-6 months. This is an improvement since the last KAP survey of February 1999, which found that 49% were weaning at this age.

Therapeutic Feeding Program (TFP): GOAL began supporting the TFC in the Malakal pediatric hospital, in July 2000. Many problems were noted such as the lack of motivated staff, poor knowledge and skills, irregular drug supply, lack of regular food items and extremely high mortality rates. GOAL commenced payment of a nominal fee for four nurses to work on day and night shifts, 2 cooks to ensure safe preparation of food and one GMT who provides medical care for the children in the TFP.

The Medical Doctor and the GMT assess the children daily for any underlying medical conditions. Routine treatment: antibiotics, anti malarial, vitamin A, antihelminths and folic acid are given to all children admitted to the TFP.

Initially GOAL supplied milk to the TFP when this program commenced support in July 2000 because there was a lack of dried skimmed milk available at the center. A system of regular ordering and monitoring of food was established with UNICEF, who provide the food for the children and WFP who provide two meals daily for the mothers. Each severely malnourished child admitted to the center receives six high-energy milk (HEM) portions daily, two porridge ('Mededa') portions, salads or fruits, soup and a meal, which depends on local availability in the market (this is purchased by GOAL). The TFP follows MoH/GOAL guidelines consisting of two phases: phase one provides 100kcal/kg/day using HEM and phase two provides 200 kcal/kg/day using HEM porridge and local meals.

172 severely malnourished children (3% of the target population) were admitted to the TFP since its commencement in July 2000. In this quarter 50 children were admitted to the TFP and 23 were discharged (on reaching more than 70% wt/ht)¹. It was observed that although there was an alternative SFP in their own area, some of those children discharged from the TFP traveled to the SFP in Malakia. 7 children died and 4 defaulted from the TFP in this quarter. The number of deaths has reduced from 14 and the defaulters reduced from 10 since the first quarter. Most of the deaths were due to late stage cases of Kala-zar² and anemia (which is often a late complication of undiagnosed Kala-zar). As the children with Kala-zar were mostly admitted in the late stages of their illness discussions took place, in this quarter, between Hospital sans Frontier HSF, (who operate the Kala-zar program in Malakal town), WFP and GOAL. These children were not receiving appropriate feeding in the Kala-zar ward therefore were seriously malnourished on arrival to the TFC. Cases of Kala-zar are now admitted directly to the TFP and then return daily to the Kala-zar ward, where they receive their medications.

The MoH charge 800 -1,000 SD for drugs and admission to the TFP so many of the families who are unable to afford this avoid/delay coming for treatment to the TFP. Following discussions with GOAL the MoH agreed not to charge those families who could not afford it. Also to ensure nutritional awareness and early treatment GOAL aims to carry out nutritional education in Malakal town, for the Community Health Workers (CHWs) along the Sobat Corridor.

In January 2001, GOAL employed an experienced GMT from Khartoum for a 2-month period to work with the pediatric doctor and to provide intensive training for the local nursing staff and GMT. The training focused specifically on nutrition and the treatment of severely malnourished children.

As the medical doctors are assigned to Malakal for a 3-6 month period only on national service- continuity of the program has proved difficult. Medical and food supplies for the TFP had been ordered inconsistently and protocols for the treatment of malnourished children were not obeyed.

¹ Many of the beneficiaries to the TFP are from outside Malakal town along the Sobat Corridor and they have no operating SFP in these areas. These children are therefore kept in the TFP until they achieved a weight >80% over two consecutive weeks with no medical condition observed.

² Kala-zar is an endemic illness in Sudan particularly in the Upper Nile region and is transmitted by sand fly bites.

In collaboration with the MoH, GOAL designed TFP guidelines to resolve this problem. The GOAL nutritionist based in Khartoum visited the nutrition program on a regular basis to provide technical support to the local staff and liaise with the MoH to ensure the sustainability of the TFP. The nutritionist initially trained a nurse from the clinic to give on-site training to the nurses and to supervise the TFP. In the next quarter a nurse from the TFP will be identified to take responsibility for overall nutrition in the TFP and to report regularly to both UNICEF and WFP. Monthly meetings with all involved took place to highlight key concerns and provide an opportunity to discuss the work.

Community Health Promoters: The CHPs and the CTC continue to improve nutritional awareness and other factors such as poor sanitation while coordinating their work with other Non Governmental Organizations (NGO) such as the Islamic African Relief Agency (IARA) and IRC. All defaulters from the SFP and the TFP are followed up in the community.

Co-ordination: Since July 2000 GOAL has initiated biweekly interagency health and nutrition coordination meetings with UNICEF, IRC, MoH, WFP, Sudanese Red Crescent (SRC), IARA and Sudanese Council of Churches (SCC). These meetings facilitate information sharing and feeding programs, surveys, EPI, health data, disease outbreaks and morbidity and mortality data of Malakal and the Upper Nile region. There are three other SFP centers in Malakal and GOAL aims to build the staffs technical capacity in nutrition in these centers.

Objective 2: Vaccination coverage in children under five years old against measles, polio, pertussis, diphtheria & BCG increased from the current 41% to at least 70% over the program period. Eligible women attending antenatal care vaccinated with tetanus toxoid.

When GOAL commenced this program in Malakal the coverage rate for full course vaccinations given was 41% as revealed by the baseline survey in Malakal town in 1999. The coverage rate had increased to 42% by April 2000 and to 57% in November 2000, (mini EPI survey by GOAL CHPs).

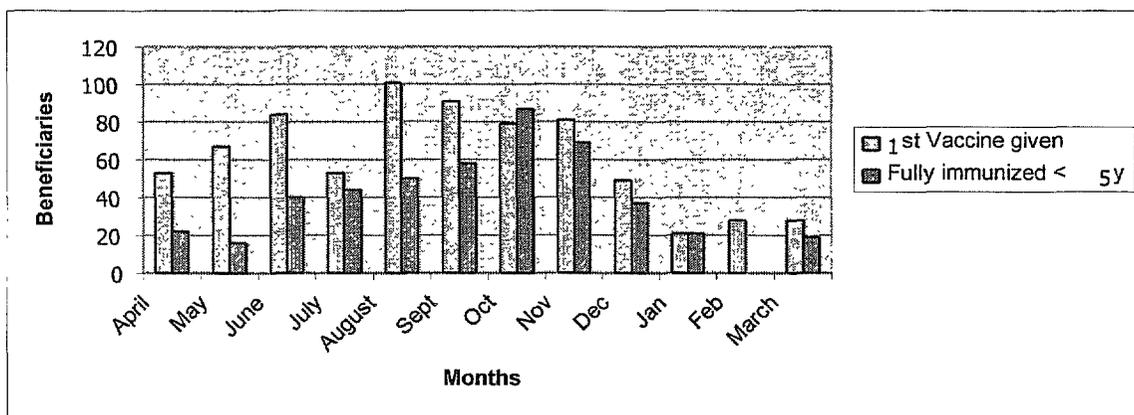
Figure 2 shows a significant improvement throughout the first three quarters of the funding year in the number of children under 5 years fully vaccinated, from a total of 78 children in the first quarter to 193 in the third quarter. In the final quarter there was a reduction in the number of children recorded as fully vaccinated at the health center due to the coinciding acceleration campaigns (January / February 2001) which took place in the community and not at the health center. A repeat EPI survey is needed to assess progress towards this objective at the end of the funding year.

GOAL gives most attention to the immunization of children under one year old. Of the total number of children fully vaccinated in this quarter, 92.5% were aged under one year compared to 75% in the last quarter. At the Malakia health center, 10% of children under five years old were fully vaccinated and 87% were up-to-date in their vaccination schedule. There were 1,187 vaccines given in this quarter with a monthly average of 395, in comparison to 2679 vaccinations with a monthly average of 876 last quarter.

The increase in vaccinations last quarter was attributed to beneficiaries from the south of Malakal changing to the Malakia clinic due to the temporary closure of the Islamic African Relief Organization (IARO) clinic, which resumed activities in this quarter.

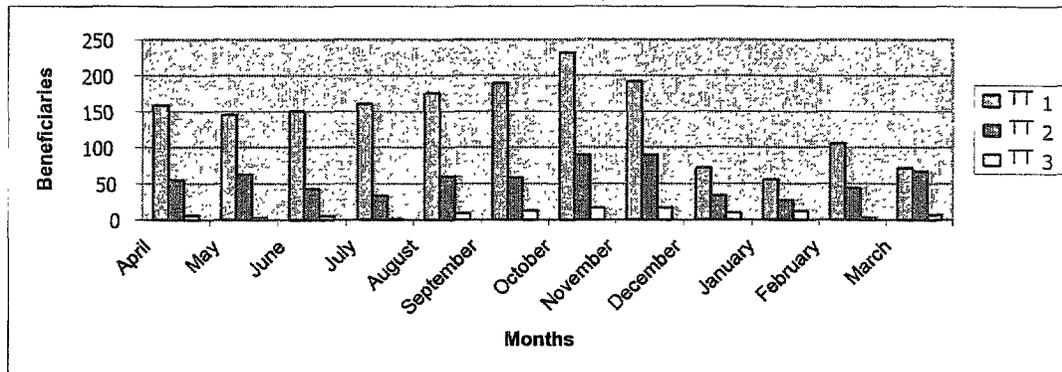
The number of BCG and measles vaccines administered in this quarter was 77 and 95 respectively, a reduction from 209 and 247 in the previous quarter. A number of factors contributed to these reductions, including a MoH acceleration campaign (all routine vaccinations given), a shortage of vaccines from the MoH cold chain and a reduction in the numbers attending the clinic. Throughout the funding year only three cases of measles were confirmed in the clinic, in line with seasonal trends. All of these cases had recently moved to Malakal from villages near by and had not been vaccinated. No other cases of immunizable diseases were reported this quarter. A total of 367 children defaulted from the EPI program during the period April 2000 -March 2001, 260 of whom re-attended when followed up by the GOAL CHPs. IRC hygiene promoters assist in tracing EPI defaulters from the south of the town. Mother Child Health (MCH) workers attended workshops and training on EPI during this funding period and the CHPs are also trained in scheduled sessions with the vaccinators in the clinic. In this funding year 2,801 women received TT vaccine, which represents 81% of the women of child-bearing age. This has increased since the GOAL baseline survey in September 1999, which revealed that only 27% of the women in Malakia received TT.

Fig. 2: Vaccinations Given, Malakia Health Center, April 2000 - March 2001



Last quarter, a total of 854 TT vaccines were administered with a monthly average of 284, compared to 448 in this quarter (figure 3). Though there is a significant drop due to the aforementioned reasons, there is an improvement in access to TT by the women in Malakal. The clinic quarterly assessment found that 88% of women were up to date in their vaccination schedule. No cases of neonatal Tetanus have been reported.

Fig. 3 Tetanus Toxoid Vaccination, Malakia Health Center, April 2000 – March 2001



Two 3-day rounds of 7th national polio campaign were conducted in October – November 2000 and the first round of the 8th polio campaign in March 2001. MoH, UNICEF, GOAL, WHO and other NNGOs co-ordinated the campaign in Malakal town which was supervised by GOAL's vaccinator. The MoH/WHO stipulated a house-to-house strategy, to prevent areas being overlooked thus improving overall coverage. The coverage rate was 94% in the 8th round in 2001, which showed a decrease from previous rounds due to many families being out of town on the day.

The MoH, UNICEF and NGOs commenced the CSM vaccination campaign in the Upper Nile, in February/March 2001. This followed reports from UNICEF of cases of meningitis in Probe (south of Malakal, in the Jongoli State) with 2 deaths reported and further cases suspected in the Upper Nile State. As the presence of meningococcal bacilli can't be tested in Malakal and samples of cerebro spinal fluid have to be sent to Khartoum, the MoH could not confirm any cases. Furthermore the meningitis surveillance system was very poor in the town and the IDP camps and GOAL strengthened this through the initiation of regular task force meetings for meningitis surveillance, prevention and response. GOAL is seen as the lead agency in Malakal town in initiating and co-ordinating campaigns or outbreak response. A total of 25,253 people, between the ages of 2 and 30 years received CSM vaccine in Malakal town and the outreach areas. Vaccinations also took place in areas along the Sobat Corridor and the IDP camps outside Malakal town. GOAL/MoH and other NNGOs conducted this campaign, the vaccinators being paid with fund for work due to lack of funds by the MoH. Furthermore GOAL in collaboration with the MoH facilitated the training of staff from the Sobat Corridor on meningitis, with food provided by WFP as an incentive for attending these training sessions. In addition, training workshops on the prevention of meningitis were organized jointly for CHPs from GOAL, IRC and SRC.

An EPI acceleration campaign took place in the Upper Nile State in January - February 2001 (stopped in March due to the polio campaign, 8th round). The MoH implements this campaign only in selected areas of Sudan, which have poor EPI coverage rates targeting women of childbearing age and children <5 years. A total of 752 children were vaccinated in rounds 1 and 2 with 5.5% of the target group fully immunized. A total of 1,075 women received TT vaccine, 32% of the target population.

Objective 3: Access to basic essential/emergency health care and essential ante/postnatal services among target population increased.

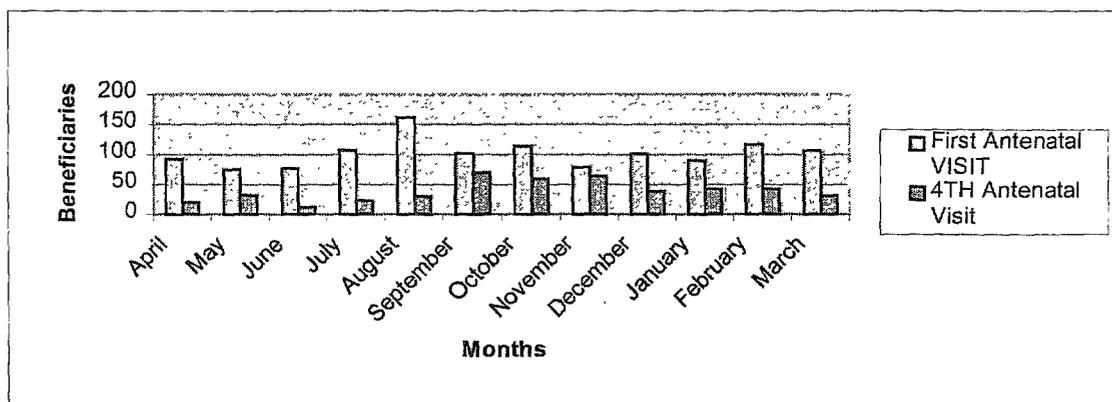
General: The GOAL Malakia health center has a strong focus on prevention and consists of the following activities: EPI, GMP, Reproductive Health (ante/postnatal care and family planning), nutrition screening, supplementary feeding, Curative Care (diagnostic laboratory, pharmacy, dressing room) and an ORT clinic. Volunteer teams of CHPs and TBAs enhance the preventative component of the program.

At the end of this quarter, 30 members of staff were employed at the clinic and community program, 36 community volunteers and 18 TBAs. A Sudanese clinic and CHPs co-ordinator supervise all staff with a Health Visitor supervising the reproductive health, a Khartoum based nutritionist monitoring the nutrition program and 2 expatriate staff supporting the overall program. All Khartoum recruited staff have identified and begun to train local counter parts with the objective of handing over these positions to permanent staff from Malakal.

In this quarter a total of 7,323 beneficiaries were seen many of whom were from outside the catchment area. Of the total beneficiaries seen in this quarter 29% (2,114) attended the clinic for preventative care while 71% (5,209) came for curative services while also receiving preventative care. Curative services are available for all age groups and both sexes. Rehabilitation of the clinic took place in this quarter with locally employed laborers.

Reproductive Health: A total of 3,959 beneficiaries were seen in this section since the beginning of the funding period. In this quarter 25.5% attended their first antenatal visit, 13% attended their 4th visit and 11% came more than five times, similar to the last quarter.

Fig 4: Comparison between the 1st and 4th Antenatal Visits, April 2000- March 2001



In the quarterly assessment 86% of the women attending antenatal care could list three signs of pregnancy, an increase from 84% in the last quarter. A total of 20 women were referred from the midwifery section to Malakal hospital, in this quarter (in comparison to 48 in the last quarter), with the following complications: Malaria, ante-partum hemorrhage, pre-eclamsia, abortion, unstable lie and anemia. The high number of anemic cases is due to poor general diet exacerbated during pregnancy and some related traditional food taboos for pregnant women.

The community in Malakal rely on '*Manyachalo*' (prepared from dura flour after fermentation, occasionally with mashed fish added to it) for their main diet. This is cheap but of low nutritional value. As a result iron supplements are given as prophylaxis to all pregnant women in view of the poor nutrition and high fertility rates. Women often engage in heavy labor during pregnancy for example collecting firewood, working in the fields during harvest time and carrying water.

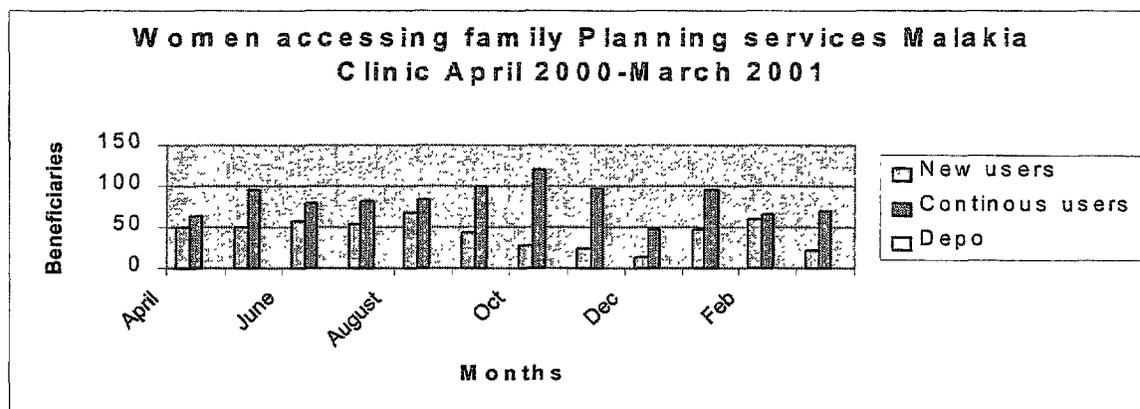
An average of 28 TBAs continue to report to the clinic on a weekly basis with up to 10 TBAs from the Bam area (south of Malakal town) attending the weekly training sessions. The health visitors conduct weekly training in safe delivery methods, care of the newborn child, importance of ante/post-natal care, EPI, harmful traditional practices such as female genital mutilation (FGM), sexually transmitted diseases (STD) and acquired immune deficiency syndrome (AIDS) and human immune deficiency virus (HIV). The TBAs reported a total of 699 deliveries during this funding period. In this quarter, 218 (97%) of the deliveries were attended by trained TBAs and 7 (3%) were unattended, which shows a great improvement from the last quarter. Most of the unattended deliveries reported are from an area called Lowakat, where there is only one trained TBA operating. GOAL co-ordinated with the MoH midwifery school to include untrained TBAs in the next training program. 26 neonatal deaths were reported, most of which were unattended deliveries. The improved reporting system may have contributed to an apparent high number of neonatal deaths. Some of the causes of deaths were due to malaria, fever, jaundice and syphilis (1 case).

There were three maternal deaths reported in the funding year due to complications such as malaria, retained placenta and unattended delivery. The local radio has been used by GOAL to emphasize the importance of TBAs in assisting deliveries. The families are encouraged to save money for services supplied by the TBAs, in kind/cash to enable the TBAs to buy some of the essential contents of the delivery kits such as soap, gloves and suturing materials.

A total of 659 women, a monthly average of 55, were seen in the postnatal clinic during this funding year. In this quarter 248 beneficiaries attended the postnatal clinic compared with last quarter when only 101 beneficiaries were seen. The TBAs conducted a monthly average of 310 postnatal visits in the community this quarter compared to 356 last quarter. 20% of this quarter community visits were supervised by a health visitor and 36% of the mothers received vitamin A during this postnatal visit. Family spacing, EPI, breast-feeding and weaning practices are discussed with postnatal women. As seen in the number attending the postnatal clinic, the customs and traditions that the mother should not leave the house until 40 days (or 3 months for twins) is now changing due to the education given by the TBAs and the CHPs.

Family planning is part of the overall reproductive health program in the Malakia clinic supported by the UN Family Planning Association, UNFPA. The midwife/health visitor listens to the concerns of women and advises appropriately. The number of women accessing this service has been increasing, with a monthly average of 121 beneficiaries 51% who were continuous users and 49% new patients (Figure 5).

Fig 5: Women Accessing Family Planning Services, Malakia Clinic April 2000 – March 2001



A workshop to discuss harmful traditional practices took place last quarter, in collaboration with the Sudan National Council against Harmful Practices (SNCTP). Following on from this, further workshops have been conducted in Malakal with health staff, TBAs and CHPs and other agencies to increase awareness of the dangers of some of these practices and discussions also took place amongst the community. These deep-rooted customs, however, require effective health education targeting both men and women in order to reduce the risks to health associated with some of these harmful practices.

GOAL is co-ordinating with the MoH to organize training on STDs/AIDs/HIV, for health staff, CHPs, TBAs, community representatives and other agencies, which will be followed by education sessions in the community, clinic and schools.

The community find it embarrassing to discuss STDs and whilst treatment is available in the market, it is expensive. GOAL endeavors to encourage the community to use condoms and to prevent the spread of STDs through health education and plan to work very closely with IRC in the future in a reproductive health program.

Morbidity and Mortality: The top three illnesses seen at the clinic in this quarter were malaria 24.7% (reduced from last quarter), acute respiratory infection (ARI) 26% (similar to last quarter) and diarrhea 25% (increased since last quarter). Complicated cases seen in the clinic (malaria, anemia, acute respiratory tract infection and bilharzia) are referred to the Malakal hospital for further investigations and treatment. Other illnesses seen were anemia associated with malaria, ear, eye and urinary tract infections, burns and wounds. The quarterly clinic assessment revealed 94% beneficiaries were prescribed the correct drugs in this quarter, 100% of the beneficiaries could describe correct usage prescribed and 92% of beneficiaries could explain preparation of Oral Rehydration Solution (ORS). GOAL Malakia clinic continues to receive its essential drugs quarterly from UNICEF.

Logistic constraints concerning the supply of Tuberculosis (TB) drugs to Malakal have been experienced since August 2000. Since these drugs have not been available at the main hospital, patients have had to buy them in the market, which is unaffordable to many, and therefore they go without treatment.

In Malakal there is an increasing problem of alcohol consumption leading to further economical constraints on families and poor health. Following these findings, GOAL discussed this logistical problem with UNICEF Khartoum and GOAL will communicate closely with MoH in Khartoum to assist speedy transport of these drugs to Malakal.

Health Education and awareness training: There are 40 active CHPs promoting preventative health messages to the community. They cover all "hillas" areas in Malakia. There were 11,521 home visits in this quarter and 6,250 homes visited by the CHPs. The CTC Team Leaders are responsible for the supervision of the CTC program and ensuring continuity of health education in the schools. In December 2000, the CHPs supervisor and CHPs team leaders along with the clinic health staff, participated in a seven day workshop conducted by Development Initiative Group (DIG) in which the health staff were trained in methods for promoting health education in the community. The CHPs attended a four-day workshop on landmine awareness held by OXFAM in February 2001. One main aim of the workshop was on the training of trainers and GOAL aims to incorporate this training for the CTC program to increase awareness of children in the schools on the existence and the dangers associated with explosives.

Community Participation and Co-ordination: All community and clinic activities are carried out in collaboration with the community and other agencies in Malakia through monthly health committee meetings.

Objective 4: Reduction of case fatality rate to less than 1% in severe watery diarrhea/cholera outbreaks in Malakal town and Sobat River basin area.

In March 1999, there were 301 deaths reported from SWD giving a case fatality rate of 8.2% in Malakal town. Throughout the funding year, no cases of SWD have been reported from Malakal or surrounding villages. There was, however, an increase in the number of diarrhea disease cases from 725 in last quarter to 1,308 cases in this quarter.

There was also an increase in the number of patients treated in the ORT section though most of the cases were suffering from mild diarrhea. As the weather was also extremely humid, similar to conditions prior to the outbreak that took place 2 years previously, the community was concerned about the possibility of another outbreak.

GOAL observed the situation closely, and the interagency Emergency Preparedness Group to control Severe Watery Diarrhea was re-activated. This group involves all agencies in collaboration with the DG MoH and the Upper Nile State "Wali" (Commissioner). The committee increased community awareness by the use of the local radio and their participation in environmental hygiene in the Upper Nile State. There were weekly meetings to identify supplies available and to co-ordinate refresher training. The committee strengthened the surveillance system, both in Malakal town and the outlying Internally Displaced Camps (IDPs) and villages, for SWD and all agencies prepared the essential equipment for a possible outbreak.

GOAL and IRC had discussions to establish a plan for water chlorinating in the event of any outbreak. IRC and Water and Sanitation (WES) identified the water points in the town and mapped the area. GOAL drew up a plan drawn up for chlorinating distribution at the sites in the North of the town. The GOAL CHPs promoted health education on clean drinking water in the community as a vast majority of the community continues to source their drinking water from the river.

The UNICEF/WES water system is not yet complete. In this last quarter assessment of the CHPs, 66% of the community interviewed knew how to make their water safe.

Two workshops to train teams on rapid response were conducted during January 2001. This refresher training on severe watery diarrhea took place for MAs, nurses, and CHPs/Hygiene Promoters (HPs) both with Malakal town and others from along the Sobat corridor and was in co-ordination with the SRC, IRC, WES and the MoH. Ongoing health education took place in the clinic and the community in Malakia about prevention of this disease.

In this reporting period, GOAL CHPs in coordination with Malakia health committee and IRC conducted 22 cleaning campaigns in Malakia. The communities were encouraged to improve their environment and the Local Council participated in cleaning the graveyard – the main area of open defecation in Malakal town. The northern locality shows a great improvement in terms of cleanliness since the community health program was set up. Furthermore the community have been encouraged to ensure good drainage in their living areas to prevent water stagnation.

Increased efforts have been made to raise the community's knowledge on the prevention of dehydration and diarrhea. From the clinic quarterly assessment, 92% of the beneficiaries could explain the correct method for making ORS. 28% of the households have pit latrines in their homes compared with 24% in last assessment. This is attributed to IRC recommencing the construction of latrines after the last rainy season.

6. RESOURCE USE / EXPENDITURES

Total expenditure for the period January to March 2001 was US\$104,758. This represents 32.52% of the total budget of US\$322,180. The total expenditure for the funding year from 1st April 2000 to 31st of March 2001 was US\$322,180. This represents 100% of the total agreed budget.

Table 2: % Expenditure by Objective 01/04/00 to 31/03/01

	Objective 1	Objective 2	Objective 3	Objective 4	Shared Costs
4th Quarter	35.65%	36.39%	30.28%	41.58%	20.52%
1st – 3rd Quarter	63.75%	66.85%	65.79%	48.32%	89.32%
Annual Expenditure	99.39%	103.24%	96.07%	89.90%	109.84%

Cumulative expenditure for the period 01 April 2000 – 31 March 2001 amounted to US\$322,180. This amounted to 100% of the total budget.