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SAVE THE CHILDREN - USA
SOMALIA FIELD OFFICE

ANNUAL REPORT
DEC. 1992 - JAN 1994
(WITH 2-MONTH EXTENSION)

COMMUNITY-BASED HEALTH INITIATIVE
LOWER SHABELLE, SOMALIA

AID-OFDA Somalia Health
Grant number 968-1032-G-00-3017-00

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EXECUTIVE SUMMARY

The Somalia Field Office of Save the Children/USA is involved in strengthening the community-based primary health care activities of the Lower Shabelle region. During the past year, the program has worked in six districts within Lower Shabelle: Qorioley, Merka, Kurtun-warey, Barava, Aw-dhegle and Sablale. The total target population was estimated at the time of the proposal submission at 207,108; population movement, for a variety of reasons, has meant that population figures have remained estimates.

The overall goal of the health initiative is to improve the general health and welfare of women and children in the impact area. During the past year, this project has aimed at achieving a significant impact on the health status of these target groups through both its immunization program and through establishment of a basic health infrastructure at village level. This latter task included the training of CHWs and TBAs, and the establishment of health posts and MCHs. This project is being undertaken with a view towards long-term development and sustainability by any future government / Ministry of Health.

The project focuses on creating health services in Lower Shabelle with strong community input. Morbidity and mortality rates are targeted through increased knowledge of preventive measures, and through access to health services, using a primary health care approach. Community support and involvement are stressed. During the grant period, this has involved the following activities:

- immunization for measles (under-twelves initially, then under-fives) and the full range of EPI (under-fives),
- distribution of Vitamin A (under-twelves initially, then under-fives),
- training of community health workers and traditional birth attendants to work both at health posts/MCHs and on their own in the more remote villages, including development of manuals for this training,
- reconstruction or renovation of fixed basic health posts and MCHs; provision of drugs, supplies, furniture, staff to these; and
- an program assessment survey, concerning vaccination coverage and morbidity/mortality, for evaluation and future planning.

There have been several constraints to the program, largely involving ongoing security problems in both the Lower Shabelle region and in Somalia in general. Beginning with the June 5th incidence involving the shooting of UN troops in Mogadishu, activities for all humanitarian agencies in Somalia were slowed for several months. In the wake of UNOSOM efforts to establish a district council in Qorioley in early September, clan tensions erupted into open violence on September 6th in the town itself.

Disease		% of villages where mentioned
1)	Malaria	100%
2a)	Scabies	79%
2b)	Bilharzia	79%
4)	Hepatitis	71%
5)	Diarrhea with blood (dysentery)	63%
6a)	Watery diarrhea	56%
6b)	Tuberculosis	56%
8)	Anemia	50%
9)	ARI (including bronchitis and pneumonia)	44%
10)	Worms / parasites	42%
11a)	Urinary tract infection	40%
11b)	Measles	40%
13a)	Bleeding with delivery	34%
13b)	Sexually transmitted diseases	34%
15)	Wound infection	29%

One year later, in January 1994, 161 households in thirty clusters were surveyed in the SCF/USA impact area of Lower Shabelle (see Annex 1 for all results). While the main purpose behind the survey was to get a better idea of vaccination coverage rates, questions relating to morbidity and mortality were also asked. These may give a more accurate picture of actual health problems in the villages than the questions put to the elders discussed above. Absolute numbers for these responses are not high enough to ensure they can be generalized to the population as a whole, but are suggestive of trends. When asked if anyone in the household was sick during the previous two weeks, there were 148 cases mentioned. The most common health problems were as follows:

		N	% of total
1)	Malaria	57	38.5%
2)	Watery diarrhea	22	14.8%
3)	ARI	13	8.7%
4)	Fever (not malaria)	9	6.0%
5)	Worms/parasites	8	5.4%
6)	General aches & pains	7	4.7%
7)	Stomach pain	4	2.7%
8)	Eye infections	4	2.7%
9)	Kidney infections	3	2.0%
	Other	20	13.5%
	Unknown	1	0.6%

The "other" category includes anemia (n=2), vomiting (2), urinary tract infections (2), bilharzia (2), dysentery (1), problem delivery (1), skin infections (1), ear infections (1), epilepsy (1), hemorrhoids (1), breast infection (1), and throat pain (1).

The survey found illness was most common in children. Children under age five accounted for 43.2% of all reported cases, with 19.5% aged 5 - 9, 10.8% aged 10 - 14, 2.0% aged 15 -

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BACKGROUND INFORMATION

Save the Children Federation (SCF/USA) is committed to the survival and well-being of infants and children. It has developed models for the welfare and survival of children and women which have been implemented worldwide.

Save the Children first began its operations in Somalia in 1981 in Jalaqsi, in response to the emergency posed by the large influx of Ethiopian refugees. In 1981, program activities were shifted to Qorioley (Lower Shabelle region), where general community development activities were undertaken among both refugee communities and indigenous villages throughout the vicinity. The program focussed on agricultural training and development, afforestation, economic productivity, and community infrastructure.

Since December 1990, Somalia has been ravaged by a violent civil war. SCF pulled out all its expatriate staff at that time, and all program activities halted during this period. In August 1992, however, SCF committed itself to resuming direct program involvement in Somalia, while simultaneously supporting the feeding activities of SCF/UK. During September 1992, security in Lower Shabelle was such as to allow a visit from an assessment team, with members from both SCF headquarters in the USA, and from its sub-regional office in Addis Ababa. The team, together with the advice of key national staff members who had remained in Somalia, decided to focus initially on agricultural and infrastructure revitalization, primary health care, and community sanitation within Lower Shabelle. The health initiatives discussed in this report are the result of an AID-ODFA health project, funded from 1 December 1992 to 31 November 1993, with a no-cost extension to 31 January 1994. These initiatives have involved strengthening the community-based primary health care activities in the Lower Shabelle region, including training and implementation of activities for both preventive and basic curative care.

The program has worked in six districts of Lower Shabelle: Qorioley, Merka, Kurtun-warey, Barava, Aw-dhegle and Sablale. The total target population was originally estimated at the time of the proposal submission at 207,108. Because of changing political and security circumstances, and the consequent flow of people in Somalia, population estimates must remain very fluid.

The overall goal of the program is to improve the general health and welfare of women and children of the Lower Shabelle region. Morbidity and mortality have been attacked through increased knowledge of preventive measures and access to health services, using a primary health care approach. A basic health

needs assessment for the region has been carried out, as has a follow-up survey focussing on EPI coverage. As well, a disease surveillance system has been established, in coordination with other health programs in the country, to assist in monitoring this effort and for improved planning towards the general goal.

This project has achieved a significant short-term impact on the health status of mothers and children in the region. As well, it has a large potential for long-term health development, within a framework sustainable by any future government. Given the tenuous political environment in Somalia and the lack of national planning for the foreseeable future, however, the program emphasis has been on community strength and self-reliance.

PROBLEM STATEMENT

Because of the initial emergency nature of the program, the planning process at the beginning of the project was abbreviated. The director of Save the Children's Health Unit in the USA visited in November 1992, and held extensive discussions with NGO representatives in Nairobi and Somalia, as well as staff in Mogadishu and the impact area. Communities in Lower Shabelle were visited and focus-group discussions were held with the village elders. All available data were also examined. Existing services and resources were essentially nil, due to the civil war in Somalia. Health problems were widespread, but were fairly consistent between communities. An initial prioritization was made so that work could begin, before more thorough assessment would be made. The interventions selected for initial concentration were:

- immunization / Vitamin A,
- control of diarrheal disease,
- acute respiratory infections,
- maternal health, and
- setting up a community-based PHC system, including training of CHWs and TBAs and establishing a series of village health posts.

Once the project was funded, a basic needs assessment survey was carried out in the impact area in January and February 1993, to further clarify the health status and needs of the people. Groups of elders and local health staff from each of a sample of 48 villages and towns were met and consulted. The fifteen health problems which the community representatives overall listed as most important in the needs assessment survey were:

These security problems, both nationally and locally, slowed the SCF/USA health activities for a time, then suspended them altogether for approximately two months, in September and October 1993.

Related to the security situation is the continuing movement of the population. This means that the actual beneficiaries themselves may change, as well as the absolute number of beneficiaries changing. For example, the population of children under age five who is eligible for immunization has changed, both in person and in number, so that those who have received their first dose may not be present to receive the second or third, and vice versa.

The security situation has been discussed with USAID staff in Mogadishu and Nairobi throughout the year. Adjustments have been made due to the limitations implied by restrictions of movement and security risks. It is this combination of constraints that resulted in a two-month, no-cost extension to the grant, which was originally scheduled to finish 30 November 1993.

Despite these constraints, however, a great deal has been accomplished which allows for improvement in the health and general standard of living of women and children in Lower Shabelle. Accessibility of families to health care, both preventive and curative; individuals' knowledge of basic health care, especially as it relates to ORT and ARI; and immunization coverage of children have all significantly increased due to this program.

19, and 24.3% aged 20 years or more. Among the under-fives, the most common illnesses were:

		N	% of total
1)	Malaria	24	37.5%
2)	Watery diarrhea	18	28.1%
3)	ARI	8	12.5%
4)	Fever (not malaria)	4	6.2%
5)	Worms/parasites	3	4.6%
6)	Eye infections	3	4.6%

A question was also asked in the January 1994 survey if anyone in the household had died during 1993. Overall, 133 people had died, and 40% of households had experienced at least one death. This included one household with 12 deaths and one with 17; otherwise, all deaths were limited to five or fewer per household. With these two larger cases, getting complete age and cause of death information proved impossible, so concentration was given to the deaths among the five youngest members of the households. Among these deaths (up to five per household), the major causes were:

		N	% of total
1)	Watery diarrhea	22	19.6%
2)	Measles	19	16.9%
3)	Starvation	15	13.3%
4)	Malaria	12	10.7%
5)	Dysentery	9	8.0%

Among children under age five (n=60), the major causes of death were found to be:

		N	% of total
1)	Watery diarrhea	15	25.0%
2)	Measles	11	18.3%
3)	Malaria	7	11.6%
4)	Prematurity	4	6.6%
5)	Starvation	3	5.0%
6)	ARI	3	5.0%
7)	Dysentery	3	5.0%

There has been an obvious concern with nutritional status among Somalis in the past year, with many deaths due to starvation. A nutritional assessment using mid-upper-arm circumference was done among children aged 1 - 5 in both the January/February 1993 needs assessment and the January 1994 survey. Findings in 1993 (n=3675) found 36% suffered from severe malnutrition, 42% had mild/moderate malnutrition, and 21% of these children were not malnourished. During the survey in January 1994, one year later, children were again measured. First, the child was checked for edema; only one case was found among 215 children. Of the remainder who were then measured, 15 (7.0%) registered severe malnutrition (less than 12 cm), 77

		N	% of total
1)	Malaria	57	38.5%
2)	Watery diarrhea	22	14.8%
3)	ARI	13	8.7%
4)	Fever (not malaria)	9	6.0%
5)	Worms/parasites	8	5.4%
6)	General aches & pains	7	4.7%
7)	Stomach pain	4	2.7%
8)	Eye infections	4	2.7%
9)	Kidney infections	3	2.0%
	Other	20	13.5%
	Unknown	1	0.6%

The "other" category includes anemia (n=2), vomiting (2), urinary tract infections (2), bilharzia (2), dysentery (1), problem delivery (1), skin infections (1), ear infections (1), epilepsy (1), hemorrhoids (1), breast infection (1), and throat pain (1).

There was only one person sick in the previous two weeks in eighty-five households. In forty-four households, two people had been sick, three people in fourteen households, four people in three households and five people in two households.

A higher percentage of women (n=85, 57.4%) was reported overall to be sick than men (n=63, 42.5%).

Illness was most common in children. Children under age five accounted for 43.2% of all reported cases, with 19.5% in age 5 - 9, 10.8% in age 10 - 14, 2.0% in age 15 - 19, and 24.3% in those age 20 or older. Among the under-fives, the most common illnesses were:

		N	% of total
1)	Malaria	24	37.5%
2)	Watery diarrhea	18	28.1%
3)	ARI	8	12.5%
4)	Fever (not malaria)	4	6.2%
5)	Worms/parasites	3	4.6%
6)	Eye infections	3	4.6%

We looked more specifically at the age and sex distribution of the three leading causes of illness reported: malaria, watery diarrhea and acute respiratory infections.

Malaria cases were almost evenly distributed among the sexes, with 27 males (47.3%) and 30 females (52.6%). Many cases -- 42.1% (n=24) -- were in children under five. Children 5 - 9 accounted for 24.5% of cases (n=14); those 10 - 14 for 10.5% (n=6); those 15 - 19 had no cases; and those 20 or older had 13 cases, or 22.8% of the total.

For watery diarrhea, the sex distribution was 50/50 -- 11 males and 11 females. The age distribution was not so even: all cases were in children twelve or younger, but 81.8% of the total were in children under five (n=18); 13.6% of the total consisted of under-ones (n=3).

ARI was more common in females, with 8 (61.5%) as opposed to 5 males (38.5%). Over half the cases were in children under five

(35.8%) mild malnutrition (12 to 13.5 cm), and 111 (51.6%) were adequately nourished. In 11 cases (5.1%), the child was not available to be measured.

Many of the health problems found in both surveys have been addressed throughout the year in the CHW and TBA trainings (see below). There are, however, problems from the initial list which, because of either technical and / or logistic problems associated with intervention, have not been addressed during the one-year grant period, such as TB and bilharzia. Figures available on child health topics relate specifically to the program objectives discussed below, and are covered at that point.

One component of both the initial proposal and the 1993 needs assessment survey was establishing population figures for the villages of Lower Shabelle. There have been attempts in Somalia in the past, both by NGOs and the government, to census the population. However, all such figures have lost any reliability as a result of the civil war, population movement and the famine situation of recent years. A major task initially, therefore, for SCF has been establishing population figures for the towns and villages of Lower Shabelle. Because of the importance of obtaining data quickly from a large area, and the security problems of the region, a house-to-house census or a sample survey could not be done. Rather, figures were attained through discussions with SCF/USA staff, who had worked for many years in the area, and with the village elders, who are very familiar with the number of people in their area.

There are obvious problems with this method, especially in a situation as variable as that of Somalia. Figures change as people move in and out, according to the security situation, and, as well, some overestimation was probably done by the elders in the hope of obtaining additional aid. As both security and movement in the area remains fluid, any population figures must remain estimates. Also, there is much population movement traditionally during the dry season, as people go in search of water.

Based on the long relationship between Save the Children and Lower Shabelle, and the extensive knowledge of staff of the impact area, it is felt that the figures we used initially are reasonable estimates, given the present state of flux. However, until such time as movement and security stabilizes, these estimates cannot be realistically updated. Staff report villages where no one lives anymore: people have moved because of security problems, or lack of water, or in search of food. Other villages have more and more people. For us to try to change our initial estimates in such a climate would be only a random guess at best. For consideration of this past year's activities, therefore, we will continue to use the original estimates made, with a total population in the impact area of approximately 252,896. These population estimates are shown in Annex 2.

PROJECT CONSTRAINTS

A general constraint to the fulfillment of the project objectives has been the security situation of both the region and the country as a whole. Security began deteriorating in Lower Shabelle in May with attacks on vehicles, limiting movement for all aspects of the SCF/USA program. Subsequent security problems in Mogadishu, beginning on June 5th with the killing of UN troops and continuing for several months, slowed program activities significantly, restricting it to "safe" areas. Constraints were also put on the continued availability of drugs, vaccines and supplies, as well as restricting transportation between Mogadishu and Qorioley to vehicles with a military convoy.

In the wake of UNOSOM efforts to establish a district council in Qorioley, clan tensions there erupted into open violence on September 6th, which continued sporadically throughout the month. September and October were times of stress and tension in Lower Shabelle as a whole. Efforts were focused on establishing peace in the area, and program activities for SCF/USA were suspended.

Expatriate staff of SCF/USA were evacuated to Nairobi three times between June and October 1993. Since evacuation from Qorioley provides many more logistic difficulties than evacuation from Mogadishu, expatriates were further restricted to Mogadishu for long periods while in Somalia. Hence, the health program manager was absent from Qorioley from June to early December 1993.

Throughout this period SCF/USA national staff maintained their presence in Qorioley. The exception to this was the health coordinator, whose clan was on the "losing side". He initially had to take refuge with a fundamentalist group in Qorioley, before he could be brought to Mogadishu. The rest of the staff continued their historically active role in mediating between community groups, bringing elders together to resolve disputes which would result in a peaceful solution. The staff maintained a continual presence in the SCF office and residence, and all assets were secured, resulting in no loss. SCF Mogadishu staff also maintained an open dialogue in Mogadishu with elders from Qorioley and participated in peace meetings in Qorioley, while remaining neutral in the disputes. Discussions among the elders of the region to declare peace took place in Qorioley until the end of December 1993.

The situation in the area has progressively calmed. Moroccan forces established a base in Qorioley, beginning October 13th. Peace negotiations between elders have been ongoing and concluded 1 January 1994. SCF planning activities have continued and health activities began again with immunization teams going out on November 3rd.

Related to the security situation is the continuing movement of the population, as discussed above. This means that the actual beneficiaries themselves may change, as well as the absolute number of beneficiaries changing. For example, the population of children under age five who is eligible for

immunization has changed, both in person and in number, so that those who have received their first dose may not be present to receive the second or third, and vice versa. This was one of the primary reasons behind the need for a vaccination coverage survey to be done at the end of the grant period, to assess progress toward the stated objectives despite a continually fluctuating target population.

As well, major fluctuations in the Somali shilling / US dollar exchange rate put budgetary constraints on the program. When the project was first begun, the exchange rate was 5,500 Somali shillings per US dollar. Major components of the budget were calculated in Somali shillings: Somali staff, vehicle operations, a share of office rent/repair/maintenance, plus a portion of operational materials and project inputs, equivalent to 75.6% of the total budget. When the exchange rate fell to 3,100 - 3,200 per dollar during June and July 1993, it put a severe strain on the program budget.

Both the security situation and the fluctuations in exchange rate have been discussed with USAID staff in Mogadishu and Nairobi throughout the year. Adjustments have been made in budget line items in collaboration with the USAID project manager, as well as realization of the limitations implied by restrictions of movement and security risks. It is this combination of constraints that resulted in a two-month, no-cost extension to the grant, which was originally scheduled to finish 30 November 1993.

Community participation in support of health services has been a continuing problem. Many communities feel they simply do not have the resources at this time -- whether food, time or other in-kind services -- people are still too involved in their own survival. It has traditionally been the case in Islamic cultures to give a portion of one's "wealth" to the poor or needy. It has been suggested to community leaders that this could be directed toward CHWs. This was thought to be a good idea by the leaders, but has yet to be fully implemented in any case. Another constraint to community participation in Somalia in particular has been its history of provision of services by the government without participation. In the past, health posts were built by the government and health workers paid by the government, without any concept of community participation. Many community facilities, such as schools and hospitals, were looted and destroyed during the civil war. This was done, not because people did not think these facilities benefitted them and their community, but because they were seen to belong -- personally -- to Siad Barre, and were destroyed as an act of revenge against him and his government. Despite SCF's constant refutation, it has come to be seen by some in Lower Shabelle as a sort of "interim government", providing services associated with the government in the past. Another deterrent to community participation in Somalia has been the large influx of emergency aid. People have become used to food and services being supplied

at no cost to them. Understandably, they are more interested in getting things free, rather than contributing for these services.

Another ongoing constraint to all health care service within Somalia at present is the lack of any national health plans. The identification of existing problems and needs, their prioritization and examination of possible methods to address these problems to arrive at an overall strategy must depend on the private sector and individuals. Key in this are the Somali people themselves, who must plan for their own and their family's health.

To assist in this effort towards sustainable health care in Somalia in general, SCF/USA participates weekly in coordination meetings in Mogadishu for all agencies dealing with health in the country. In early 1993, such meetings also took place regionally in Lower Shabelle. However, with security problems, there has not been a regional meeting since April. SCF/USA has met in Mogadishu, however, with the UNICEF regional representative for Lower Shabelle and other NGOs working in the area to discuss health initiatives. As well, we have participated in a zonal meeting in Baidoa, sponsored by UNICEF, to try to standardize the role and training of community-based health workers. It is hoped that, through such efforts at collaboration, a more rational and consistent system of health services will result for the country which can eventually be institutionalized within Somalia. SCF/USA does not wish to set up services which duplicate those of other NGOs, or which are not compatible with or sustainable through the formal health sector to be reestablished in Somalia.

Despite these constraints, a great deal has been accomplished which allows for improvement in the health and general standard of living of women and children in Lower Shabelle. Accessibility of families to health care, both preventive and curative; individuals' knowledge of basic health care, especially as it relates to ORT and ARI; and immunization coverage of children have all significantly increased due to this program.

PROJECT DESCRIPTION

The health activities carried out in the past year use the principles of primary health care, and are community based and supported. They focus on the health problems identified by the community elders and the CHWs now working in health posts in the villages. In line with SCF's general health policy, these initiatives emphasize women and children. They do, however, certainly impact the population as a whole. They include the training of mothers and families in the prevention and cure of common, locally endemic diseases; immunization; and pre-natal and delivery care. They also cover the training of CHWs and TBAs,

and the renovation of health posts, in order to secure the first link in the referral chain.

A discussion follows of the various program components and accomplishments / constraints. A timetable of activities during the period the grant is attached as Annex 3.

1) Immunization and Vitamin A Distribution

GRANT OBJECTIVES: By January 31, 1994,

1) 80% of children 9 months to 12 years will be immunized against measles, and will receive one megadose of Vitamin A,

2) 55% of children under 5 will be fully immunized against the other five immunizable diseases, and 45% of women of child bearing age will be immunized against tetanus, and

3) 70% of children 6-59 months of age will have received one megadose of Vitamin A every six months [please note this has been revised from "every four months", based on UNICEF recommendations].

The initial concentration for vaccination throughout Somalia in early 1993 was on measles for children under twelve, in conjunction with Vitamin A distribution. Two teams of four people each began vaccinating in the Qorioley area with SCF/USA on 6 January 1993, with an additional team of four added for the Brava region as of 23 January 1993. All these people first received training for one week. This training consisted of four days of theory and two days of field practice. The theory included:

- introductory measles information
- diagnosis of measles
- measles transmission
- prevention of measles
- complications of measles
- treatment of measles
- vaccine administration
- loading procedure of cold boxes and vaccine carriers
- vaccine preparation

In addition, all the teams participated in a half-day ORS and Vitamin A seminar, and a one-day field practice in ORS and Vitamin A distribution.

Each trainee had an internship that provided observation and practice on all of the mobile team functions. It included registration, vaccine preparation and injection practice. A post-training evaluation was performed upon completion of the training program.

A cold chain facility was completed at the SCF/USA offices in Qorioley, through provision of equipment and training from UNICEF. Vaccines and related supplies are also provided regularly through UNICEF and the EPI office at Benadir Hospital in Mogadishu, which is supplied through UNICEF.

After one round of measles vaccination, a full EPI strategy was begun on 28 February 1993. Prior to this, all teams participated in an EPI training management workshop. This covered the planning and logistics needed to reach the stated coverage objectives, plus the implementation and monitoring of EPI activities. Training specifically on full EPI was also done with the mobile teams; see Annex 4 for a copy of the EPI training manual. Reporting of immunization returns is done daily; a sample report form is attached as Annex 5.

The number of vaccines given to children and women of child-bearing age in the impact area as of the end of January 1994 are shown by month in Table 1 and Graph 1. As stated above, measles vaccination in January and February was for children under age 12, while the full vaccination program beginning after this focused on under-fives.

During 1993, vaccination in Lower Shabelle was also carried out by other NGOs and by UNICEF. Initially, division of vaccination sites between NGOs to avoid duplication was very *ad hoc*. However, this later became more formal. At a meeting in early December 1993 with UNICEF and AICF (the only other NGO to be vaccinating in Lower Shabelle at that point), geographical responsibility was divided, with UNICEF focusing on the Merka and Janale Districts, AICF on Aw Degle District and Janale town, with SCF/USA covering the remainder of Lower Shabelle (see Map 1).

Initial coverage rates for all vaccines are not known. Figures produced by the Center for International Health Information, in association with USAID, during October 1992 showed levels of vaccination coverage for the country as a whole in August 1992 as follows:

BCG	31.0%
DPT3	18.0%
Measles	30.0%
OPV3	18.0%
TT2	5.0%

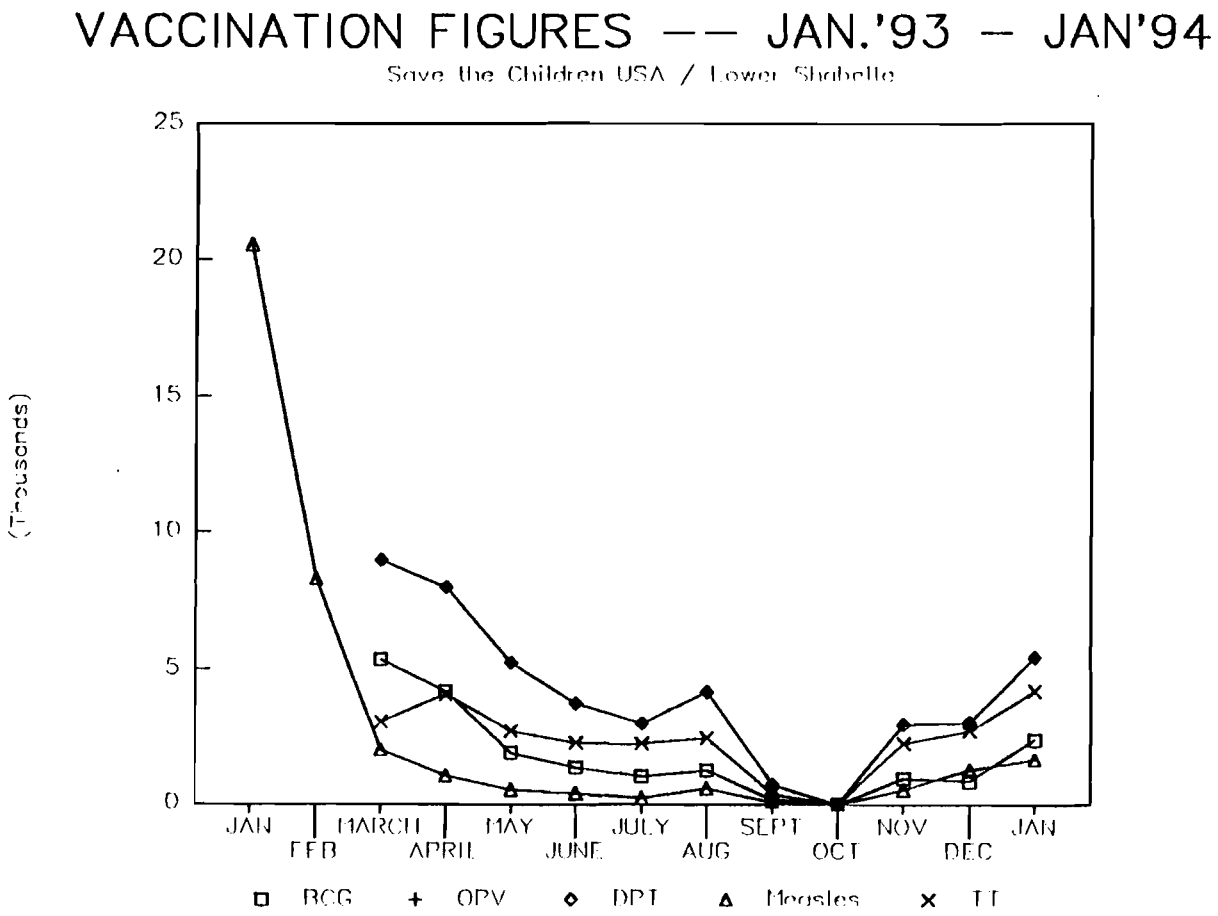
The limitations already discussed regarding the population estimates obviously seriously affect the estimation of vaccine coverage rates in SCF/USA areas. There is also the question of

TABLE 1 - SCF/USA - Lower Shabelle Impact Area Vaccination
January 1993 - January 1994

VACCINE	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG
BCG			5,336	4,155	1,879	1,333	995	1,214
OPV1			8,920	3,045	1,489	1,269	986	1,376
OPV2			13	4,879	1,831	1,416	1,099	1,514
OPV3			8	36	1,888	1,019	897	1,231
DPT1			8,920	3,045	1,489	1,269	986	1,376
DPT2			13	4,879	1,831	1,416	1,099	1,514
DPT3			8	36	1,888	1,019	897	1,231
Measles	20,535	8,265	1,973	1,031	521	400	222	573
TT1			3,025	2,192	1,245	1,148	1,171	1,250
TT2				1,799	661	701	623	758
TT3				50	751	415	439	410

VACCINE	SEPT	OCT	NOV	DEC	JAN	TOTAL
BCG	194	clan	923	814	2,364	19,207
OPV1	196	fight	1,166	1,695	2,039	22,181
OPV2	299	clan	1,025	731	1,592	14,399
OPV3	219	fight	726	566	771	7,361
DPT1	196	clan	1,166	1,695	2,039	22,181
DPT2	299	fight	1,025	731	1,592	14,399
DPT3	219	clan	726	566	771	7,361
Measles	93	fight	522	1,226	1,630	36,991
TT1	211	clan	1,236	1,980	2,403	15,861
TT2	95	fight	592	460	1,204	6,893
TT3	56	clan	406	240	564	3,331

Graph 1



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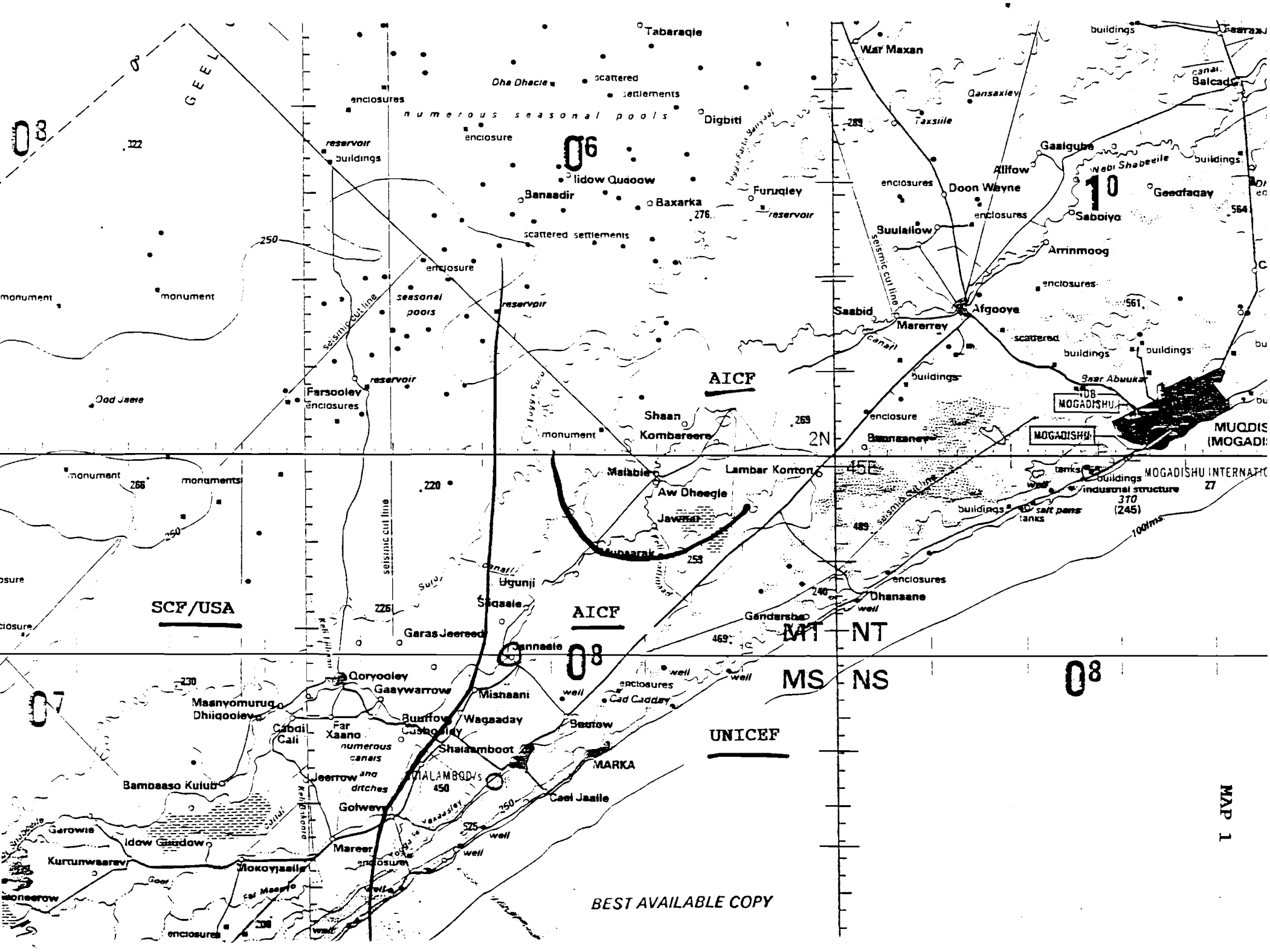
Tabaraqle
Dha Dhacle
scattered settlements
numerous seasonal pools
Digbiti
enclosures
reservoir
buildings
Iidow Qudoow
Banaadir
Baxarka
Furuqley
scattered settlements
enclosure
seasonal pools
monument
seismic cut line
Farsooley
Ood Jaele
AICF
Shaan Kombareere
Matabie
Aw Dheegle
Lambar Konton
Jawhar
Muqaarak
Ugunji
Saqaale
SCF/USA
Garas Jeereed
Qorvooley
Gaaywarrow
Mishaani
Maanyomuruq
Dhiiqooley
Cabdi Cali
Far Xaano
Buulfow
Wagaaday
Cashooley
numerous canals and ditches
Shalaamboot
Jeerrow
Bambaaso Kulub
Golwey
Mareer
Garowle
Idow Gaudow
Kurtunwaarey
Mokoyjaale
Beoneerow
Cad Caddey
Beetow
MARKA
Ceel Jaale
UNICEF
War Maxan
Qansaxley
Taxsiile
Gaalgube
Allfow
Doon Wayne
Webi Shabeeile
Geedfaqay
Saboiyo
Buulallow
Arrinmoog
Saabid
Afgooye
Marerrey
Canal
Saar Abuukar
MOGADISHU
MUQDIS (MOGADIS
MOGADISHU INTERNATIO
industrial structure
salt pans
Dhanaane
Gandarsha
2N
45E
MT NT
MS NS
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MAP 1

the proportion of the population that is under age five. Traditionally, this is estimated at twenty percent. However, there has been discussion as to whether this is valid in areas of Somalia, due to the larger percentage of under-fives killed by famine conditions, as compared to the population at large. Due to these questions on population figures, SCF/USA deemed it necessary to conduct a 30-cluster EPI survey in January 1994 to determine coverage rates among under-fives. The survey was carried out in those areas for which SCF/USA has vaccination responsibility, drawn from a total population of 158,397. Obtaining a more accurate estimate of vaccination coverage rates was the key purpose of this survey (see Annex 1). Full vaccination information was asked about children aged 1 - 5. For children aged 5 - 12, only measles vaccination was asked.

For all children, it was asked whether they had a vaccination card:

	1 - 5	%	5 - 12	%	Total	%
Yes	44	20.4%	32	14.6%	76	17.5%
No	150	69.7%	187	85.3%	337	77.6%
Yes, but card does not show all vaccinations done	21	7.7%			21	4.8%

Forty percent of children under five (86 out of a total of 215) were fully vaccinated. This is lower than the 55% in the original project objective. We feel that this is due in large part to the high population mobility in Somalia during the year; people have tended to move frequently, often from areas of lesser NGO activity to areas of higher activity, looking for food. This also applies to vaccination activities. Hence, a lack of opportunity -- due to moving around, a nomadic lifestyle, or merely looking for food -- was the reason given for one quarter (24.0%) of all not-fully-vaccinated children. Thus, it may be the case that some of those with the first dose may have moved out of the region, while those moving in to the area have no vaccination history.

The number / percentage per vaccine dose for under-fives found in the survey were as follows:

	number	%
BCG	144	66.9%
OPV1	145	67.4%
OPV2	102	47.4%
OPV3	87	40.4%
DPT1	145	67.4%
DPT2	102	47.4%
DPT3	87	40.4%
Measles	168	78.1%

If the child was not fully immunized, the respondent was asked why this was so. The following responses were given:

No./ %	Answer
11/8.5%	Afraid child will be ill as a result
31/24.0%	Moving around / nomadic / looking for food -- no opportunity
11/8.5%	Unaware -- did not know the advantage / did not think well children needed vaccination
37/28.6%	Not present when mobile team came / did not see mobile team
6/4.6%	Mobile team did not come
3/2.3%	Mobile team did not come close enough
1/0.7%	Vaccines finished by the time they arrived at the vaccination site
7/5.4%	Not interested / don't believe in immunization
3/2.3%	Parent sick when team come
1/0.7%	Will continue when mobile team comes
2/1.5%	Thought child too young
2/1.5%	Don't trust mobile team (previous abscesses etc.)
1/0.7%	Child too sick when mobile team came
1/0.7%	Team left before they got there
1/0.7%	Did not know child needed more than 1 dose
11/8.5%	Unknown

The older children -- age 5 - 12 -- had only been targeted for measles vaccination. Of 219 children, 72.6% (n=159) had been vaccinated against measles; the remainder of cases were not vaccinated (n=58, 26.4%) or unsure (n=2, 0.9%). Of all the children, aged 1 - 12, 327 out of 434 had received measles vaccination, or 75.3% overall. This comes close to the 80% coverage objective stated in the original proposal.

It was also asked if the respondent (i.e. -- if the mother) or the woman of the household had been vaccinated against tetanus in the previous year. Approximately one third (n=51, 31.7%) had been vaccinated. Of these, 43.1% (n=22) had been vaccinated once; 27.4% (n=14) twice; and 29.4% (n=15) had been vaccinated three times. The original objective was to vaccinate 45% of women fully; but only 31.7% have received a tetanus vaccination. The survey did not include a question as to why a woman had not been vaccinated, but the general impression given to the surveyors was that women in general see the importance of tetanus injections, but only during pregnancy; if they are not pregnant, they do not want to be vaccinated.

Several constraints have been encountered in the vaccination program. These include several limited time periods when certain vaccines are unavailable throughout the country. Also, several other NGOs have conducted vaccination and Vitamin A distribution programs within the SCF/USA impact area. In some cases, registration was not done, particularly for Vitamin A distribution, so it was impossible for SCF/USA teams to tell exactly who had received services.

There have also been constraints to maintaining the enthusiasm of the community towards the immunization program beyond the first round. During the rainy seasons, the more nomadic families have often left the area, taking their herds to regions more amenable for grazing. The settled farmers, on the other hand, have begun to plant, and all the adults are typically away from home at their farm before the vaccination team arrives in a village, so the children are not brought out. As well, with the departure of much of the "relief" work done in the area by various agencies, people have become concerned that they get as much as possible out of the agencies that remain. Hence, people have stated that there has been enough vaccination, and they are now interested in other possible benefits. Consequently, there has been a significant dropout rate from first dose levels. As with all humanitarian aid in the country, security problems during a large portion of 1993 have limited movement and program activities as well. Vaccination teams had restricted movement from June through August, and did not work at all for most of September and October when there was fighting in Lower Shabelle.

Vitamin A distribution has increased considerably over the past year. In the initial needs assessment survey in January/ February 1993, only 1% of those 6-59 months and 3% of those 5-12 years had received Vitamin A in the last six months. During the January 1994 survey, the distribution of Vitamin A capsules was asked for children 1 - 5 and 5 - 12. Of the younger children, 29.7% had received Vitamin A in the last year (n=64), generally just once (n=54, 84.3%). The older children followed a similar pattern, with 36.1% (n=79) having Vitamin A in the previous year, again generally just once (n=68, 86.1%). Overall, the percentage of all ages who had received Vitamin A was 32.9% (n=143).

This certainly is an increase on the initial levels. However, it falls far below the initial grant objectives. The reasons for this may be similar to those posed for immunization coverage. As well, those answering the survey were often not sure if the children had been given Vitamin A (12.2% overall) -- the vaccinators simply did not tell them exactly what they were giving the child. This is a fault of the vaccination team's efforts at health education. It, along with the need for and benefits if Vitamin A distribution, need to be addressed to the teams more strongly to attain the stated objective.

2) Control of diarrheal disease

GRANT OBJECTIVE: By January 31, 1994, 60% of mothers will be trained by CHWs in ORT preparation and use, including home-available fluids and cereal-based ORT.

The needs assessment in January/February 1993 found approximately one quarter of children under twelve with diarrhea. Watery diarrhea was much more of a problem than bloody diarrhea

(17.5% and 6.5% respectively of children had these conditions). The January 1994 survey found as well that watery diarrhea was seen much more frequently as a cause of both illness and death (see Annex 1).

For watery diarrhea in the January 1994 survey, the sex distribution was 50/50 -- 11 males and 11 females. The age distribution was not so even: all cases were in children twelve or younger, but 81.8% of the total were in children under five (n=18); 13.6% of the total consisted of under-ones (n=3). Deaths due to watery diarrhea were more common in females (n=14, 63.6%) than males (n=8, 36.3%). Ages were predominantly young: 68.1% of watery diarrhea deaths occurred in under-fives (n=15) and 22.7% in those age 5 - 9 (n=5). The remainder (n=2, 9%) occurred in adults (age 20+).

A basic curriculum for teaching about ORT has been established, and initiated with both the CHW and TBA trainings. Training of mothers has been implemented informally by CHWs and TBAs, both in the health posts/MCHs, when a sick child presents, and at the home. ORS is available through the health posts, MCHs, village-level health workers and mobile vaccination teams.

ORS knowledge was assessed in both January/February 1993 and January 1994. In 1993, it was found that 31.5% of mothers knew how to prepare ORS correctly. In 1994, 59% (n=95) knew how to do this correctly. Of the remainder, 59 admitted not knowing about ORS (36.6% of total), while 7 (4.3% of total) said they knew about ORS, but could not give the correct mixing instructions. This January 1994 percentage coincides with the stated objective.

3) ARI management

GRANT OBJECTIVE: By January 31, 1994, 55% of all families will have at least one member that can recognize the signs and symptoms of respiratory infections (ARI, pneumonia and tuberculosis); and will know when and where to receive adequate and timely treatment, and where to go for referral services.

Basic training on ARI management has been given to trained CHWs. CHWs give informal training to families on ARI, both in the health posts and in home visits.

It was found in the January 1994 survey ARIs accounted for 8.7% of all illnesses in the previous two weeks. ARIs were more common in females, with 8 cases (61.5%) as opposed to 5 cases in males (38.5%). Over half the cases were in children under five (n=8, 61.5%), with 7.6% (n=1) in age 5-9 and 30.7% in those age 20 or older (n=4).

In the 1994 survey, each respondent was asked if someone in the household could recognize the signs and symptoms of acute respiratory infections. Correct answers were given by 84.5% (n=136). This exceeds the stated objective.

4) Maternal health

GRANT OBJECTIVE: By January 31, 1994, 75% of villages will have at least one TBA trained in: appropriate pre- and post-natal care, and b) diagnosis and referral of high-risk pregnancies.

The role of primary-level health care workers is key to any wide-reaching health strategy. TBAs and CHWs act as the first point of contact and as the important first link in any referral chain.

SCF/USA provides basic guidelines for selection of health workers to the community, who then select their candidates. These people receive training in Qorioley. During the grant period, all these were "initial" trainings; refresher trainings begin in February 1994. SCF then provides drugs and supervision to health workers. In the case of TBAs, TBA kits from UNICEF in Somalia -- both basic and renewable TBA kits -- were in very limited supply during 1993. Only 20 TBA basic kits were received in June, which were then distributed, one per village or one per two TBAs in an MCH. TBA renewable kits have not been available. SCF/USA independently supports two MCHs: one in Qorioley in association with AMET, the Allah Amin Medical Team, a local NGO running the Qorioley hospital; and one in Brava. MCH kits -- both basic and renewable -- have been received from UNICEF for these facilities.

The initial training for TBAs last fifteen days; this is relatively long, because most of the TBAs are illiterate, so there is more repetition of new concepts. The curriculum for TBAs covered the following topics:

How couples make a baby
Antenatal care:
- history taking & physical examination
- identification of women at risk
- nutrition during pregnancy

Minor problems of pregnancy:
- morning sickness
- constipation
- lower back pain
- mild anemia

Serious problems of pregnancy:
- bleeding in early pregnancy
- bleeding in late pregnancy
- severe anemia
- pre- and post-eclampsia

Germs and the need for cleanliness
Labor:
- role of the TBA during labor
- complications of labor

Breastfeeding
Weaning
Growth monitoring
Diarrhea and oral rehydration therapy
Immunization
Record keeping
Home visits
Making referrals

A manual for this training has been created (see Annex 6). The topics covered in this manual largely coincide with those suggested by UNICEF for TBA training. The SCF/USA health coordinator actively participated in the UNICEF & WHO-sponsored regional workshop in Baidoa in November 1993 on "Development of CHWs and TBAs Training Guidelines". As well as discussing training curriculums, this workshop covered selection, job descriptions, supervision, drugs and reporting for primary-level health workers.

Some of the TBAs trained are attached to the two MCH clinics, in Qorioley (8) and Brava (5). Training for 43 village-based TBAs has also taken place, for the following villages:

Jerrow - 1
Garowlay - 1
Arbow Herow - 3
Bulo Warbo - 2
Afgoye-Yare - 2
Donburale - 2
B/Sheikh / Haduman - 2
Golweyn - 4
Ethiopian Refugee Camp 1 - 4
Ethiopian Refugee Camp 2 - 4
Farsoley - 2
Iskaashoto - 2
Dhagane - 2
Tuwaaray - 2
Gaywarow - 2
Madulow - 2
Abdi-Ali - 2
Furuqlay - 2
Jasiiro - 2

Fifty-three TBAs have been trained during the grant period. This meets the number expected in the grant proposal. Three separate TBA training sessions were held: in April and August 1993, and in January 1994.

Several questions regarding maternal health were asked in the January 1994 survey. The respondent was asked if she (if the respondent was the mother) or the woman of the household had been pregnant during 1993. Out of a total of 161 households, over

half replied affirmatively (n=85, 52.7%). Of those women that were pregnant in 1993, approximately one quarter (n=23, 27%) were still pregnant. Of the remainder, 85.5% had had a live birth (n=53), 6.4% had had a stillbirth (n=4) and 8.1% had miscarried (n=5). Of the livebirths, 86.7% (n=46) of the infants were still alive; 13.2% (n=7) had died.

5) Trained community health workers (CHWs)

GRANT OBJECTIVE: By January 31, 1994, 65% of all families will have access to at least one CHW trained in diagnosis, treatment and referral of the most common diseases.

As stated above, primary-level health care workers are key to any wide-reaching health strategy. Especially in more remote rural areas, CHWs are the first point of contact. Their role is crucial in the reestablishment of any sort of health-care system in Somalia. As such, training and support of CHWs has been a main focus of SCF/USA activities during the grant period.

Training focuses on both prevention and basic treatment of locally endemic diseases. The initial training covers use and prescription of essential drugs, and the crucial role of immunization for children and women are stressed. Knowing when and where to refer difficult cases is essential.

There are two different types of initial training for these health workers:

1) 10-day course for CHWs who are to be based at health posts
2) 7- day course for village-based CHWs, focussing initially on diarrhea, ARI, malaria and health education.

The curriculum for the training health-post-CHWs is as follows:

Section 1:
- What is a CHW?
- What do CHWs do?
- Getting rid of waste - a basic health requirement
- Disposal of excreta (latrines)
- Keeping the family healthy
- Protecting again infectious diseases (immunization)

Section 2:
- How to examine a sick person
- Questions to ask a sick person
- General conditions of health
- Taking someone's temperature
- Counting respiration
- Examining pulse rates

Section 3: Management of Sick People
- Control of malaria
- Respiratory diseases:
  - common cold
  - pneumonia
- Diarrhea
- Worms and intestinal parasites
- Malnutrition:
  - kwashiorkor
  - marasmus
  - anemia
- Eye problems
- Earache and ear infections
- Blood in Urine
- Burns
- Cuts, scrapes and small wounds
- Skin problems:
  - scabies
  - abscess
- Record keeping

A training manual for CHWs has been developed and is attached as Annex 7.

Regular supervisory visits are made to the trained CHWs once a week, to provide assistance in diagnosis / treatment, support, drugs / supplies, and on-the-job training.

An initial group of fifteen CHWs were originally brought in to Qorioley for ten days of training. These CHWs were selected by the community elders, based on SCF specifications. One of these specifications was that the trainees be literate, to be able to maintain records, read prescriptions, etc. This qualification meant that, of the fifteen, only one CHW was female. More extensive efforts have been made since then to obtain more female CHWs; three of the last four health posts opened had one female CHW (out of three CHWs per health post).

During the grant period, thirty-six CHWs have been trained to work in health posts, in three separate training sessions: in March, November and December 1993. Since the time of training, two in Bulo Sheikh have left the Lower Shabelle area, so 34 CHWs are functioning. New CHWs for Bulo Sheikh will be trained. CHWs trained for health posts are as follows:

Garowlay - 3	Golweyn - 3
Jerrow - 3	Farxane - 3
B/Warbo - 2	M/Gubay - 3
B/Sheikh / Haduuman - 3	Shalaambood - 4
Donburale - 3	Afgoye-Yare - 2
Barawe - 3	Farsoley - 4

Two sessions for training of 31 village-based CHWs have also been held, in August and December 1993. The CHWs trained cover the following areas:

Jerrow area:
- Cabdi Cali - 2
- Furuqley - 2
- Madulow - 2
- Gaywarow - 2
- Jariisa - 2
- Tugaarey - 2

Afgoye-Yare area:
- Bambasa - 2
- Malayley - 2
- Ay Arto - 1
- Carmooy - 2
- Mayo Farax - 2
- Gorgaal - 2

Garawlay area:
- Dhayanay - 2
- Urun-Uran - 2

Farsoley area:
- Iskaashato - 2
- Dhaqane - 2

CHWs at health posts received "health post kits" of medicines and supplies from UNICEF (see Annex 8 for a listing of the contents of the UNICEF health post renewable kit). Supplementary supplies of drugs also come from Somali Central Pharmacy. Village-based CHWs receive a much more basic supply, consisting of:

shoulder bag	1 (one time)
scissors	1 (one time)
forceps	1 (one time)
thermometer	1 (one time)
aspirin	250 tab. (monthly)
chloroquine	250 tab. (monthly)
ORS	200 packs (monthly)
ferro / folic	250 tab. (monthly)
GV	1 bottle (monthly)
cotton wool	1 roll (monthly)
gauze bandage	1 pack (monthly)
soap	2 bars (monthly)
surgical tape	2 rolls (monthly)
notebooks	2 (monthly)
gloves	1 pack (monthly)

Both CHWs and TBAs are supported financially and/or in-kind by their communities. This point is stressed to the elders prior to the selection of health workers to be trained, and again after training. This is not such a potential problem in the case of curative services, as people are accustomed to paying for drugs, deliveries, etc. Rather, community support is essential so that workers can devote time and effort as well to preventive services. As discussed in the section on constraints, community support of health workers has been a continuing problem. In one case, a health post was actually closed down for a period because the community did not want to contribute support to the CHWs. After several weeks, the community came to recognize the benefits they derived from the health post, and rethought their priorities; the health post was reopened.

Sixty-seven CHWs have been trained during the grant period. It was originally envisaged that 97 would be trained. However, security problems have meant that movement in the region has been severely restricted for large portions of the year; including movement of trainees to training sessions. Training slowed in June and July to one TBA session in July. It resumed with another TBA session at the end of August, finishing just prior to the time fighting began in Qorioley itself. It was not until November that training could start up again in earnest.

6) Basic curative health facilities

GRANT OBJECTIVE: By January 31, 1994, 50% of all families will have access to a fixed health center able to diagnose, treat, or refer most common disorders, and maternal disorders.

By the end of the grant period, eleven health posts had been renovated and opened in association with the community, with two to three CHWs per post. These posts are located in the following areas, serving the shown estimated populations (see Map 2):

1)	Donburale	4140
2)	Jerow	2820
3)	Bulo Sheikh	6200
4)	Bulo Warbo	4272
5)	Garawley	6336
6)	Afgoye Yare	4212
7)	Shalambood	10800
8)	Farsoley	8000
9)	Farhano	3000
10)	Golweyn	8000
11)	Barawe	15000

The placement of health posts is based on several criteria, especially the number of people to be served, and the interest

and commitment of the community. As well, areas with known health problems from local flooding were targeted. Five health posts were envisioned in the initial grant proposal. However, these were not sufficient to cover much of the area, and the number targeted to open was increased.

SCF/USA's role is to assist in the construction or renovation of health posts, to provide training and supervision for the CHWs, and to provide basic furnishing, drugs and supplies. There are two supervisors for these health posts, both of whom are qualified nurses. They currently visit each post every week to assist in diagnosis, deliver drugs and supplies, and provide support and on-the-job training.

The CHWs work on an unpaid basis, but are supported in kind through their community. The community elders sign a contract to this effect: to support the health post and health workers, and to guarantee the security of the health post (see Annex 9). As described above, there was one case where this contract was not respected by the community, and the health post was closed for a time until the need was recognized and the contract upheld. Difficulties with community participation and support have been discussed in the section on project constraints.

Essential drugs are supplied from UNICEF; an agreement has been signed with them for this purpose. However, supplies have been erratic at times for all sorts of drug kits. Supplementary drugs have been obtained periodically from Somali Central Pharmacy. Resupply to health posts occurs every other week. During the rainy seasons, each health post has a three-week supply of drugs in stock, in case they become inaccessible to SCF/USA staff.

Health posts records are collected and analyzed on a monthly basis to help determine the health problems present among the population (see Graph 2). This is discussed more in the section below on monitoring and evaluation.

As discussed above, SCF/USA also supports two MCH centers, in Qorioley and in Brava. Through separate, private funds, SCF/USA also provides limited support to the Qorioley hospital, as a link in the referral chain from the CHWs and health posts. Staffing costs were met for several months, and assistance is provided in logistics, proposal writing and managerial skills.

MONITORING AND EVALUATION

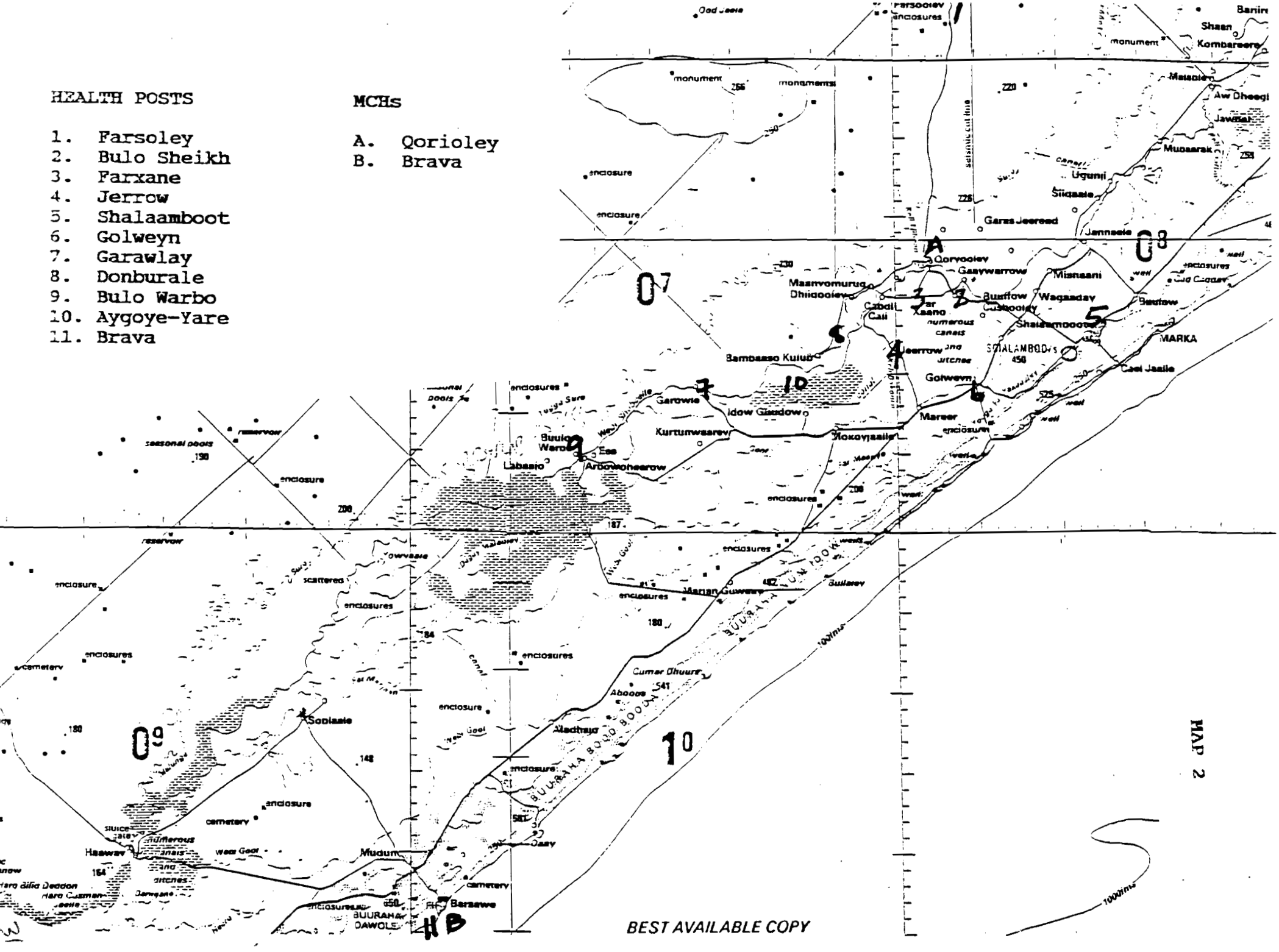
SCF/USA has set up a system of continuous disease surveillance through its health posts and MCHs, collected by CHWs and TBAs. Monthly reports are presented from this data in a form produced by the Center for Public Health Surveillance for Somalia (CPHSS; see Annex 10) to other NGOs/donors in Somalia (i.e. - UNICEF, PSF/Somali Central Pharmacy). The data received is reviewed by the health supervisors, and any perceived problems,

HEALTH POSTS

1. Farsoley
2. Bulo Sheikh
3. Farxane
4. Jerrow
5. Shalaamboot
6. Golweyn
7. Garawlay
8. Donburale
9. Bulo Warbo
10. Aygoye-Yare
11. Brava

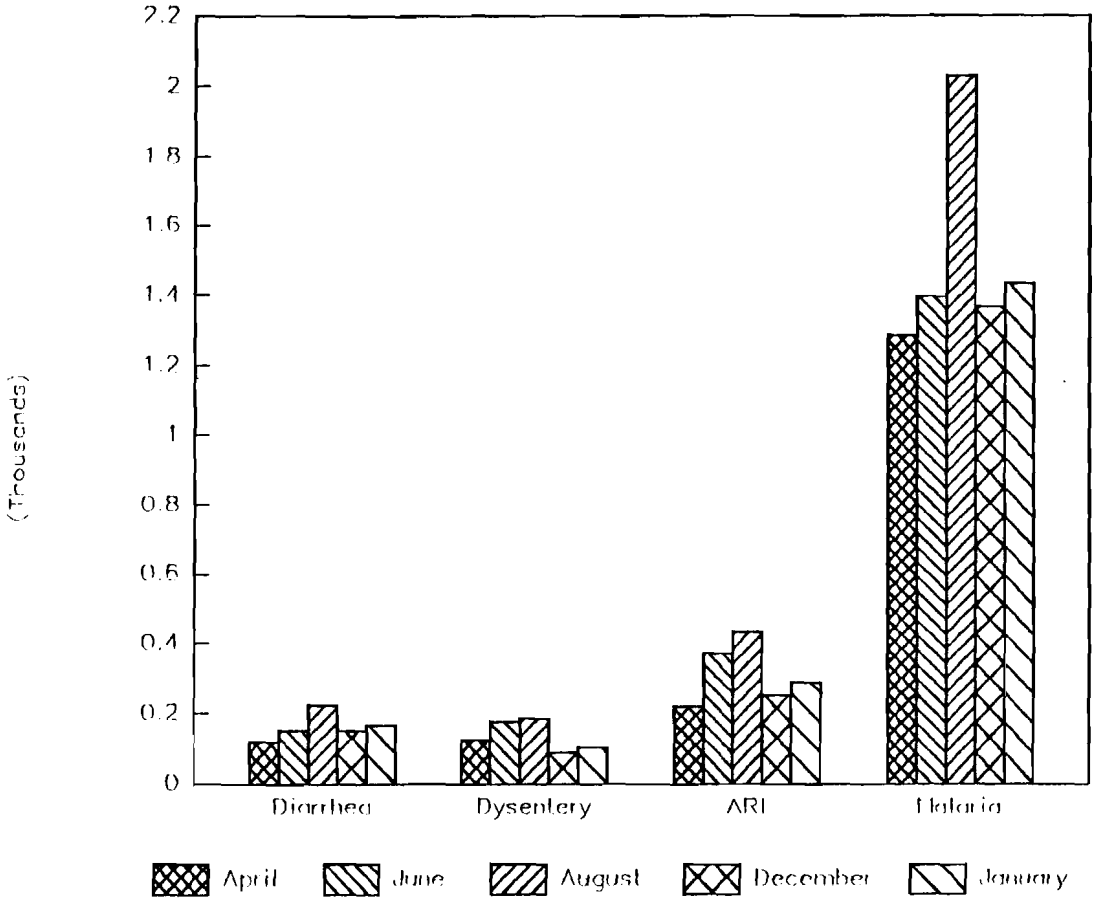
MCHs

A. Qorioley
B. Brava



Graph 2

Common Diseases in Six Health Posts
April 1993 to January 1994
Lower Shabelle
Save the Children / USA



NOTE: Data is for six health posts open throughout the year: Bulo Sheikh, Garawlay, Bulo Warbo, Donburale, Jerrow and Aygoye-Yare.

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with regard to either the actual diseases seen or the reporting process, are addressed.

There are obvious limitations to disease surveillance using this means based on health post data. Not all sick people come to the health post; some use self-treatment or traditional healers, while for others the post may be just too far. Some attempt is made to circumvent these problems through one CHW making home visits. This helps to minimize the problem of self-selected surveillance.

Given the emergency situation at the beginning of the current grant, a full baseline survey was not done at the time. The needs assessment survey of the impact area in January and February 1993 helped to clarify the health status and needs of the people, as well as the health resources available to them.

To further assess project objectives and impact, in the light of an ever-changing population, a 30-cluster EPI-coverage survey was carried at the end of the grant, in January 1994. The result of this survey can be found in Annex 1. These findings will be used both to assess past achievements and to plan how the program can be improved and refined in the future.

HUMAN RESOURCES

The current health staff at SCF/USA in Qorioley consists of:

- a health program manager (expat epidemiologist / health planner) responsible for the overall running of the program, monitoring progress and problems, and planning policy,
- a health coordinator (Somali nurse) who both oversees the day-to-day running of the program, and is responsible for many administrative and planning duties for the program as well,
- two supervisors who oversee both the trained CHWs and TBAs and the general management of the health posts,
- three mobile vaccination teams, two based in Qorioley and one based in Brava, of four people each,
- a health worker trainer, working with both CHWs and TBAs,
- a health sector secretary,
- a cold-chain supervisor, who manages the cold chain facilities in Qorioley, ensures logistics for an adequate supply of vaccines and related supplies, and plans / oversees the mobile teams,
- a pharmacist, to manage the flow of drugs and supplies, and
- a generator operator, to ensure continual maintenance and functioning of the cold-chain generator.

Despite the constraints present in Somalia during the grant period, much has been accomplished towards improvement in health standards for women and children in Lower Shabelle. Emphasis has been on setting up the basic infrastructure for a PHC system -- training of village-level CHWs and TBAs and establishment of community-supported clinics. Individuals' knowledge of basic health care, especially as it relates to ORT and ARI and immunization coverage of children have also both significantly increased due to this program. Overall, there has been a significant increase in accessibility of families to health care, both preventive and curative;

SCF/USA Health Post
at Jerrow

Immunization
sessions

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Annex 1

RESULTS OF THE JANUARY 1994 EPI COVERAGE / MORBIDITY & MORTALITY SURVEY IN LOWER SHABELLE -- SCF/USA

In January 1994, 161 households were surveyed in the SCF/USA impact area of Lower Shabelle, using a standard 30-cluster WHO EPI-coverage survey format. A list of towns and villages in the area was compiled from original estimates of 1993. Towns and villages in the regions for which SCF/USA has vaccination responsibility were selected from this list, as the primary purpose of the survey was to assess EPI coverage rates in those areas. These towns/villages were then alphabetized, to make a random listing. A number was chosen from a random number table and thirty clusters chosen.

The thirty clusters covered the following:

- 161 households,
- 215 children aged 1 - 5,
- 219 children aged 5 - 12, and
- 161 women of child-bearing age.

The respondents were the mother (68%), the father (16%), an older relative or sibling (13%), or another wife (1%). The size of the households was as follows:

# of residents	number	% of HHs
1 - 5	27	16.8%
6 - 10	96	59.6%
11 - 15	23	14.3%
16 - 20	8	5.0%
21 or more	7	4.3%

There was a total of 300 children under age five in the households surveys. These were distributed as follows:

# of under-fives	number	% of HHs
1	49	34.2%
2	49	34.2%
3	35	24.5%
4 or more	10	6.9%

While the main purpose behind the survey was to get a better idea of vaccination coverage rates, questions relating to morbidity and mortality were also asked. Absolute numbers for these responses are not high enough to ensure they can be generalized to the population as a whole, but are suggestive of trends. When asked if anyone in the household was sick during the previous two weeks, there were 148 cases mentioned. The most common were as follows:

(n=8, 61.5%), with 7.6% (n=1) in age 5-9 and 30.7% in those age 20 or older (n=4).

A question was also asked if anyone in the household had died during 1993. Overall, 133 people had died, and 40% of household had experienced at least one death. This included one household with 12 deaths and one with 17; otherwise, all deaths were limited to five or fewer per household. Age, sex and cause of death was also asked. With the two larger cases, getting complete age and cause of death information proved impossible, so concentration was given to deaths among the five youngest members of the households. Among these deaths (of up to five per household), the major causes were:

		N	% of total
1)	Watery diarrhea	22	19.6%
2)	Measles	19	16.9%
3)	Starvation	15	13.3%
4)	Malaria	12	10.7%
5)	Dysentery	9	8.0%

Among children under age five (n=60), the major causes of death were:

		N	% of total
1)	Watery diarrhea	15	25.0%
2)	Measles	11	18.3%
3)	Malaria	7	11.6%
4)	Prematurity	4	6.6%
5)	Starvation	3	5.0%
6)	ARI	3	5.0%
7)	Dysentery	3	5.0%

Again, we looked more specifically at the age and sex distribution of the leading causes of death reported: watery diarrhea, measles, starvation and malaria.

Deaths due to watery diarrhea were more common in females (n=14, 63.6%) than males (n=8, 36.3%). Ages were predominantly young: 68.1% of watery diarrhea deaths occurred in under-fives (n=15) and 22.7% in those age 5 - 9 (n=5). The remainder (n=2, 9%) occurred in adults (age 20+).

Measles deaths, as well, were more common in females (n=11, 57.8%) than males (n=8, 42.1%). Over half the deaths (n=11) were in children under age five. The remainder were in children aged 5 - 9 (n-6, 31.5%) and aged 10-14 (n-2, 10.5%).

Starvation hit males and females about equally (n=7 and 8, 46.6% and 53.3% respectively). Twenty percent of the deaths occurred in under-fives (n=3), 46.6% in ages 5 - 9 (n=7), 13.3% in ages 10 - 14, and 20.0% in adults aged twenty or more (n=3).

Two-thirds of malaria deaths were female (n=8 as opposed to n=4 for males). Again, the youngest were hardest hit, with 58.3% of the deaths in under-fives (n=7) and 25% in ages 5 - 9 (n=3).

The remainder of the deaths were in adults aged twenty or more (n=2, 16.6%).

The respondent was asked if she (if the respondent was the mother) or the woman of the household had been pregnant during 1993. Out of a total of 161 households, over half replied affirmatively (n=85, 52.7%). Of those women that were pregnant in 1993, approximately one quarter (n=23, 27%) were still pregnant. Of the remainder, 85.5% had had a live birth (n=53), 6.4% had had a stillbirth (n=4) and 8.1% had miscarried (n=5). Of the livebirths, 86.7% (n=46) of the infants were still alive; 13.2% (n=7) had died.

Children aged 1 - 5 were measured for mid-upper arm circumference to assess nutritional status. First the child was checked for edema; only one case was found among 215 children. Of the remainder who were then measured, 15 (7.0%) registered severe malnutrition (less than 12 cm), 77 (35.8%) mild malnutrition (12 to 13.5 cm), and 111 (51.6%) were adequately nourished. In 11 cases (5.1%), the child was not available to be measured.

Respondents were asked if they knew was ORS was and how to prepare it. Fifty-nine percent (n=95) knew how to do this correctly, Of the remainder, 59 admitted not knowing about ORS (36.6% of total), while 7 (4.3% of total) said they knew about ORS, but could not give the correct mixing instructions.

Each respondent was also asked if someone in the household could recognize the signs and symptoms of acute respiratory infections. Correct answers were given by 84.5% (n=136).

Also, the distribution of Vitamin A capsules was asked for all children, both 1 - 5 and 5 - 12. Of the younger children, 29.7% had received Vitamin A in the last year (n=64), generally just once (n=54, 84.3%). The older children followed a similar pattern, with 36.1% (n=79) having Vitamin A in the previous year, again generally just once (n=68, 86.1%). Overall, the percentage of all ages who had received Vitamin A was 32.9% (n=143).

Obtaining a more accurate estimate of vaccination coverage rates was the key purpose of this survey. Full vaccination information was asked about children aged 1 - 5. For children aged 5 - 12, only measles vaccination was asked.

For all children, it was asked whether they had a vaccination card:

	1 - 5	%	5 - 12	%	Total	%
Yes	44	20.4%	32	14.6%	76	17.5%
No	150	69.7%	187	85.3%	337	77.6%
Yes, but card does not show all vaccinations done	21	7.7%			21	4.8%

Forty percent of children under five (86 out of a total of 215) were fully vaccinated. The number / percentage per vaccine dose were as follows:

	number	%
BCG	144	66.9%
OPV1	145	67.4%
OPV2	102	47.4%
OPV3	87	40.4%
DPT1	145	67.4%
DPT2	102	47.4%
DPT3	87	40.4%
Measles	168	78.1%

If the child was not fully immunized, the respondent was asked why this was so. The following responses were given:

No./ %	Answer
11/8.5%	Afraid child will be ill as a result
31/24.0%	Moving around / nomadic / looking for food -- no opportunity
11/8.5%	Unaware -- did not know the advantage / did not think well children needed vaccination
37/28.6%	Not present when mobile team came / did not see mobile team
6/4.6%	Mobile team did not come
3/2.3%	Mobile team did not come close enough
1/0.7%	Vaccines finished by the time they arrived at the vaccination site
7/5.4%	Not interested / don't believe in immunization
3/2.3%	Parent sick when team come
1/0.7%	Will continue when mobile team comes
2/1.5%	Thought child too young
2/1.5%	Don't trust mobile team (previous abscesses etc.)
1/0.7%	Child too sick when mobile team came
1/0.7%	Team left before they got there
1/0.7%	Did not know child needed more than 1 dose
11/8.5%	Unknown

The older children -- age 5 - 12 -- had only been targeted for measles vaccination. Of 219 children, 72.6% (n=159) had been vaccinated; the remainder of cases were not vaccinated (n=58, 26.4%) or unsure (n=2, 0.9%). Of <u>all</u> the children, aged 1 - 12, 327 out of 434 had received measles vaccination, or 75.3% overall.

It was also asked if the respondent (if the mother) or the woman of the household had been vaccinated against tetanus in the previous year. Approximately one third (n=51, 31.7%) had been vaccinated. Of these, 43.1% (n=22) had been vaccinated once; 27.4% (n=14) twice; and 29.4% (n=15) had been vaccinated three times.

Date: _____

Village / town _____

Name of Interviewer _____

Explain you work with SCF/USA and are conducting a survey to see how effective our health and vaccination program has been in the last year, and to plan for the future. Since our program focuses especially on children, we want to ask questions of some families with children under age five. Do they have children under five living in the household? IF YES -- continue with interview. IF NO -- thank them and go to the next household.

****

FOR EACH HOUSEHOLD:

1) Name of respondent _____

2) Type of respondent:

1)____ mother

2)____ father

3)____ guardian

4)____ older relative / sibling

5)____ other wife

6)____ other (specify _____)

3) Number of residents (living and eating) in household: _____

4) Number of children under five resident in household: _____

5) Has anyone in the household been sick in the last two weeks:

	Age	Sex	Illness
1			
2			
3			
4			
5			
6			

6) Has anyone in the household died during 1993?:

	Age	Sex	Cause of Death
1			
2			
3			
4			
5			

QUESTIONS TO / ABOUT THE MOTHER IN THE HOUSEHOLD:

7) Have you been pregnant during 1993: ___ yes (GO TO 7a)

___ no (GO TO 8)

7a) If yes, what was the result of the pregnancy:

1)___ live birth (GO TO 7b)

2)___ stillbirth (GO TO 8)

3)___ abortion / miscarriage (GO TO 8)

4)___ still pregnant (GO TO 8)

5)___ other (specify _____) (GO TO 8)

6)___ no response / unknown (GO TO 8)

7b) Is the baby still alive? __yes __no
(IF NO, check that the baby's death is included in 6 above)

8) How many times have you been vaccinated during 1993?
(tetanus) ____ ____Unknown

9) Do you know how to prepare ORS? __yes __no
If yes -- please ask her to tell you how -- Is this

___ correct ___ not correct

10) How do you know when your child has a respiratory infection (caabuq hawo mareenka)?

_____

_____

_____ [___ correct ___ not correct]

QUESTIONS FOR EACH CHILD AGED 1 - 5 IN THE HOUSEHOLD
(ONE PER CHILD)

11) Name of child _____

12) Age of child (and date of birth)

____ months OR ____ years **AND** ___ / ___ / ___
day mth year

13) Immunization coverage:

13a) Does the mother have an immunization card for the child:
___yes ___no

13b) Look at the card or ask the mother for the dates of all the immunizations:

	day / mth / year
BCG	___ / ___ / ___
OPV 1st	___ / ___ / ___
2nd	___ / ___ / ___
3rd	___ / ___ / ___
DPT 1st	___ / ___ / ___
2nd	___ / ___ / ___
3rd	___ / ___ / ___
Measles	___ / ___ / ___

13c) If the child is not fully immunized -- ask why not:

_____

_____

_____

14a) Does this child have edema (swelling around feet and ankles -- press your finger on the top of their foot and see if there is any pitting)?

___ yes (go to 15) ___ no

14b) If the child does not have edema, measure the mid-upper arm circumference of this child:

___ less than 12cm

___ 12 to 13.5 cm

___ 13.5 to 17 cm

15) Has the child had a Vitamin A capsule during 1993?

___ yes ___ no ___not sure / unknown

15a) If yes -- how many times and when? ___ times

When?: _____

_____

_____

ASK IF THERE ARE CHILDREN AGED 5 - 12 IN THE HOUSEHOLD AS WELL

If yes, for each child:

16) Is this child immunized against measles? __yes __no

16a) If yes -- is this information based on a immunization card or on the respondent's recall?

___ immunization card ___ recall

17) Has the child had a Vitamin A capsule during 1993?

___ yes ___ no ___ not sure / unknown

17a) If yes -- how many times and when? ____ times

When?: _____

_____

_____

****

TO THE INTERVIEWER:

REMEMBER
WE NEED 7 CHILDREN AGED 1 UP TO 5
<u>AND</u> 7 CHILDREN AGED 5 UP TO 12
FROM EACH CLUSTER

ANNEX 2

POPULATION ESTIMATES FOR QORIOLEY IMPACT AREA

Town / Village	Pop'n Estimate
MERKA DISTRICT:	
Merka Town	12,600
Golweyn	10,800
Shalambood	5,400
Janaale	10,800
El-Jaale	360
El-Wargow	1,440
Mushani	1,080
Jebey	540
Bufow Baad	288
Wagade	540
Tawakal	300
Samey-Samey	360
Deg-Warin	1,644
Sigale-Digta	1,591
Sagaarole	400
Ugungi	987
Hantiwadaag	3,500
Sigale Bari	451
Buloy Da'und	6,700
Malable	838
Bulo-Jameco	500
Bulo-Khalif	1,020
Bulo-Arundi	464
Mashalay	350
Bufow Cusboley	1,000
Urugle	650
Dalbianka	650
Danow	650
Jabawka	650
Faarah	650
Gobeyle	650
Tonole	650
Taleh	650
Batarmi	650
Murale	650
Muuri	540
Eel Biyoley	1,260
Km 50	2,880
Km 60	980
Jilib Marka	900
Gendershe	720
Dhanaane	900
Eel Ahmed	504
Laanta Burro	288
Lihda Mooro	288
Eel Adow	324
Munguye	144
Majabto	288
Madina	120
Subtotal - Merka District	80,589

Town / Village	Pop'n Estimate
QORIOLEY DISTRICT:	
Qorioley Town	18,000
Ethiopean Camp 1	11,750
Ethiopean Camp 2	15,000
Bandar / Dharkeynley	1,020
Maanyo Farah / Farkerow	1,800
Guri-Goal	1,500
Armoy	420
Donburale	900
Malayley	1,200
Ay Arto	720
Furuqley	1,800
Abdi-Ali	3,000
Farhano	3,600
Jerow	2,400
Madulow	420
Bulo Sheikh / Haduman	4,200
Gaywerow	3,600
Jasira	1,200
Tugarey / Garas Gule	1,500
Gorgal	1,020
Farsdey	1,200
Bulo Arbow	360
Dugule	840
Malin Aafi	420
Geed-laay	300
Bulukey	280
Cis/Gadud	350
Cis/Raxma	540
Farxeerow	1,200
Subtotal - Qorioley District	78,170
BARAVA DISTRICT:	
Barava Town	19,998
Mudul	1,000
Kunyo-Barow	1,800
Heyjo-Mahaad	145
Marin Gubay	798
Abu-Shegow	498
Kunyo-Awguka	1,500
Subtotal - Barava District	25,739

Town / Village	Pop'n Estimate
SABLALE DISTRICT:	
Sablale Town	3,000
Far-Jano	300
Hawai	1,698
Damay	432
Bulo-Sheikh	4,200
Subtotal - Sablale District	9,630
KURTUN-WAREY DISTRICT	
Kurtun-warey Town	3,240
Bulo-Mareerto	4,728
Mukay Dumis	660
Idow Gudow	888
Bombasa	2,340
Afgoye Yare	2,682
Sheikh Banaaney	2,034
Ura-Urow	1,530
Garawlay	2,250
Aflow	810
Dhayaney	2,688
Muraqmaal	600
Bulo Warbo	1,500
Alafuto	2,400
Arbow Herow	2,772
Towfiiq	900
Habawshe	588
Wadajir	1,998
Ambarey	288
Garas Raadiye	222
Daydoog	156
Garasweer	1,416
Daymey	432
Duubley	192
Subtotal - K/warey District	37,314
AW-DHEGLE DISTRICT:	
Aw-dhegle Town	7,200
Mubarak	6,504
Torturow	1,500
Bariire	1,100
Dan Garey	1,800
Malable	2,400
Dara Salam	950
Subtotal - Aw-dhegle District	21,454
TOTAL	252,896

Annex 3

SAVE THE CHILDREN / USA - LOWER SHABELLE, SOMALIA
ACTIVITIES DECEMBER 1992 TO JANUARY 1994

	'92 DEC	'93 JAN	FEB	MAR	APR	MAY	JUN
IMMUNIZATION:							
Estimate pop'n size to be targetted	x						
Set up cold chain		x					
Identify and train teams of vaccinators	x	x					
Secure transportation for mobile teams	x	x					
Hold vaccination campaigns for measles		xxx	xx				
Further training for teams for full EPI			xx				
Hold vaccination campaigns for full EPI			xx	xxxx	xxxx	xxxx	xxxx
VITAMIN A:							
Estimate pop'n size to be targetted (9 months - 12 years)	x						
Identify and train distributors		xx					
Distribute Vitamin A with vaccination campaign		xxx	xx				
TBA TRAINING:							
Identification of priority villages for trained TBAs			x	x x			
Discussion with community representatives to identify list of eligible TBAs; identification of TBAs to be trained						x	
Formal training session						xx	
CHW TRAINING:							
Identification of priority villages for trained CHWs, based on population size and health posts		x	x x				
Discussion with community representatives and identification of CHWs to be trained			x	x			
Formal training session				xx			
Distribution of drugs / supplies				x	x x	x x	x x
Supervision of trained CHWs					xxxx	xxxx	xxxx
Collection of surveillance information					x	x	x

ACTIVITIES TO DATE, cont.

	'92 DEC	'93 JAN	FEB	MAR	APR	MAY	JUN
HEALTH POSTS:							
Identify pre-war health posts and establish priorities for renovation		x	xx				
Discussions with communities in priority areas			xxx				
Construction / renovation of agreed-upon health posts			x	xxxx	xx		
Training of CHWs to staff health posts				xx			
Opening of staffed and supplied health posts				x	x		
Continuing distribution of drugs and supplies					x x	x x	x x
Supervision of trained CHWs in health posts					xxxx	xxxx	xxxx

ACTIVITIES TO DATE, cont.

	JUL	AUG	SEP	OCT	NOV	DEC	'94 JAN
HEALTH POSTS:							
Identify pre-war health posts and establish priorities for renovation							
Discussions with communities in priority areas	x			x		x	
Construction / renovation of agreed-upon health posts					x	x	
Training of CHWs to staff health posts					x	xx	
Opening of staffed and supplied health posts		x			x		xx
Continuing distribution of drugs and supplies	x x	x x			x x	x x	x x
Supervision of trained CHWs in health posts	xxxx	xxxx	x		xxxx	xxxx	xxxx

Annex 4

EPI TRAINING OBJECTIVES

During this training the participants will learn:- Knowledge, Attitude, and Skills to provide a better EPI system. At end of this training participants will able to:-

* Demonstrate excellent immunization sessions.
* List Temperature required by each vaccines.
* Give the children right dose on the right side.
* Show good team work on immunization sessions.
* Report number of children immunized daily by age group.
* Demonstrate active program management.
* List role of immunization mobile Team before during and after the immunization sessions.
* Teach parents how, when and why to give ORS and Vitamin A.

TEACHING METHODS

* Lecture
* Demonstration
* Case study
* Brain-storming
* Large-group discussions and small-group discussions.
* Presentation.

TEACHING MATERIALS

* Exersice Books	11
* Pens	11
* Blackboard	1
* Chalk	1 Small carton

* Sample of different vaccines.
* Available Thermometers (Bulb & Dial).
* Syringes & needles

	JUL	AUG	SEP	OCT	NOV	DEC	'94 JAN
IMMUNIZATION:							
Estimate pop'n size to be targetted							
Set up cold chain							
Identify and train teams of vaccinators							
Secure transportation for mobile teams							
Hold vaccination campaigns for measles							
Further training for teams for full EPI							
Hold vaccination campaigns for full EPI	xxxx	xxxx	x		xxxx	xxxx	xxxx
VITAMIN A:							
Estimate pop'n size to be targetted (9 months - 12 years)							
Identify and train distributors							
Distribute Vitamin A with vaccination campaign							
TBA TRAINING:							
Identification of priority villages for trained TBAs	x					x	
Discussion with community representatives to identify list of eligible TBAs; identification of TBAs to be trained	x					x	x
Formal training session	x	x					xx
CHW TRAINING:							
Identification of priority villages for trained CHWs, based on population size and health posts							
Discussion with community representatives and identification of CHWs to be trained							
Formal training session							
Distribution of drugs / supplies	x x	x x			x x	x x	x x
Supervision of trained CHWs	xxxx	xxxx	x		xxxx	xxxx	xxxx
Collection of surveillance information	x	x			x x	x	x

EXPANDED PROGRAMME ON IMMUNIZATION

INTRODUCTION

There are six important diseases that are very serious, and which can kill or disable many children even though other children survive and became immune.

These six diseases are

- -Poliomyelitis
- -Measles
- -Diphtheria
- -Pertusis[whooping cough]
- -Tetanus
- -Tuberculosis

The special thing about these infection is that we can prevent them by immunization. To immunize a person, you give a vaccine that is, a weakened or killed form of the same micro-organism which causes the diseases.

You give the vaccine by injection, or by mouth. The vaccine makes the child`s body produce antibodies, but it does not give the disease to the child.

The child becomes immune, without becoming ill. The expanded programme on immunization aim to immunize all children against these six diseases. They are called target diseases.

WHAT VACCINES ARE MADE FROM

Manufactures make vaccines from microorganisms similar to the ones that causes diseases or from the toxins that they cannot harm people.

Manufactures can use killed microorganisms pertussis in DPT. Live microorganisms that are attenuated, that is made weak measles polio and tuberculosis . The TB vaccines is called BCG.

Toxiods, which are inactivated, harmless toxins [TT] and diphtheria toxiod.

WHAT DAMAGES VACCINES

You can easily damage vaccines if you do not look after then carefully. If a vaccine is in good condition, and able to make a child immune, it is potent. If vaccine is damaged, and not able to make child immune, then it has lost its potency. All vaccines lose their potency after a certain time even with good care. Vaccines have an expire date printed on the label. After that date, the vaccine has lost much or all of its potency, even if it has been looked after carefully.

The easily damage vaccines are heat, sunlight and freezing. Heat and sunlight damage all the vaccines especially : polio, measles and BCG. Freezing can damage DPT and TT.

The safest thing to do is to keep all vaccines at the correct cold temperature, and out of sunlight. If a vaccine is damaged by heat, sunlight or freezing , you cannot make it potent again. It does not help to get the vaccines back at the correct temperature or in the dark after the damage is done. SO That you must throw the vaccine away best to be burned.

We use spirit, detergent and soap to clear things, but all these chemicals may remain on the instrument. If there is any chemicals on a syringe or needle, it can damage a vaccine. To sterilize immunization equipments you must use heat(steam or boiling water). If your syringes and needles have been in contact with disinfectant, antiseptic, spirit, or soap you can't use them with the vaccines.

TEMPERATURE

Temperature of something is how hot or cold it is. you can feel if something is warm or cold, but to find the exact temperature you must measure it in degrees centigrade with a thermometer. Water changes into ice at zero degree centigrade ($0^{o}C$) below $0^{o}C$ is freezing, above $0^{o}C$ ice melts into water. The correct temperature to store vaccines is between $0^{o}C$ and $+8^{o}C$ which can only be founded in a refrigerator.

THERMOMETERS

You can use one of the following thermometers in your refrigerator and in your vaccine carrier to measure the temperature of your vaccine.

Dial Thermometer.

A needle moves around the scale, pointing to plus number when it is warmer, and to minus number when it is colder.

Bulb Thermometer.

Colored in the bulb moves up the scale as it becomes warmer and down the scale as it becomes colder.

WHEN TO GIVE VSCCINES TO CHILDREN

Below you will find the schedule of the ages at which to give the different vaccines as recommeded by the EPI.

The immunization schedule for children and childbearing age in Somalia.

VACCINES	DOSES	AGE GROUP	SITE	STORE AT THE HEALTH UNIT
DPT	0.5ML	6wks-5yrs	outer part of L.THIGHT	+ 2 to + 8^{0c}
OPV	2-3 drops	6wks-5yrs	oral	_ 20$_c^0$
BCG	0.05ML-0.1ML	-at birth -after 1yr	left uper arm i.derma	+ 2- +8c^0
MEASLES	0.5ML	9 months or after 9mon	right uper arm	_20c^0
TETANUS	0.5ML	women of childbearing age	IM uper left arm	+ 2- +8c^0

The age to givevaccines is just before the child is in danger from the disease (so as early as possible during the first year of life).

After the child has lost the immunity from child his mother (maternal antibodies can prevent a vaccine from working).
Any time after the recommended age if the child fails to come for immunizattion of the correct age.

Number of doses to give

For measles and BCG you need only one dose. The life vaccine organism grows in the child's body and gives good immunity.

FOR POLIO :- You must give 3 doses to get good immunity.

FOR DPT :- You must give 3 doses. The killed vaccines do not give the immunity after only one dose.

The time between doses of vaccines
OPV and DPT should not be given before six weeks of age. the intervals of 2 & 1st dose of DPT/OPV is 4 weeks. If you give less than 4 weeks apart the child dose not get good immunity. If a child missed a dose can be given at any time more than 4 weeks after the first dose. You do not have to repeat the earlier dose. However, if there is a long delay, the child may contact the disease before he/she is fully immunised.

CONTRA-INDICATIONS TO IMMUNIZATIONS

There are almost no contra-indications. But do not give the second or third doses of DPT vaccine to a child who had has a severe reaction to a previous dose, especially if the reaction was a confusion or shock within 3 days of the injection.

Do not give a vaccine to a sick child if the mother seriously objects, encourage her to accept but do not force her. If do force her, she may not come back for the next dose.

IMMUNIZATION FOR SICK CHILDREN.

Many health workers do not like to immunize a child who is ill. Young children have many illness, and immunization after delayed.

Many children catch one of the target diseases, because they missed being immunized due to illness. However, we now know that it is safe to immunize even if they are ill.

CHILDREN WITH A FEVER.

Immunize them as usual. You can give any vaccine, including DPT there is no danger from adding the reaction to vaccine to a moderate fever. Very ill children who need to go to hospital, or children who have a very high fever. Immunize them if possible. A sinior health worker must desire for each individual child. Remember that sick children need protection against diseases that they may catch in hospital.

You must immunize malnourished children, they can develop good immunity although they are malnourished they are more likely than other children to die from the disease particularly measles.

INJECTIONS

There are different kinds of injections. You can inject different vaccines in different ways. They can be:- Intramuscular (deeply into the muscles) for DPT and TT. to give an intramuscular injections. You stretch the skin light, and push the needle straight down the skin.

* Intradermal (into the top layer of the skin) for BCG to give an intradermal injection, you must stretch the skin light, and put the needle almost flat along the skin.

* Subcutaneous (just below the skin) for measles. To give a subcutaneous injection, you pinch the skin up and put needle in at an angle.

Cleaning the skin before an injection. It is good to clean the skin especially if it looks dirty, but it is not essential. Use cotton wool, and a little water, do not use antiseptic.

POSITIONING A CHILD FOR AN INJECTION.

You must show each mother exactly how you want her to hold her child. You cannot hold the child yourself, because you need both hands to give the injection correctly.

- -Make that there is a chair, bench for the mother to sit on.
- -Ask her to move the child's clothing from the part where you want to give the injection.
- -If a mother cannot hold her child securely by herself, ask some one else to help you.

AFTER AN INJECTION.

There may be a drop of blood where the needle cut a small blood vessel.

* Have a dry cotton wool ready.
* Press the place where the needle entered.
* Press firmly with cotton wool until the bleeding stops.

HOW TO PREPARE AND GIVE ORAL POLIO VACCINE.

OPV may came either in plastic dropper portable, or a in glass vial with a dropper in a separate plastic bag.

TO USE THE VACCINE FROM THE DROPPER BOTTALE.

* Remove the cap of the dropper.
* Stand the dropper bottale on the ice pack. Use the vaccine from the glass vial.
* Remove the metal cap of the vial completely.
* Remove the rubber stopper.
* Cut the plastic bag which contains the dropper.
* Fit the dropper onto the open vial.
* Stand the vial on ice pack.

HOW TO GIVE OPV VACCINE TO THE CHILD.

* Let the mother hold the child firmly lying on his back.
* Open the child's mouth , either squeeze his checks gently between your fingers to make

  his lips point foreword, or pinch his nose then his mouth will open.
* Let two drops of vaccines fall from the dropper onto the child's tongue.
* Make sure that the child swallows the vaccines, if the child spits it out, give another dose.

NB:**Throw away opened vaccines after one session.**

GIVING BCG VACCINES.

The usual place to inject BCG now is the upper part of the left arm. However, you can also use the upper part of the right arm, or the left forearm. Where you inject depends on your programme.

* If you wish, clean the skin with cotton wool and water.
* Hold the child's arm with your left hand so that your left hand is under the arm.

* Your thumb and fingers reach around the arm and stretch the skin tight.

* Hold the syringes in your right hand, with the bevel facing up towards you.

* Lay the sringe and needles almost flat along the child's arm.

* Insert the tip of the needle into the skin just the bevel and a little bit more. keep the needle flat along the skin, so that it only goes into the top layers of the skin Keep the bevel facing upwards. Do not push too far, and do not point downwards, or the needle will go under the skin. Then it will be a subcutaneous instead of an interdermal injection.

* Now put your thumb over the needle end of the sringe to hold it in position. Hold the plunger end of the sringe between the index and middle fingers of your right hand and press the plunger in with the right thumb.

* Inject 0.05 or 0.1ml of vaccine, and withdraw the needle, make sure that the adopter does not look. If the adopter leaks, your must fix the needle on more firmly. If you inject BCG correctly interdermal then will be a clear, flat topped swelling in the skin, like a mosquito bite. The swollen skin may look pale, with very small pits. If you inject BCG too deeply under the skin by mistake, the skin does not well or there is a round bump under the skin, when you inject, you may feel that the vaccine is in too easily.

* Stop the injection and correct the needle position.
* Give the remainder of the dose but not more.

* If the hole dose has already gone under the skin, consider the injected.

* Do not repeat the dose.
* Follow up the child carefully for side effects.

GIVEN MEASLES VACCINE.

Most health workers inject measles vaccine into the child's left upper arms. In some programmes, they use the right arm. Here we describe how you inject into the left arm.

* Sit the baby into the mothers lap.
* Tuck his right arm away round here baby.
* Mothers left arm goes around the baby, to support his head and shoulders.

* Her right arm holds his legs out of way, and her right hand holds his left hand.

DPT AND TETANUS TOXOID BEFORE YOU LOAD THE SRINGE

* Check the label.

* Shake the vial , so that the sediment mixes completely into the liquid, if the vaccine is not well mixed, you may give the wrong dose.

* Remove the center metal cap using a metal file.
* Put the vaccine in the vaccine carrier.

LOADING THE SRINGE

* Take sterile 0.5ml with 2ml sringe and an intramuscular needle.

* Use the same needle into the syringes, that is a little more you want to inject.

* Drow 0.6ml of vaccine into the sringe, that is a little more than you want to inject.

* Point the needle upwards. Expel air bubble and a little of the vaccine until exactly the correct dose remains in the syringes.

GIVING DPT VACCINE

How to position the baby ?.

* Site the baby on the mothers lap.

* Her left arm goes around the baby, to support its head and to hold its outside arm.

* The babies inside arm is touched away round mothers body.

* The mothers right arm holds the babies legs very firmly.

INTRAMUSCULAR FOR A CHILD

The best place for INTRAMUSCULAR injection for children is in the thigh. If you inject into the buttocks at the wrong place, you may cause paralyses of the child's leg. So in many countries health workers prefer not to inject into a child's buttocks.

You can give INTRAMUSCULAR injections into the arm. you can use the arm to give TT. to adults. But the arm muscles are too small in young babies.

* Put your finger in the thumb on the out part of the child's middle thigh.
* Stretch the skin flat between your finger and thumb.
* Quickly push the needle straight down through the skin between your fingers.
* Go deep into muscle.
* Press the top of the plunger with your thumb to inject the vaccine.
* With drow the needle and press the site with cotton wool.

GIVING TETANUS TOXOID INTRAMUSCULAR

Prepare the vaccine in the same way as for DPT, you give tetanus toxoid by intramuscular injection. The best place to give TT to a woman is on the outer side of her left upper arm.

* Use your left hand to sequence up the muscle of the arm.
* Push the needle through the skin deep into the muscle.
* Inject the vaccine.
* With drow the needle, and press the site with cotton wool.

NB. Give two doses of at least four weeks apart, to with and one dose for each pregnancy, give it by intramuscular injection. Do not freeze the vaccine.

GOING TO THE IMMUNIZATION SESSION

You may use a public bus, a car, a motorcycle or bicycle. In some countries they may use a horse, a donkey, or cart's. Before you go to the field check vehicle that you have:-

-Enough patrol for the journey.
-Enough oil for engine.
-Enough air in the tires.
-Enough water in the radiator.
-Complate tool kit.
-Spare tire for a car.
-Purify repair autfit.

Pack your immunization kit and your vaccine carriers firmly onto the back of your transport. Keep the vaccine carrier shaded as much as you can. Go straight to the place for the session. Do not stop or delay on the way - the vaccine may become warm, but do not go dangerously fast.

WHAT TO DO ABOUT THE VACCINE IF HAVE BREAK DOWN

You may have flat tire or other problems, while you stop for repairs, you must not leave the cold boxes or vaccine carriers inside the hot vehicle standing in the sun.

- -Move the care into the shade, take the carrier out of the car and the carrier in the shade.
- -Remember not to leave the vaccine behind when your vehicle in going again.

RELIABILITY AND PUNCTUALITY.

* Being reliable means going on the day that you promised the community.

* Being punctual means arriving at the time that you side you would arrive.

* Why is it important to be reliable and punctual?
  - -The people can believe your immunization programme.
  - -If do not arrive, and session is late or canceled people will lose interest and they will not come next time.

WHAT TO DO IF DO NOT GO THE SESSION ?.

Send some person to apologize and to explain what has happened. Tell the people when you will come again, and sure to go next time.

STARTING A NEW PLACE FOR SESSION.

First you must visit the community, talk to their leaders and explain about your programme. Remember that you, health workers, are essential for this , and your very important for them, if you deal with them in good way.

Your supervisor may accompany you on certain visits such as the first one, to help to explain wider aspects of the programme. but your responsible for arranging the details and for the building a good relationship with the community.

Ask the community to find a contact person for you. The contact person may or may not now when you will came, they tell the mothers and find people who will help you like crowd controller.

CHOOSING THE SITE.

The site may be in a building, such as school or a house or under good shadow. Try to find building that is well lighted and ventilated. Try to avoid dark, poorly ventilated building. Make sure that you have enough space. You need either one large room or several rooms, or try to find somewhere that is shaded, such as under some trees.

If possible, the site may have entrance and an exit. Then it is easier to arrange the waiting and follow movement of mothers and children. You can arrange chairs and tables, branches or a rope to make an entrance and an exit.

ARRIVING AT A VILLAGE FOR AN IMMUNIZATION SESSION.

What to do when you arrive at the target village:-

* Put the vaccine carriers in the coolest place that you can find in the shade in a house or tree.
* find your contact person to tell them that you have came. Greet them and introduce yourself and team members.
* Greet the mothers, take them somewhere outside the site itself, such as the waiting area. Arrange them to sit down confortably.
* The other members of the team can prepare the immunization site with the help of people from the community.
* Sometime community leaders arrange the site and the people before the team arrives.

WHAT ARE THE TASKS THAT YOU HAVE TO DO AT A SESSION.

There are five tasks that you may have to do:-

* Registration
* Teaching programme.
* Giving Vit.A
* Immunizing right children/ women
* Explaining next immunization session and doses remaining for their children.

REGISTRATION

* Place - Near the entrance.
* Worker- Health worker.
* Task - Greet the mother in friendly way.
  - Give each mother the appropriate record card (Immunization card) and file in personal information.
  - Write the child's name, date of birth and other details on the card, or
  - Chick the card that the child already has.

IMMUNIZATION.

* Place -Somewhere shady and as cool as possible to keep the vaccines cool.
* Worker-A person who is trained to care vaccines and to give them to children and woman. Some one from the community can help especially to give oral polio vaccine (OPV).
* Equipment-The immunization kit in it's bag or box.
  - -The vaccines and ice in your vaccine carrier.
  - -Bucket, box or folded paper to collect rubbish.
  - -Pen
  - -Immunization tally sheet.
  - -Immunization cards.
* Tasks -Immunization really hone three tasks:-
  - # Vaccine care.
  - # Giving vaccine children and woman.
  - # Recording the vaccine that you have given.

VIT. A & ORS TEACHING

-Place	:After immunization injection or oral.
-Worker	:Health worker.
-Equipment	:Enough vit. A + ORS according your expectation.
-Task	:Give every child one cap. of vit. A.
	:Explain to mother the importance of vit. A
	:Give to suchets of ORS every child and explain to mother what and how to use ORS.
	:Tell the mother if the child get chronic diarrhea must go to the OPD/MCH.

RECORDING NUMBER OF CHILDREN IMMUNIZED EVERY DAY.

Recording is a very important part of a vaccinator's job. There are two ways in which you may have to record an immunization.

1- In your immunization records for your report to your supervisor. In some programmes you have to record each immunization in detail, with the child's name, address, age for your report.
2- On your tally sheet, if there are used in your programme a tally sheet is a quicker, simpler kind of report for your supervisor. It also help you to evaluate your own work.

THE TALLY SHEET

It is very essential to use tally sheets, because it is quicker and simpler than it is to keep detailed records of each immunization session. A tally sheet makes it easier to count the immunizations which you have given. There are separate lines for each of vaccines. There is a separate section to record vaccines given to babies less than one year old, and to children one or more and women who received tetanus toxiod (TT).
please use the following form:-

It is very essential to use tally sheets, because it is quicker and simpler than it is to keep detailed records of each immunizations session. A tally sheet makes it easier to count the each of vaccines. There is a separate section to record vaccines given to babies less than one old, and to children one or more and women who received tetanus toxiod (TT).

VACCIN	LESS THAN ONE YEAR	ONE YEAR AND OLDER	TOTAL
DPT/OPV I	IIIII IIIII IIIII IIIII IIIII IIIII IIIII IIIII III	IIIII IIIII III	56
II	IIIII IIIII IIIII IIIII IIIII IIIII IIII	IIIII IIIII IIIII IIIII IIIII IIIII IIIII	69
III	IIIII IIIII I	IIIII III	14
BCG	IIIII IIIII IIIII IIIII IIIII IIIII IIIII IIIII	IIIII IIIII IIIII IIIII IIIII	65
MEASLES	IIIII IIIII IIIII IIIII IIIII I	IIIII IIIII	36
TT	PREGNANT IIIIII IIIII IIIII IIIII IIIIII IIIII III	OTHERS III	36

COMPLETE YOUR RECORDS AT THE END OF SESSION

* Count up from the tally sheet how many immunization you have given.
* In some programmes you also have had their first immunization or completed all their immunizations.
* Tally amount of vaccines that you have used, meanwhile you have to mention what you have to throw away.

EXPLANATION OF EXIT STATION

* place = for a large session, before you start station task near the entrance.
* Worker = every health worker, helpers contact person.
* Equipment= a smile (show them happy face)

TASK AT THE EXIT STATION

Check that the mother has attended all the station that she should attend. Make sure that the mother understand.

* which vaccines the child had today.
* Any side effects to expect from this vaccine, and what she can do about them.

LEAVING AN OUTREACH IMMUNIZATION SITE.

* Return the tables and chairs to their proper place and owners.
* Clean the site.
* Collect up your rubbish.

Put all the empty vials and ampoules and the wasted vaccines that you cannot use into a plastic bag, or other suitable container.

You can empty ampoules of reconstituted BCG on to the ground. The will soon destroy the vaccine.

Take the rubbish bite to the health or your EPI station in order to burn it.

Do not leave any of the vials on the ground. They may break and cut somebody's feet, or a child may put the glass into his/her mouth.

Thank your contact person and tell them when you will come next session (probably after a 4week).

WHICH VACCINES MUST YOU THROW AWAY ?

|- Any vaccine which has been taken out of the vaccine carriers and opened.

|- All vaccines if ice in carrier has melted. Cover +8°C.

WHICH VACCINES CAN YOU KEEP TO USE AGAIN ?

|- Keep the vaccines which stay in the vaccines carrier.
  -If the temperature in the carrier is below +8°C.
  -Or if there is not some ice which has not melted.

WHEN YOU ARE BACK TO YOUR STATION ?

|- Return the vaccine to the refrigerator.
  -Check that there is still ice in the vaccine carrier.
  -Check the temperature of the vaccine in the carrier.
|- If there is still ice in the vaccine carrier, or if the temperature is between 0°C--+8°C.
  -The vaccine are in good condition.
  -Mark the vials or ampuls of those vaccines, and put them into the return box in the refrigerator. Use them first next time.

You should not use vaccines that have been in and out of the refrigerator more than three times. Throw them away.

NB.

If the ice in the ice packs has melted and you have no thermometer, of if temperature is above +8°C.

-The vaccines may be damaged.
-Throw away into the rubbish container all the vaccines.

|- Put the ice packs back in the freezer before you went out and the freezer is full, put the "return" ice packs on to the lower shelf of the main compartment..

THROW AWAY RUBBISH SAFELY (Rubbish disposal).

If the local authority does not collect, wrap and bury your rubbish in a good rubbish pit or rubbish burring container.

ROLE OF TEAM LEADER

|- Problem identification.
|- Problem solving.
|- Individual staff evaluation.
|- Formal and informal reports.
|- Daily task evaluation.
|- Team assignment.
|- Contact community leaders.
|- Observing general health problems and other important events.
|- Preparation of all the necessary materials and vaccine before their departure to immunization site.
|- Proper disposal of rubbish and used strings/needles.
|- Make sure that the team transport is ready.

ROLE OF TEAM MEMBERS.

|- Be ready on time at the station everyday.
|- Should sign staff attendance book before to immunization session.
|- Should obey their team leader.
|- Should full fill their personnel assignment.
|- Should demonstrate excellent team work.
|- Should be active and competent.
|- Should reach

Annex 5

IMMUNIZATION RETURN

MONTH:_____ REGION:_____

YEAR:_____ DISTRICT:_____

DATE:_____ LOCATION:_____

VACCINE	AGE UNDER 1 YEAR	OVER 1 YEAR	TOTAL
BCG			
POLIO 1			
POLIO 2			
POLIO 3			
DPT 1			
DPT 2			
DPT 3			
Measles			

TALLAALKA TETANADA HAWEENKA 16 - 45 YRS

VACCINE	UUREY (PREGNANT)	KUWA KALE(OTHER)	TOTAL
TT1			
TT2			
TT3			
TT4			

VITAMIN A:

UNDER 1 YEAR	OVER 1 YEAR	TOTAL

Annex 6

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HOW COUPLES MAKE A BABY?

A girl starts her period around the age of 13 years, although this will vary from person to another. She loses some blood once a month, usually every 26 to 30 days. This bleeding lasts 3 to 5 days. The period stops when the woman is between 40 to 50 years of age.

Inside her belly a woman has two ovaries, one on each side. About 14 days before her period starts. One of the ovaries releases a very tiny egg. This egg travels along a tube to the pocket in the belly where the baby grows, called the womb.

If the woman has sex around the time when the egg is released, one of the seeds in the man's fluid may join with the egg to make a baby. The baby is planted in the rich earth of the womb, and here it grows for 9 months, floating in a bag of liquid.

If the woman does not have sex around the fertile time when the egg is released, the egg and the rich food of the womb which was prepared for the baby, leave the womb when the woman has her period.

HOW DO YOU KNOW WHEN A WOMAN IS PREGNANT?

Pregnancy is usually first noticed by the woman herself when she misses her period.

THE SIGN AND SYMPTOMS OF PREGNANCY ARE:-

- No period for six weeks or more.
- Morning sickness.
- Bigger belly and breasts, with dark areas around nipples, belly and face.
- Frequent urination.

HOW CAN YOU TELL HOW MANY MONTHS THE PREGNANCY IS AND HOW THE BABY IS LYING.
If you feel the womb below or at the level of the navel, the woman is 3-6 months pregnant.

At 5 months, the baby is at the level of the mother's navel and she begins to feel it moving.

If you feel the womb above the level of the navel, the woman is more than 6 months pregnant.

As the baby gets bigger, it turns so that the head usually sinks downward. By 8 months the head should be pointing downward, especially when it is the first baby.

WHAT HAPPENS IF THE HEAD IS NOT DOWN?

If the baby is lying with its bottom down, or across the womb, the delivery will be dangerous, and the mother should deliver in hospital.

If the belly is very big, the mother may have twins. It is safest for her to deliver in hospital.

By 9 months, the baby is up to the mother ribs, and she should feel it move every day.

WHAT ARE FUNCTIONS OF THE PLACENTA AND THE CORD?
HOW DOES THE BABY EAT, BREATHE & GET RID OF WASTE?

The mother eats and breathes for herself and the baby. Her oxygen and digested food travel into the placenta and through the cord into the baby; the baby needs this food and oxygen to grow strong and healthy. When a mother eats well, she feeds her baby well. Waste from the baby travels back out to the mother by the same route, and the mother's body gets rid of it.

ANTENNAL CARE.

ANTENATAL care should accomplish the following:-

- Advise the mother and her family to help them take an active part in protecting both the mother and her baby's health.
- Promote good preventive health practice for all pregnancy woman.
- Identify woman and babies at especially great risk for problems during the pregnancy, delivery or after delivery.
- Reduce harm to the mother and her baby by rapid management of obstetric emergencies within the limits of the existing resources.

ANTENATAL care is delivered both by TBAs in the area, and in the ANTENATAL clinic. The TBAs are the strength of our ANTENNAL program. Most of the efforts of the ANTENATAL program should be towards good preventive health care in pregnancy for all women. The program can also reduce morbidity and mortality rates by responding adequately to obstetric emergencies and by paying extra attention to woman at high risk of a complication or poor outcome. This section will first discuss how to interview and examine pregnant women and record the information. The prevention and management of these problems are found in the rest of the guideline. Women with risk factors should be followed up by TBA and ANTENATAL clinic staff. We must follow at risk women in working area. We do not have the option to electively send the high risk women to a referral hospital or the nearest hospital to handle obstetrical complications. Preventive care in the village

or towns, early detection and treatment of problems, and rapid response to emergencies must therefore be stressed given the distance.

SCREENING AND REGISTRATION.

Woman should attend the ANTENATAL clinic as early in pregnancy as possible. Frequency of ANTENATAL clinic to TBAS home visits should be:
- up to 7 months once per month.
- month 8 twice per month.
- month 9 every week (4 times a month)

History and physical examination of pregnant women in the first ANTENATAL clinic visit in each pregnancy is special because it is the time when the obstetric history and much information collection takes place. The ANTENATAL Record is a guide to what history and physical examination should be done look at the ANTENATAL registration boxes carefully.

HISTORY TAKING.

Ask for and record the following information on the top line:- Registration Number, Mother's name, age, section, TBA name and space for previous Complication in pregnancy.

Second line:- Question the mother about how many children have been born and died. First list the number of living children and their ages, then the number of live births that died, with their age at death and the cause of death. If more than one death, write cause in the right box on top line. Next list the number of stillbirths (7 or more months) and abortions (1-8 months).

PHYSICAL EXAMINATION.

Examine the women and record the findings.
Weight - weigh and record the weight. Make sure the scale is correct -- is zeroed and gives good results, other wise forget it. You must be able to compare weight overtime for the scale to be useful weight. Gain in the 2nd and 3rd trimester of pregnancy should be at least 1.5kg per month. On the first examine also estimate the height. If the height is less than 150 cm, this is a risk factor (see the registration forms).

BLOOD PRESSURE.

A normal blood pressure is anywhere from 80/50 to 120/80.
Any marked increase from previous reading is abnormal even if still within this normal range. If the reading is high, repeat it (see section on pre eclampsia). Any diastolic reading of 90 or more may indicate pre-eclampsia.

ANAEMIA.

Check the conjunctiva, nails and skin for paleness. Record mild Anaemia as [+] and severe as [++]. Try wherever a hemoglobin is being measured to compare your physical examination results with the blood measurement to improve your clinical examination. If you suspect severe Anaemia by paleness signs, check for other signs such as rapid pulse and edema. Woman with severe Anaemia on exam should have a hemoglobin test to determine to see which interventions they need.

EDEMA.

Check the legs and ankles, fingers and face for edema. Push in with a finger -- does a dent remain? Record as mild [+] or severe [++]. Also check the fingers and the face.

ABDOMINAL EXAMINATION.

First of all, the mother has to be positioned comfortably. She should lie on a mat or a bed with her baby straight. Her arms are at her sides, her knees bent slightly and her abdominal relaxed. A right-handed nurse should examine the mother from the mother's right side and a left-handed nurse from the mother's left side. The shape of the abdomen should be smooth and oval.

FUNDAL HEIGHT.

Use the whole of the hand to feel for the top of the uterus (this is the fundus). An increase of 2 fingers per month is normal. Make sure that when the mother returns in a month that you can use the register to tell whether the fundal height has increased. This is the beginning of this child's growth monitoring. Later in pregnancy, when fetal parts can be felt, also use this space to indicate the position of the baby. Make sure you can only feel two poles a head and a buttock. If you feel 3 poles, 2 heads, 1 buttock or 2 buttock and 1 head, this may be twins and special care is needed. Feel for fetal movement while checking the baby's position.

FETAL HEART.

Listen for the fetal heart. Usually it can be heard by 24 weeks; sometimes as early as 20 weeks with the veto-scope we use. Record this as (+) when you hear it or (-) when you do not hear the fetal heart.

BREASTS.

The breast should be full and nipples should stand out. Short nipples should be identified since these are a risk for poor feeding.

INTERVIEW.

The mother should be asked about any problems she is having; specifically:

- -Does she have any burning on urination?
- -Does she have any fever, cough, or vaginal discharge?
- -Does she have headaches, visual problems, swelling?
- -Is she eating well and resting sufficiently?
- -Is she avoiding carrying heavy loads?

IDENTIFYING WOMEN AT RISK.

The information from the history and physical examination help assess whether the woman is at a high risk of a problems. Information is collected to warn us about higher risks and to monitor how well the women is practicing good preventive health care during her pregnancy.

CURRENT HISTORY/COMPLAINTS.

COMPLAINTS		DIAGNOSIS
- Complaints of bad head ache or sudden weight gain.	_____	percales
- Very frequent urination with burning urine.	_____	Bladder inf.
- Fatigue or dizziness when walking	____	examine for Anaemia.

PHYSICAL EXAMINATION.

EXAMINATION		FINDING
- BP- Diastolic - over 90mm	_____	pre-eclampsia.
- BP- Diastolic - over 110mm	_____	Eclampsia.
- Pale conjunctive, nails, and skin.	_____	Anaemia.
- Poor weight gain or uterine growth.	_____	Low birth weight baby/aneamia.

TBA HOME VISIT.

The TBA should visit the pregnant woman at least weekly to assure daily consumption of iron and Vitamin C and chloroquine prophylaxis. The woman should be seen by the MCH mid-wife or nurse in ANTENATAL clinic at least monthly.

During each home visit, the TBA should:-

1- Ask the woman how she feels.
- Is she tired?
- Is she eating well? Be sure she is not restricting food intake.
- Has she been carrying heavy weights? This should be avoided if possible.
- Has she been getting enough rest?

2- Observe the woman and assess her general and nutritional state and her compliance with prophylaxis.
- Look for Anaemia.
- Check that she taking her iron, Vit. C and chloroquine regularly.

3- Examine the abdomen, breasts and assess the following:-
  - Look at the ankles, there should not be any swelling.
  - Palpate the abdomen to assess the number of months of pregnancy and to feel fetal movement. Ask the mother if she feels the baby and to be sure there is only one baby.
  - Listen to the fetal heart.

4- Ask the mother questions to determine whether she has developed any new problems since the last visit.

5- Educate the pregnant woman on the following points:-
  - The importance of personal hygiene especially daily cleaning of the breast and vulval area.
  - The importance of good diet.
  - The importance of drinking enough fluids to prevent urine infection.
  - The importance of rest and sleep, and of sharing the heavy work at this time, especially during the third trimester.
  - The importance of reporting abnormalities to the TBA.
  - The importance of not taking any other medicines unless prescribed by a member of the health team who knows she is pregnant.

NUTRITION DURING PREGNANCY.

Culturally, a pregnanct Somali women eats foods such as meat and animal milk, which supply her needs, but at this time the above mentioned foods are not available due to the war. Therefore it is

important to use other foods to nourish the woman and her growing baby.

THE NORMAL PREGNANCY.

Normal pregnancy has the following signs:-

1- Signs:
- Missed period.
- Feeling nausea especially in the morning.
- Breasts became bigger and may be more sensitive.
- Increased frequency of urination.
- Increased tiredness.
- Appetite is less.
- Increased vaginal discharge.

Duration :- A normal pregnancy lasts for about 40 weeks; this is counted from the first day of the woman's last period.

2- Physical changes in a normal pregnancy:
* Week 6-8- woman notices her missed period, morning nausea may start, breasts sore, urinates more often.
* Week 10- uterus can be felt on exam, cervix softer, weight gain noticeable.
* Week 12- uterus can be felt above symphysis, nausea usually less.
* Week 18 - woman starts to look pregnant; fetal movements first felt by mother.
* Week 24 - Fetal movements increases.
  - Fetal parts can be felt on exam.
  - Weight gain can increase.
  - Feet and legs after tired.

* Week 28 - Abdominal skin getting stretched and thin.
* Week 32 - Woman very tired.
  - Lower ribs may be sore as uterus pushes up.
  - Make sure the baby's position is head down.
* Week 40 - In second or later pregnancy, head engages so fundal height drops.
  - Check the fundal position.

Normally the uterus will be approximately 2 fingers higher every month.

NORMAL PROBLEMS OF PREGNANCY

1- Morning sickness.

The TBA should advice the mother to:-

- Eat small pieces of dry food before getting up in the morning.
- Eat small meals often, rather than large meals.
- Avoid greasy, oil food.
- Drink a lot of fluids, a little at a time.
- Ask the mother to inform the TBA if vomiting becomes severe. The TBA should inform the nurse if there are signs of dehydration and the woman cannot hold down fluids.

2- Constipation.

- Reassure the woman that constipation is a common problem during the pregnancy.
- Worn her that iron tablets can lead to constipation. But point out that Anaemia is more serious than constipation.
- Advice her to drink plenty of fluids.
- Advice her that her constipation may be relieved if she can add extra oil to cereals.

3- Low back pain

There is no medical treatment for this problem with pills or injections except antipain drugs which are usually not needed.

- Massage over the secrum by the TBA or another person is very effective.
- The pregnant woman should be reassured that it is a common problem in pregnancy and that she should lie down on her back and bend her knees up to 5 minutes then lie on her side and rest.

4- Mild Anaemia.

Signs and symptoms are include.

- Pale conjunctiva, nails, skin, and tongue.
- Tiredness.

TREATMENT

- Iron tablet 1x3 daily until she has recovered.
- Tell the pregnant women to eat as much as she can.

SERIOUS PROBLEMS OF PREGNANCY

Nurses working with TBAs in primary health care should remember that most of the TBAs are older women, respected in their community, who have had many years of experience delivering babies and looking after pregnant woman before this PHC program.

Therefore the nurse whose job it is to supervise the MCH or TBA section work must listen to and respect any TBA who makes a referral to him/her. The referred patient must be seen as soon as possible. Most obstetric emergency cannot wait, a decision should be made rapidly whether to call a doctor or transfer the woman to a hospital.

The following problems all require referral to the nurse or midwife, whom must decided whether to treat the patient or to refer her to a doctor or to hospital.

1-Bleeding in early pregnancy.
Before the seventh month, the most common reason for bleeding is:-
- Threatened abortion.
- Normal abortion.

2-Bleeding in later pregnancy.
- placenta previa.
- placenta abrupta.

3-Severe Anaemia in pregnancy.
Signs and symptoms for Anaemia:
- Very pale conjunctiva, tongue, lips, nails and palms of hands.
- Edema of ankles.
- Difficult Breathing
- Extreme fatigue

TREATMENT -- Iron/Folate tablet 3 times a day throughout the pregnancy with daily Vit amin C tablets. It is normal for iron tablets to turns the stool black; it may also cause constipation. Too many iron tablets taken all at once is poisonous for small children, so keep them in safe place.

PRE- AND POST-ECLAMPSIA

The causes of pre- and post-eclampsia are still unknown. It is occurs only in pregnancy during the last 3 months. Woman most risk of developing it are those having their first babies and those having twins. Pre-eclampsia becomes eclampsia if the woman has signs of pre-eclampsia than starts having convulsion.

Signs and symptoms of pre-eclampsia:

- Edema.
- Sudden weight gain.
- Headache.
- Raised blood pressure (Diastolic over 90 mm).
- Protienuria.

GERMS AND THE NEED TO BE CLEAN..

Many diseases are caused by germs, which are small living things; we cannot see germs because they are so small. They are everywhere: in the air, in food, in our bodies. Germs which cause diseases particularly like to live in any kind of dirt; for example, in faeces or articles soiled with blood or sweat.

HOW DO GERMS GET INTO OUR BODIES?

Germs enter our bodies through any opening. They enter our mouths when we eat dirty food or drink dirty water; we may get diarrhea. They enter our noses when we breath in air containing germs from a sick person's cough and sneezes; we may get a cough. They get our skin when we have a wound or an insect bite. Germs for diseases such as AIDS enter us through the thin, damp lining of the sexual organ when we have intercourse with an infected person, through either the man's or woman's fluids. The germs are very dangerous, and we could die.

What wounds do newly delivered mothers and babies have?
What illness do they get?

The baby has a cut cord. Germs can enter to cause tetanus.

The mother may have tears in the birth canal. Her womb is open and she is passing blood which germs like to live in. Germs can enter to cause fever, belly pain and small discharge.

HOW CAN WE STOP GERMS FROM ENTERING OUR BODIES?

Keep everything clean, because germs like to live in dirt. One of the best ways of keeping them away is to keep ourselves, our houses and our villages very clean.

When we go to a delivery, when we bath, we should wear clean clothes and wash our hands very well with soap and water. Our hands should be washed by scrubbing with a brush, water and soap. Let the hands dry in the air.

Germs like dirty finger nails. We should cut our nails very short and scrub them well.

Make sure that the mother has a clean cloth to lie on and another to cover herself with. She needs a clean cloth to wrap the baby in. The room where the mother will deliver should be clean.

After the delivery, make sure that the baby's cord is clean and dry to keep out germs. All these hygiene practices help to stop germs entering the mother and baby and making them ill.

HOW CAN YOU KILL GERMS?

We cannot always wash away all germs. These germs that remain even after careful washing can be killed by :-

- Boiling all equipments for at least as long as it takes to cook a pot of rice. This will kill all the germs including the ones which cause HIV infection too.

- For the baby's cord, putting gentian violet or spirit on it will kill germs.

- TBAs can prevent diseases by keeping themselves and their equipment, the mother and her surroundings clean. Germs can be killed by boiling and disinfectant.

NORMAL LABOR.

there are 3 stages of LABOR.

STAGE # 1- Begins when the woman has regular contractions and continues until the cervix is completely dilated.

STAGE # 2- Begins when the cervix is completely dilated and continues until the baby is delivered.

STAGE # 3- Begins when the baby is delivered and continues until the placenta is delivered about 1hr later.

ROLE OF THE TBA DURING THE LABOR.

Birth is a natural event.

The 1st stage of LABOR:- the TBA is usually called to attend the pregnant woman at this stage; what to do?

1- On arrival at the house the TBA should ask the mother:-
- When did the pains start?
- How often are they coming?
- Has she had a show (pink discharge)?
- Has she passed a lot of water (rupture of membrane)?

- Has she been passing urine?
- Has she defecated in the last 24 hours?

2- The TBA should then inspect and palpate the abdomen; this will show:-
- The position of the baby.
- How long each contraction is lasting.

3- The TBA should select a place for delivery that is clean and well ventilated.

4- She should reassure the pregnant woman.

5- If in early LABOR the TBA should:-
- Encourage the mother to walk around, because this helps the head of the baby to move down into the pelvis.
- Offer her tea, water, porridge or milk to drink. The woman in LABOR needs a lot of nourishing fluids to give her energy and to make the uterus work.
- Suggest that the woman can have a light meal, if she wants
- Encourage her to pass urine every hour to keep the bladder empty.
- Encourage her to defecate at least once during the labor.
- Encourage her to wash herself.
- Keep the vulva area clean.
- The TBA must be sure she has new razor blade ready for cutting the cord and perhaps for episiotomy.
- If the woman was identified as high risk, the midwife or medical officer should be called to the place of delivery with obstetric emergency kit.

COMPLICATIONS DURING LABOR.

TBAs must be taught to recognize the following conditions and to refer the patient to nurse or midwife, who must see the patient immediately, and then decide whether to treat her or refer to the nearest referral point.

A - Prolonged LABOR.
- Baby larger than the mother's pelvis.
- First baby.
- Malpresentation.
- Poor maternal nutrition.
- A full bladder.
- Female circumcision and infibulation.

GENERAL MANAGEMENT OF PROLONGED LABOR.

The TBA SHOULD:-

- Give the mother fluids, especially sweets, milky tea, or porridge.
- She must check to see if LABOR is progressing and if the membranes are ruptured.
- A Midwife or other qualified nurse should be called to do a vaginal examination to findout why LABOR is prolonged.

The woman should:-

- Keep her bowels and bladder empty.
- Rest as much as she can.
- Keep taking fluids during LABOR.

Dangers of prolonged LABOR to the mother.

- Dehydration.
- Exhaustion.
- Rupture of uterus. If this happen, the mother and baby will die.
- Infection, if membranes rupture.
- Prolapsed uterus.

B- PROLAPSED CORD.

C- ABNORMAL LABOR AND PRESENTATION.

- Twin pregnancy.
- Malpresentation.
  * Breech.
  * transfer lie.

D- RETAINED PLACENTA.

E- POSTPARTUM HEMORRHAGE AFTER THE PLACENTA HAS DELIVERED.

CARE OF NEW BORN BABY.

The baby who does not start to breath as soon as his nose and mouth have been cleaned needs immediate attention from the TBA or Nurse.

WHAT TO DO IF THE CHILD IS NOT BREATHING.

- Hold the baby on your lap with his head down.
- Rub his back to try to stimulate breathing and flick his feet.
- Gently try to blow air into his lungs. Put him on a flat surface with his head back. Cover his nose and mouth with your mouth blow gently about 20 times per minutes. Be careful that you do not blow very hard, as this can damage the baby's lungs. Blow from cheeks only and not from your lungs.

GENERAL EXAMINATION OF THE CHILD.

After the baby is breathing well and the placenta is delivered, the TBA should examine the new born baby. If she finds any abnormalities, they should be reported to the nurse, who should visit the house of the patient to examine the baby herself as soon as possible, and to give any treatment or advice which might be needed.

The TBA must register the birth as soon as possible and make sure a Road-to-Health card is issued for the child. The TBA must visit the new mother and her baby once every day for the first seven days after the delivery. If the baby's cord has not fallen off by the seventh day, she must visit until it does fall off. During this time she must examine the baby every day.

WHAT TO LOOK FOR?

- Is the baby breast-feeding properly?
- Is he showing any sign of dehydration?
- Does he have diarrhea or fever?
- Is he breathing too fast?
- Is he coughing too fast?
- Is he being fed any other foods besides breast milk?
- Is he warm?
- Is the cord clean and dry?
- Is he passing urine?
- Is he passing stools normally?

After the first seven days of life, the TBAS should continue to examine the baby once a week until he reaches 40 days of age.

BREAST-FEEDING.

The TBAS must educate all mothers about the importance of breast-feeding. No other foods must be given to babies before 4 months.

Breast milk is the only milk for babies why?

Because:- It is always clean.
- It contains all the foods a young baby needs, and is made especially for him.
- It protects the baby from diarrhea.
- It needs no preparation.
- It is free.

A young baby needs to be fed on at least every 3 hours. This helps the milk to come. At first the milk looks thin and watery, but in fact it is very good for the baby as it contains protein and vitamins and protects him against diseases. Let the baby suck until he finishes each time he feeds. The first part of the milk at each feed contains more protein than the last parts. It is important to allow the baby to suck fully at each feed until satisfied.

WEANING PRACTICE.

What is weaning? What is best way to manage the weaning period?

Weaning is the process by which an infant learns to eat foods other than breast milk until he is able to eat the family diet and stop breast-feeding.

Weaning begins between 4 and 6 months of age with the introduction of soft mixed porridges. It ends at around 1.5-2 years when the child is eating 3 good meals a day.

Weaning is a dangerous time for the child. Many children became sick and thin and same of them die.

At this time, the child meets many new germs and often gets sick. He is growing very fast and needs plenty of good food as well as breast-feeding. He needs foods in a soft form that he can learn to eat.

Many mothers find it difficult to keep their children growing well over the weaning period, because :-
- They are busy on the farm or in the market.
- They do not have enough good foods available.
- The child often refuses to eat.

- They do not know how to use the foods that they do have in way that meets the child's needs.

The objective of care in the weaning period is to improve the quality of the infant's diet and to protect against diarrhea by clean handling of the foods.

TBAs can help mothers to keep their children growing well by encouraging them to go for immunization, weighing and treatment, and by advising them on child feeding.

What happens when supplements begin at 4 months?
This is the best time to begin supplements because:-
- Breast milk is no longer enough for good growth, and the extra foods let the baby go on growing.
- Good growth helps the baby to fight any germs in the porridge so the risk of serious diarrhea is less.
- The baby learns to eat foods other than breast milk at the time when he is most interested in trying new foods.

AVOIDING ABRUPT WEANING.

All new foods should be introduced in small amounts at first. This allows the baby time to get used to new tastes.
The following plan may be followed for carefully planned weaning.

4-6 months plan:

- Continue with breast milk as the main food.
- Introduce foods like porridge made from wheat, maize, millet or sorghum and flours; fed by means of a spoon, after breast feeding.
- Once the baby is used to the new taste add small amounts of other soft foods like cow's milk, egg, and mashed potato.

Abrupt weaning is dangerous. The introduction of new foods should be carefully planned. Breast feeding may be safely stopped only when the child is eating enough of a mixed diet.

GROWTH MONITORING.

Every child visiting the clinic should be weighed and measured. His weight and height should be recorded on the ROAD-TO-HEALTH card. If the mother left the card at home, gently request that she go home and bring it back. If the child never had a card, a new card is filled out. Some clinics keep a copy of the Road-to-Health card for each child in the clinic.

Measure and record the height to the nearest 0.1 cm.
- lying down if less than 85 cm.
- standing if greater than or equal to 85cm.

If a child is measured lying down who is 85cm or more, subtract 1cm from the height. Measure and record the weight to the nearest 0.1cm, record the weight on the weight column
If growth is falling off, try to find out why:-
- Is the child being fed adequately?
- What weaning food are being given?
- Does the child have an illness?

Calculate the percent median weight for height chart.
The Road-to-Health card shows if the child is at risk even if his percentage weight-for-height is not below 80%. Take a nutritional history and carefully examine the child to see what is wrong. The child may need supplementary food. If not already enrolled, refer to supplementary center, if it is existing in the area you work.

DIARRHEA AND REHYDRATION

WHAT IS DIARRHEA?

We define diarrhea as when the patient has 4 or more watery stools within 24 hours. That means more then the usual output.

Infants who uses breast-feeding have very soft stools, which are not diarrhea. Diarrhea is common in children between 6 months to 2 years of age. It is also common with children who drink bottle milk, contaminated food, water and unboiled cow milk.

WHAT ARE THE MAIN PROBLEMS OF DIARRHEA?

Diarrhea causes many problems but the main problems are:-
- severe dehydration, severe malnutrition and death.

WHAT ARE THE CAUSES OF DIARRHEA?

The main causes of diarrhea are bacteria and intestinal virus through contaminated water, food, hands, kitchen utensils or food containers. Malnutrition is closely related to diarrhea.

WHY DIARRHEA IS DANGEROUS?

Diarrhea is dangerous because it may cause very severe dehydration unless the patient gets proper and timely medical care against the dehydration. Therefore the main problems of diarrhea are malnutrition and death. Deaths can be caused by dehydration, when the patient loses unusual amounts of water and salts.

The patient who has diarrhea may not fell hungry, so the patient may not try his/her best to eat. Most of Somali mothers have the very bad habit of not feeding the children with diarrhea and stopping drinking. We have to educate them not to stop eating and drinking while the children are having diarrhea. Oral rehydration salts and feeding for the children is the best medicine to prevent dehydration. ORS can not stop the diarrhea but it will replace the lost water and salts. If you tell the mothers that ORS will stop the diarrhea, they will never accept your advice; so please avoid lying and misinterpretations.

HOW DIARRHEA CAUSES DEHYDRATION?

The body normally uses water and salts, obtained through drinking and eating. It makes excretion such as defecation, urination, vomiting and sweating.

When the intestines are healthy, salts and water can pass to the blood. When diarrhea exists, and intestines are not functioning properly, salts and water can not reach the blood. Unusual water and salts can go outside of the body. This excess amount of salts and water which is going out of the body results in dehydration; more vomiting and sweating can cause dehydration too.

HOW CAN WE PREVENT DEHYDRATION?

Cases of diarrhea with no signs of dehydration.

- Advice increasing fluids intake (water, soup, juice, and rice water).
- Encourage the use of homemade sugar/salt solution.
- Continue breastfeeding and normal diet for children.
- Warn mothers to bring the child back, if the condition gets worse.

PHYSICAL EXAMINATION OF THE PATIENT WITH DIARRHEA.

In addition to assessing the dehydration status of the patient with diarrhea, a physical examination and history will determine whether the patient needs other treatment beside rehydration.

- Is there Diarrhea with blood?
- Are there signs of pneumonia or other illness?

If the patient has all or part of the above mentioned signs, please refer to the head Nurse of the area or supervisor.

HOW CAN WE REPLACE THE LOST FLUIDS?

The best and easiest method to replace the lost water/salts is oral rehydration salts (ORS). How can we prepare ORS?
Usually we can find prepared ORS packets, some packets are for different volumes of water containers like(500 or 1000ml) read the instruction on the packets carefully before you prepare.

Water should be as clean as possible. It is good to boiled, if it is not safe than find clean small container with cover. Measure the water according to thequantity of ORS powder available. There may be a local measure that mother can use, such as a tea cup or water glass.

- 6 tea cups = 1 liter of water.
- 3 tea cups = 500 ml of water (1/2 liter).
- 3 water glass = 1lr of water.
- 1 1/2 of glass of water = 500ml of water.

If the packet of ORS is for 1 liter of water, measure 3 full water glasses or 6 full tea cups of water, then mix with a spoon until it is dissolved. After that, give the patient one glass of ORS after each stool or as much as he/she can drink.

Some children or adults vomit their oral fluids, ignore small amount of vomiting keep giving ORS. Vomiting is often a result of rehydration and will usually go away as the patient is rehydrated with ORS.

Make sure the mother knows that ORS will not stop the diarrhea, it replace the loses and keeps the patient from losing too much fluids and being severe or moderate dehydrated.

IMMUNIZATION

Please refer immunization training module.

EMERGENCY REFERRAL TO HOSPITAL OR THE NEAREST REFERRAL POINT.

INDICATION:- The following cases will be referred.

1- Severe Anaemia.
2- Severe Abdominal pain (other than normal LABOR pains)
3- Vaginal Bleeding.
4- Eclampsia and severe pre-eclampsia.
5- Difficult LABOR - at-risk group, including
   - Malpresentation and multiple pregnancy.
   - Membranes ruptured more than 24 hours.
   - Signs of obstruction.
   - Signs of infection.
   - Prolonged LABOR 1st and 2nd stage with ruptured membranes.
   - Ruptured uterus.
6- Cord prolapsed.
7- Postpartum hemorrage.
8- Retained placenta.

RECORD KEEPING.

MCH Clinics and health posts should have records; either cards or register. On this register or card is recorded all the important information about:- history, physical examination results, immunization, weight and others. This record should be kept at the clinic for reference for statistical purposes, monthly health reports or any other reference (like health surveys). The usual MCH register contains such things as name, age, diagnosis, treatment and others.

The first principle to consider when developing a recording system is to collect only the kind of information which is reasonable, accurate and useful.

This kind of record should be divided into the sections which the town or villages consist that the clinic serves.
Each mother and child is then registered on the page for their section or subsection. In this way it will be known how many are attending the clinic from each section. This number can then be compared to the total population of that section or subsection to see the percentage of those attending the clinic. It also makes it easier to do home visiting in different areas.

Please see MCH register and MCH cards.

In general people should be seen in the same order they arrive at the MCH clinic in order to prevent complaints of favoritism. But the staff should check the line of waiting people periodically so that no seriously ill patient has to wait for long time.

Annex 7

SAVE THE CHILDREN US IN SOMALIA

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WHAT IS A COMMUNITY HEALTH WORKER ?

A Community health worker is someone from the community selected by the community, supported by the community who was been trained to meet the basic health needs of the community and has the interest, time, motivation and devotion.

WHAT DO COMMUNITY HEALTH WORKERS DO?

The CHWs duties will cover both health care and community development, but what they do should be restricted to what they have learned in training. They must recognize their limitations. They cannot be expected to solve all the problems they meet, but they should be able to deal with those that are the most common and urgent.

CHW's should always bear in mind that they are not working in isolation. Rather they function within a health system and should be guided and supported by skilled supervisors. They should know where and when to seek guidance and refer or seek help for patients who are seriously ill or whose treatment is beyond their competence. The trainers should instruct CHWs to obtain a supervisor's advice or to send the patient to the health center or nearest hospital. This clearly indicates that CHWs cannot and should not try to do everything alone. It can never be emphasized enough that the quality of the services provided by CHWs depends on the skill and dedication of each individual CHW, the quality of their training, skilled and supportive supervision, a reliable communication network and a reliable referral system linking the CHWs to a health center or hospital.

CHWs should help local authorities and the public to take initiatives and should show an interest in any activity likely to improve the people's living conditions. They should always consider what can be the responsibility of the health sector alone and that important contributions to people's health are made by many other sectors, such as education and agriculture.

GETTING RID OF WASTE

Every household produces waste (or rubbish) from cooking, eating, sweeping, cleaning and other work. If this rubbish is left lying around the house it becomes dangerous; in hot climates it should be removed daily.

Main health problems caused by waste

When waste is left lying around it makes the area look dirty and it produces a bad smell. It also attracts flies and rats and other animals which can carry disease germs to the people. **For example:-** If flies that have been sitting on dirty waste sit on food, the people who eat the food can became ill.

If waste is left to rot near a river, pond, well or spring there is the danger that it will come into contact with the drinking water and make it dirty. When people drink this dirty water they can get diarrhea and other diseases.

If children get hurt when playing with waste or near it, their wounds can became badly infected.

Therefore, waste must never be left lying around. It should be got rid of safely. Find out where people throw their waste, discuss with them what they do, and suggest what action to take.

DUMPING WASTE IN A COMMON PIT

In most villages there is a common pit where people throw their waste. This pit should be properly protected from animals and flies, in order to prevent diseases in the community. A common pit is properly placed and protected if:-

- it is in a hollow and not on a hill,
- it is at least 100 meters away from any river, wells or spring,
- it is outside the village and at least 20 meters from the nearest house,
- there must be fence around it, and
- surface water cannot run into it.

If the pit is not being properly used, discuss with the chief how the village can have a good common pit, once properly used by visiting it regularly.

Where there is no common pit

If people throw waste around their house, this can be dangerous. People can get diarrhea and other diseases if the waste is left rotting around the house. You should discuss

this matter with the people and the village chief, and try to get a common pit ready as soon as possible. Make sure that the common pit is safe and well protected. It will be useful to ask your supervisor to came and advice on how to dig a pit or on other ways of disposing of and burning waste.

If people throw waste near a river, well or spring or near rain that flows into the river, there is a danger that the water may became dirty. If people drink such dirty water, they may became ill. Discuss this problem with the village chief and your supervisor. Try to get a common pit dug. Make sure it is used properly.

Bury the waste in a hole at a safe distance from the houses and from sources of drinking water.

Collect the waste in a container and burn it once a week away from the village or town to avoid problems of smoke and smell.

DISPOSAL OF EXCRETA (LATRINE BUILDING/USE)

People who have diarrhea, cholera, or worms pass these diseases on through their faeces. Like waste, faeces attract flies and other harmful organism. Flies that land on the faeces that contain germs can carry this germs to food, and people who eat such food may fall ill. Therefore, people should not be careless about where they defecate.

If people defecate near a river or spring there is a danger that the water can became dirty and that people drinking this water may then fall ill. To prevent the diseases that are spread through faeces, people should not defecate in places where other people, flies, animals and birds can touch the faeces or where water can be contaminated. Every household should have a latrine of its own.

If human excreta is left in a pit for 2-3 months it turns into fertilizer. This can be used in the fields to grow plants. If you want to know more about this ask your supervisor.

THE PROBLEMS

Some people in your community defecate careless in the open. Other do not keep their latrines clean. Many children and other people are suffering from diseases that are carried by faeces. The people do not know that the way they defecate causes diseases to spread.

WHAT DO YOU DO ABOUT THE ABOVE MENTIONED PROBLEMS?

First find out where the villagers defecate, then discuss why it is dangerous to defecate just anywhere. The following actions can be taken, depending upon the situation in your community.

WHEN PEOPLE HAVE NO LATRINES

If people defecate around their houses, there is a danger of diseases from faeces, particularly when people defecate less than 20 meters away from the house.

* Advice the head of the household to tell the family to defecate in latrine; if they have no latrine, to defecate in the fields away from the house.

* Ask for the help of the village chief. He may speak to the people about the problem. If he wants the people to build latrines, ask your supervisor for help. Afterwards make sure that the latrines are being used properly.

What to do if the people defecate in the river or canals?

If the people defecate in the river, the river or canal water becomes dirty and dangerous. Tell the people not to defecate:-
- in the water pools (lakes),
- within 20 metros of the river,
- in the canals or water source leading to the river,
- near the houses or non defecation area, or
- in the river.

If people continue to do so in spite of your telling them not to ask the village chief to help in persisting the people to build latrines and not to defecate in or around the river.

If people defecate in the fields or the forest, there is not much danger of diseases. If possible defecate in the fields or the forest, provided that:-
- People defecate at least 20 meters away from any house or water source.

In the open, it is better to defecate in sunny places rather than in the shade. The sun can kill the germs in the faeces. People should not defecate in agricultural fields. Please tell the people, it is always best to use a latrine if possible.

When people have latrines but do not use them properly

Advise the head of the household to:-
. make sure that no faeces are left on the slab cover of the latrines,
. have the latrine scrubbed and cleaned regularly with water,
. check from time to time to see whether the people are keeping their latrines clean.

When is a latrine properly build?

A proper latrines has the following features:-
. it is down hill and more than 20 metros away from the water supply (well, river, spring & canals),
. it is at least 20 meters away from the house,
. it has pit at least 1 meters deep, and
. it has a slab (cover) over the pit made of concrete (best) or wood; the slab has a hole through which faeces and urine can drop.

The hole should be small enough so that children too can use the latrine. But it should be large enough for faeces and urine to fall through it. The hole should have a cover.
. It has wall and roof made of material that are easy to get and cheap to pay and repair.
. It is kept clean, a separate broom and water bucket should be kept for cleaning the latrine. Water for washing. Other types of latrines can also be build, depending on local conditions. You should discuss this with your supervisor.

When is a latrine properly used?

A latrine is properly used when:-
* everyone in the household uses it,
* it is kept clean and the floor and the slab are washed often,
* the pit is kept covered when the latrines is not being used,
* materials for personal cleaning are always available (water, soap, and paper), and
* the pit is emptied or a new one is dug when the pit is full.

When a new pit is dug, the latrine is moved to the new site, the earth from the new pits is used to cover the old one, but the same slab is used to keep the new pit covered.

Always remember the following important points

* to avoid diseases carried by faeces, people should defecate in a latrine,
* when there are no latrines, people may defecate in a hole

far away from the house and from the water supply (village, well, river, and lakes); cover hole with earth after defecating, and
* always wash hands with soap and water after defecating and before eating.

KEEPING THE FAMILY's HYGIENE

Personal and family hygiene

As a community health worker, you should set an example of healthy living and good health in the community. The community will then imitate your habits.

People will learn healthy habits by watching how you live and look after your family and house. Cleanliness is the most basic health habit.

You and your family should have the following healthy habits:
* look clean,
* wash your hands before and after meals and keep your fingernails short and clean,
* do not smoke cigarettes or chew greenleafs (jaad) or tobacco,
* boil the water to prepare food for small children and the rest of the family,
* use a safe bathing place,
* clean your teeth after meals, before and at bed time,
* have at least one latrine, which all members of the family use,
* never urinate or defecate anywhere on the ground except the defecation area, if there is no latrine around,
* do not spit everywhere, particularly public areas,
* wear shoes or sandals that are made or obtained locally, and
* never drink alcohol or chew green leafs (jaad).

ASK YOURSELF QUESTIONS ABOUT HEALTHY HABITS

. How do my health habits affect my health and that of my family?

. If everyone had my habits, would the health of the community improve?

It is important for you to have healthy habits. You will learn these during training. You must set an example of healthy living in your community.

If you do not have healthy habits yourself, you will not be able to advice to others change their unhealthy ways of living.

ASK YOURSELF -- HOW DO I LOOK?

Your appearance will show what you think of yourself. If you do not look clean and healthy, you will find it hard to be an effective community health worker.

Do you brush or clean your teeth after every meal?
Advice others to do this as well. Discuss with people why it is a good habit to clean the teeth after meals.

Washing hands is important

You and your family may catch diseases or pass diseases on to other people if you do not all keep your hands clean.

Food prepared with dirty hands can carry diseases. Even if water is scarce, try to wash hands with soap and water at least before you prepare and eat food and after defecating.

Discuss with people how they can prevent diseases by keeping their hands clean.

SMOKING CIGARETTES AND CHEWING JAAD AND TOBACCO HARMS HEALTH

Do not smoke; cigarette smoke harms your lungs and your family's lungs. It may cause coughing and yellow sputum. Smoking cigarettes can also cause serious diseases such as cancer and chronic respiratory infections.

You cannot advice people not to smoke or chew jaad or tobacco if you do these things yourself. First of all change your bad habits, then try to change other's habits.

Clean water is essential for health.

If the water you use comes from a pond or a river, you should boil or filter it before drinking. Boil or filter all the water you use for drinking and cooking if it does not come from a protected, spring or wells.
Learn to filter the water and to keep the filter clean.

Use simple, locally made shoes or sandals

Some worms (hookworm) enter a baby through the feet. This can be prevented by wearing shoes. If you wear simple,

locally made shoes, others can more easily imitate what you do than if you wear expensive shoes.

To wear shoes is very essential for health.

PROTECTING AGAINST INFECTIOUS DISEASES

Infectious diseases cause many deaths in children. These diseases are caused by germs that attack the body and that can be passed from person to another.

The body can protect itself against some germs when the person is " **Immunized**". Immunization means that a drug called a "**Vaccine**" is injected into the body or swallowed to protect against possible attacks by germs.

Six common infectious diseases can be prevented by immunization: tuberculosis, diphtheria, whooping cough, tetanus, poliomyelitis and measles.

Check with your supervisor the local names of these diseases. Always use these local names when talking to the people about the diseases.

IMMUNIZATION PROGRAM

Who need to be immunized against these 6 common diseases?

* All children under 1 year of age.
* Other children who have not been fully immunized.

Also, immunization against tetanus should be given for:-

* Every pregnant woman to protect her baby from getting this disease after birth.
* All other women who are of child-bearing age and have not been immunized previously against tetanus.

What do people need to know about the vaccines & infectious diseases?

Why get immunized?

The community needs to know that young children and those women who are going to have children soon can be protected from six infectious diseases. These diseases are very dangerous and can cause death, but they can be prevented by immunization. Parents should not be afraid to have their children immunized . The injections cause only very little

pain for a moment but these dangerous diseases can handicap children for their whole lives or even kill them.

HOW AND WHEN TO GET IMMUNIZED?

A baby cannot be fully immunized against all the 6 diseases in only one visit; the mother must take her child to the health center or immunization point at least three times. You should make all mothers understand this so that they will bring back their children when they are required to do so.

Immunization against tuberculosis(TB) which is done with the BCG vaccine is given by one injection as soon as possible after birth.

Immunization against diphtheria, whooping cough, and tetanus is combined one injection, but is given 3 times. The first should be when the child is 6 weeks old, the second at least 4 weeks later, and the third at least 4 weeks after the second.

Poliomyelitis vaccine is given by month at the same 3 times as the immunization against diphtheria, whooping cough and tetanus.

Immunization against measles is given by one injection when the child is at least 9 months old.

A pregnant women should be immunized by 2 injections of the tetanus vaccine. The first is given as soon as the pregnancy is known, and the second 4 weeks later.

When can children and women be immunized

Immunization session are organized in your area according to instructions from the national or district health services.

There are two possibilities:-
. woman take their children to the health center, or
. a health team comes periodically to the village to immunize those who are due to be immunized.

How can you assist in preparing for immunizations?

When a special immunization team comes to your community. You can assist by:-
. finding out the date and time when the team is supposed to come,
. discussing with the community leaders:-
  - where to organize the session (in shelter place, with water soap and so on),
  - what equipment will be needed (table, chairs, benches),
  - how, when and where to inform and bring together the mother and children who need immunization,

- reviewing and preparing your record (last of children and mothers required for vaccines for the next immunization schedule session in your village),
- preparing the waiting area, to make mothers and children as comfortable as possible,
- organizing the queue at the entrance, and
- following the instructions of the team and making yourself available.

What records should CHWs keep for immunizations?

Whenever possible you should keep three lists:-

- a list of children born in the community, with their names date of birth and immunizations that they have already received,
- a list of pregnant women with their names and dates of previous immunization, and
- a list of all children over 1 year who have not been completely immunized.

SECTION # 2

CARE OF SICK PEOPLE

Most people get sick sometimes, well fed people get sick less often. Badly fed children became sick more seriously than well fed people.

Children who work too many hours a day and do not get enough time to play or sleep may get sick more often.

Full immunization prevents many of the diseases that kill very young children.

Early treatment can stop a sickness from becoming dangerous. A sick child needs to eat and drink to help the body to fight the sickness.

A sick children needs more care than a sick adult. Never leave a sick child alone.

A child who refuses to eat or drink and who does not want to play may be at the beginning of a sickness; watch the child carefully.

When a sick child does not get good care early, the sickness may become dangerous. It is very important to treat children very early. Children who are weak and of low weight become sick more easily.

Your community may have very strong ideas about how to care for sick children. Find out what they are; some may be dangerous and may make the child sick. Always make sure that a sick child:-
- eats and drinks enough (except when there is belly pain),
- is kept warm, and
- is washed every day.

The care a sick person receives frequently is the most important part of his/her treatment. Medicines are often not necessary. But good care is always important. The following are the basis of good care.

1- The comfort of the sick person.
A person who is sick should rest in a quiet, comfortable place with plenty of fresh air and light.
He should keep from getting too hot or too cold. If the air is cold or the person is chilled, cover him/her with a sheet or blanket. But if the weather is hot or the person has a fever, do not cover him at all.

2- Liquids
In nearly every sickness, especially when there is fever or diarrhea, the sick person should drink plenty of liquids: water, tea, juices, and so on.

3- Good food.
If sick person feels like eating, let him. Most sickness do not require special diets. A sick person should drink plenty of liquids and eat body-building and nourishing foods like milk, cheese, chicken, eggs, meat, fish beans, green vegetables and fruits, if possible.

If the person is very weak, give him these same foods, but make them into soups or juices.

HOW TO EXAMINE SICK PERSON

To find out the needs of a sick person, first you must ask important questions and then examine him carefully. You should look for signs and symptoms that help you tell how ill the person is and what kind of sickness he may have.

Always examine the person where there is good light, preferably in the sunlight; never in a dark room.

There are certain basic things to ask and to look for in anyone who is sick. These include things the sick person feels or reports as well as things you notice on examining him. These signs can be especially important in babies and persons unable to talk.

QUESTIONS TO ASK A SICK PERSON:-

Start by asking the person about his sickness but do not ask leading questions. Be sure to ask the following:-
. What bothers you most right now?
. What makes you feel better or worse?
. How and when your sickness begin?
. Have you had this same trouble before, or has anyone else in your family or neighborhood had it?

Continue with other questions in order to learn the details of the illness. But please avoid leading questions.

For example

If the sick person has a pain, ask him where does it hurt?
Ask him to point to the exact place with one finger.
Does it hurt all the time, or off and on?
What is the pain like? sharp? dull? burning?
Can you sleep with the pain?

GENERAL CONDITIONS OF HEALTH

Before touching the sick person, look at him carefully. Observe how ill or weak he looks, the way he moves, how he breaths and look for dehydration.

Notice whether the person looks well nourished or poorly nourished. Has he been losing weight? When a person has lost weight slowly over a long period of time, he may have a chronic illness.

Also note the color of the skin and eyes, healthy black skin can hide color changes behind it, so look at the parts where the skin is paler, e.g. -- the palms of the hands, the fingernails, the inside of the lips or the inside of the eyelids.

- Paleness may be a sign of anemia.
- Blueness may mean serious problems with breathing.
- Yellow color (jaundice) may result from disease in the liver.

The color of the person depends on the color of his parent's skin. The color sometimes changes when the person is sick. It may go darker with starvation, but with kwashiorkor the skin and hair color go lighter. They may also go lighter as a result of tuberculosis in the lungs or elsewhere in the body.

TAKING THE TEMPERATURE OF SICK PERSON.

It is often wise to take a sick person's temperature, even if he does not seen to have a fever. When the person is very sick take the temperature at least 4 times a day and record. If there is no thermometer, you can an idea of the temperature by putting the back of one hand on the sick person's forehand and the other on your own or that of another healthy person. If the sick person has a fever, you should feel the difference.

It is important to find out when and how the fever comes, how long it lasts and how it goes away. This may help you identify the disease.

For example

It is important to find out when and how fever comes, how long it lasts, and how it goes away. Not every fever is malaria, though in some countries it is commonly treated as such. Remember other possible causes.

- *Common cold and other viral infections. The fever is usually mild. Ask if there is also sneezing or sore throat.*
- *Typhoid:- a fever that goes on rising for 5 days and does not respond to antimicrobials.*

- *Tuberculosis sometimes causes a mild fever in the afternoon. At night the person often sweats and the fever goes down.*

TAKING THE TEMPERATURE

There are three common ways of taking a person's temperature:-

1) by placing the thermometer in the mouth,
2) by placing the thermometer in the armpit, and
3) by putting the thermometer in the anus.

TAKING TEMPERATURE IN THE MOUTH AND IN THE ARMPIT.

1- Make sure that the column of mercury inside the thermometer is below about 35C^0. If it is not shake the thermometer until it has gone down.

2-Ask the patient to place the small part of the thermometer under his tongue and keep his mouth closed, or in his armpit and hold his elbow against his body.

3-Leave the thermometer in place for about 2 minutes.

4-Take the thermometer out and read the figures in line with the top of the column of mercury inside the thermometer. If the figure is above 37.5C^0 the patient has a fever, the higher figure, the greater the fever.

5-Clean the thermometer with some cotton wool and soapy water (not hot water). Shake the thermometer so that the mercury goes down towards the small part. Put the thermometer away so that it does not fall on the ground and break.

TAKING THE TEMPERATURE IN THE ANUS.

A different type of thermometer is used for taking anal temperature. It has a round tip that will not damage the anus. You should not use the same thermometer as you use for taking oral or armpit temperature.

How to read the thermometer

Turn the thermometer until you can see the silver line.
- Below 37C^0 is normal.
- 37-39C^0 moderate fever.
- 40-42C^0 higher fever.

COUNTING RESPIRATION.

Pay special attention to the way the sick person breaths, the depth, how often breathes are taken and difficulty. Notice if both sides of the chest move equally when he breaths.

If you have a watch or simple timer, count the number of breaths per minute; between 12 and 20 breaths per minute is normal for adults and older children. Up to 30 breaths per minute is normal for children and 40 for babies. People with a high fever or serious respiratory illness (like pneumonia) breathe more quickly than normal; for small children over 40 breaths a minute is abnormal, over 60/ minute means pneumonia. Listen carefully to the sound of the breaths.

For example:-
A whistle or wheeze and difficult breathing out can mean asthma.

Look for " sucking in " of the skin between the ribs and at the angle of the neck when the person breathes in. This means air has trouble getting through. Consider the possibility of something stuck in the throat.

If the person has a cough, ask if it keeps him from sleeping, find out if he coughs up mucus how much, its color and if there is blood in it.

PULSE (HEARTBEAT)

To take the person's pulse put your fingers on the wrist (do not use your thumb to feel for the pulse).

If you cannot find the pulse in the wrist, feel for it on the neck beside the voice box or put your ear directly on the chest and listen for the heartbeat.

Pay attention to the strength, the rate and the regularity of the pulse. If you have a watch or timer, count the pulses per minute.

Normal pulse for people at rest

Adults---------- from 60 to 80 per minute

Children---------- from 80 to 100 per minute

Babies ---------- from 100 to 140 per minute.

The pulse gets much faster with exercise and when a person is nervous, frightened or has a fever. As a general rule, the pulse increases 20 beats per minute for each degree (c^0) rise in fever.

When a person is very ill, take the pulse often and write it down along with the temperature and rate of breathing.

It is important to notice changes in the pulse rate.

For example:-

- *A weak, rapid pulse can mean a state of shock.*
- *A very rapid, very slow or irregular pulse could mean heart trouble.*
- *A relatively slow pulse in person with a high fever may be a sign of typhoid.*

SECTION # 3
MANAGEMENT OF SICK PEOPLE

FEVER:-

A person gets fever when his body is attacked by very small living things called germs.

Germs live in the air, soil, water and infected animals or people. They can enter the body though;-
. the air we breath,
. unclean food and drink,
. the skin (from wounds, bites of mosquito and other insects or of dogs), or
. sexual contact with infected people.

How can people protect themselves against germs?

TO PROTECT AGAINST GERMS, PEOPLE SHOULD:-
. Eat clean fresh food
. Drink only safe or boiled water or other safe or boiled fluids
. Wash their hands after defecating
. Avoid contact with the people who have acute infections diseases
. Avoid sexual contact with people who may have venereal diseases
. Keep the surroundings of their houses and villages clean
. Protect themselves against bites of insects & animals
. Be immunized against the common infections diseases.

What should you do when a patient has a fever?

When you think a patient may have fever, take his temperature. If it is above $37.5C^0$, ask for how long the patient has had fever?

The patient has had fever for less than 24 hours and he has no other complaint.

FEVER WITH CHILLS (SUSPECT MALARIA)

Many infections can cause fever and chills including viral and urinary infections. Malaria should be suspected when the fever is high with headache and chills. The fever can be intermittent although this is not always so. Make sure by exam and history that the patient does not have other causes of fever:- pneumonia, urine infection etc.

MALARIA TREATMENT

Chloroquine 150mg

	day 1	day 2	day 3
- Adults ----------	*4*	*4*	*2*
- children 10-15yrs	*3*	*3*	*2*
- children 6-9 yrs	*2*	*2*	*1*
- children 3-5 yrs	*1*	*1*	*1/2*
- children 1-2 yrs	*1/2*	*1/2*	*1/4*

For young children (under five children) you can give Chloroquine syrup, if it is available in the stock; otherwise you can give tablets as above mentioned doses according the age.

RESPIRATORY DISEASES

Introduction:-

Adults often come to a clinic wanting pills or shots, the job of clinic staff is to carefully assess the symptoms that the patient are complaining of, decide on a diagnosis, then treat appropriately. Most adults coming the health post will not need pills or shots. A careful history and physical examination are essential.

FEVER WITHOUT COUGH (COLDS AND THE FLU)

Colds and the flu are common viral infections that may cause runny nose, cough, sore throat and sometime fever or pain in the joints. Colds and the flu almost always go away without medicine. Do not use penicillin, tetracycline or other antibiotics, as they will not help at all and may cause harm.

There are many diseases which can cause fever but the most common is a cold. The symptoms of a cold are:-

* stuffy nose,
* watery eyes,
* aches and pains,
* mild sore throat, and
* low fever.

Examine the patient to make sure there are no signs of more serious disease.

TREATMENT

- ***Give fluids as much as the patient can drink.***
- ***Reassure the condition of the patient***
- ***Aspirin for aches and pains. Avoid giving aspirin tablets to patients who may have peptic ulcer or hyperactivity of gut.***
- ***Aspirin tab.300mg***

- *Adults= 1-2 tablets 3 times a day.*
- *Children= 8-12yrs= 1tab. 3 times a day.*
- *" = 3-7 yrs= 1/2 tab. 3 times a day.*
- *" = 1-2 yrs= 1/2 tab. 3 times a day.*

This medicine will help lower fever and relieve body aches and head aches. No special diet is needed. However, fruit juice, especially orange or lemon are helpful.

PREVENTION OF COLDS.

-Getting enough sleep and eating well helps prevent colds. Eating oranges, tomatoes and other fruit containing vitamin C may also help.
- Contrary to popular belief, colds do not come from getting cold or wet. A cold is cough from others who have the injection and sneeze the virus in to the air.
- To keep from giving his cold to others the sick person should eat and sleep separately and take special care to keep far away from small babies. He should cover his nose and mouth when he coughs or sneezes.

A stuffy or runny nose can result from a cold or allergic. A lot of mucus in the nose may cause ear infection in children or sinus problems in adults.

PNEUMONIA

Pneumonia is an acute infection of the lungs. It often occurs after other RESPIRATORY illnesses such as measles, whooping cough, bronchitis, asthma or any very serious illness.

SIGNS

. Cough often with yellow, greenish, or rust-colored slightly bloody mucus
. Chest pain
. The person looks very ill
. Nasal flaring with difficult breathing
. Rapid breathing of more than 60 per minute or sometimes wheezing for children
. High fever
. Chest indrawing (retraction)

If any of this signs are present, consider the child to have severe pneumonia. If these danger signs are absent but the respiratory rate is increased above 50 per minute a pneumonia may be present but of moderate severity.

Any patient who has the above mentioned signs and symptoms should be referred to your supervisor in order to give immediate medical care.

SUPPORTIVE CARE FOR THE PATIENT WITH PNEUMONIA

We must support the child in several ways:-
- *Reduce the fever with paracetamol.*
- *Avoid extremes of heat and cold. Don't wrap the child up if the air temperature is warm and the patient particularly children has a fever. If it is cold keep the child covered.*
- *Avoid smoke.*
- *Give oral fluids if the patient is thirsty or dehydrated. Don't overhydrate in pneumonia but do give fluids if the patient wants to drink.*
- *Continue feeding during pneumonia, especially children, breast feeding.*
- *Humidity the air. This can be done by putting a jug of boiled water near the patient under cloth.*

D I A R R H E A.

WHAT IS DIARRHEA?
We can define diarrhea as when the patient outputs 4 or more watery stools per day (24 hrs), that means more than the usual output.

Infant who breast-feed output very soft stools which are not diarrhea. Diarrhea is common in children between 6 months to 2 years of age. At the same time, it is common in children who use bottle feeding, contaminated food, water and unboiled cow milk.

WHAT ARE THE MAIN PROBLEMS OF DIARRHEA?.

Diarrhea causes many problems but the main problems are severe dehydration, severe malnutrition and death.

WHAT IS THE CAUSE OF DIARRHEA?

The main causes of diarrhea are bacteria, viruses, and intestinal worms through contaminated food, water, hands, kitchen utensils or food containers. Diarrhea is also related to malnutrition.

WHY DIARRHEA IS DANGEROUS?

Diarrhea is dangerous because it may cause very severe dehydration unless the patient gets proper and timely

medical care against the dehydration.

Therefore the main problems of diarrhea are malnutrition and death. Deaths caused by diarrhea are usually when the patient loses unusual amounts of water and salts without immediate rehydration.

The patient who has diarrhea may not feel hungry. Somali mothers have the very bad habit of not feeding the children and stop the drinking, such as water, ordinary milk and breast-feeding.

We need to educate the mothers not to stop children eating and drinking while they are having diarrhea. Oral rehydration salts and feeding for the child is the best medicine to prevent dehydration. ORS can not stop the diarrhea, but it will replace the lost water and salts. If you tell the mothers that the ORS will stop the diarrhea, they will never accept your advice, so please avoid lying and misinterpretation.

HOW DIARRHEA CAUSES DEHYDRATION?

The body normally uses water and salts, so it needs to receive some through drinking and eating. It makes excretion such as defecation, urination, vomiting and sweating. When the intestines are healthy, salts and water can pass to the blood. When diarrhea is existing, intestines are not functioning properly, salts and water can not reach to blood. Any unusual water and salts can go outside of the body. This excess amount of salts and water which is going out of the body results dehydration. More vomiting and sweating can cause dehydration too.

HOW CAN WE REPLACE THE LOST FLUIDS?

The best and easiest method to replace the lost water and salts is oral rehydration salts (ORS).

How can we prepare ORS?

Usually we can find prepared ORS packets. Some packets are for different volumes of water (500-1000ml) so read the instruction on the packets carefully before your preparation.

Water should be as clean as possible. It is good to boil it, if it is not safe, then find a clean small container with cover. Measure the water according quality of ORS powder. There may be some local measure that mother can use, such as:- Tea cup and or water glass.

- 6 tea cups = 1 liter
- 3 tea cups = 500ml
- 3 aluminium water glass = 1 liter
- 1.5 aluminium water glasses = 500ml.

If the packet of ORS dissolved 1 liter of water, means 3 water glasses or 6 tea cups of water, then mix with spoon until it dissolved.

Give the patient as much solution as he/she can drink, at least one half cup of ORS for after each stool. Some children or adults vomit their oral fluids; ignore small amount of vomiting, keep giving ORS. Vomiting is often a result of dehydration and will usually go away as the patient is rehydrated with ORS.

Make sure the mothers know that ORS will not stop the diarrhea. It replace loses and keeps the patient from losing too many fluids and being severe or moderate dehydrated.

HOW CAN WE PREPARE HOME MADE SUGAR/SALT SOLUTION?

If ORS packets are not available, you can prepare it yourself with the assistance of the following instructions :- 2 pinches of granulated salt
- 4 spoonful of sugar (20gr).
- 1 liter of water (please use local measurement containers as above)

After you mix up water and sugar and salts, put the dissolved solution into a clean container and keep covered always, to avoid dust and other contaminations. Give the solution to the patient as much as he/she can drink.

NUTRITIONAL MAINTENANCE

It has been shown that there is no physiological reason for discontinuing food during a case of diarrhea and that continued nutrition is beneficial both adults and children. Continuation of feeding during illness is very important and without feeding patients can not recover at the right time. So feeding and giving ORS are most essential to mild and moderate diarrhea.

HOW CAN WE PREVENT DEHYDRATION?

Cases of diarrhea with no signs of dehydration
* Advice increasing fluid intake (water, soup, juice and rice water).
* Encourage the use of home made sugar/salt solution.

* Continue breast-feeding and normal diet for children.
* Worn mother to bring child back, if the condition gets worse.

DANGER SIGNS OF DIARRHEA

* Blood in stool or mucus.
* Fever or convulsion.
* Vomiting.
* Rapid breathing.
* Unable to drink.
* Unconscious.

If the patient has some or all of the above mentioned signs, please refer to your supervisor or nearest health service.

WORMS AND OTHER INTESTINAL PARASITES

There are many types of worms and other tiny animals (parasites) that live in people's intestines and cause diseases. Those which are larger are sometimes seen in the stools (feces). They are: 1- Round worm (Ascaris) 2- Whipworm 3- Threadworm. 4- Hookworm (pineworm) 5- Tapeworm.
The only worms commonly seen in the stools are roundworm, threadworms, tapeworm, hookworm and whipworms may be present in the gut in large numbers without ever being seen in the stools.

ROUND WORM (ASCARIS)

This worm is one of the most common intestinal parasites in Somalia. It is 20-30cm long, color pink or white.

How they spread?
Faeces to mouth, through lack of cleanness, the roundworm eggs pass from one person's stool to another person's mouth.

EFFECT ON HEALTH

Once the eggs are swallowed, young worms enter the bloodstream; this may cause general itching. The young worms then travel to the lungs, sometimes causing a dry cough or severe respiratory problems.

Many roundworms in the intestines may cause discomfort in indigestion and weakness. Children with many roundworms often have very large, swollen bellies. Roundworms may cause asthma, fits or a dangerous obserous obstruction or blockage in the gut. When the child has a fever, the worms sometimes come out in the stools or crawl out through the

mouth or nose, occasionally they crawl into the airway and cause gagging.

PREVENTION

Use latrines, wash hands after defecation, wash hands before and after eating or handling food, protect food from flies and other contaminations.

TREATMENT

Mebendazole tablet 100mg -- for roundworm (ascaris), whipworm (trichuris) and hookworm.
One tablet twice a day (morning and evening) for three days for adults and children too.

Warning

Do not give mebendazole to pregnant women or children under two years.

FOR HEALTH EDUCATION

- Wash the children's hands and anal area after each defecation and before and after meal time.
- Cut fingernails and keep short always.
- Change his clothes and bathe him often.
- Teach the child to use shoes, particularly when he using the latrine.
- Teach the parents and other adults the importance of cleanness as the best prevention for worms.
- Teach the community to build and use latrines. Do not let children go barefoot.

MALNUTRITION.

1- Protein energy malnutrition (PEM)

What is the most important health problems when we were talking about nutrition. Severe protein energy can present several forms.
- Nutritional marasmas is characterized by a severe wasting away of fat and muscle (skin and bone). It is the most common form of nutritional deficiency.
- Marasmas + kwashiorkor is a combination of wasting and oedema.

2- Mineral and vitamins deficiencies are also important forms of malnutrition.

- Severe anaemia is common and requires a daily intake of iron for an extended period of time.
- Vitamin A deficiency, the most important vitamin deficiency, is characterized by night blindness and eye problems which may lead to permanent or total blindness; the severe forms are usually associated with protein - energy malnutrition.

Mineral and vitamin deficiencies must be identified and the individual affected or at risk treated by administration of the missing nutrient.

PROTEIN - ENERGY MALNUTRITION.

Protein - energy malnutrition is a problem in many developing countries including Somalia. Most commonly it affects children between the age of 6 months and 5 years.

Chronic protein-energy malnutrition has many short and long term physical and mental effects, including growth retardation, a malnourished child being lighter and shorter than a better fed child of the same age.

MARASMAS

Nutritional marasmas results from prolonged starvation. The main sign is a severe lose of fat and muscle. The child is very thin (skin and bone). The cause is severe starvation or shortage of food.

SIGNS

. Thin muscle, thin fat, with "old man's" face.
. There is no oedema.
. The child usually crying most of the time.
. Pink and thin hair and very under weight.
. Dehydration forms.

KWASHIORKOR

The sign is oedema, usually starting at the lower part of the body. In more advanced cases oedema appears at arms, legs and face.

SIGNS

. Hair changes, loss of hair color.
. No hunger, difficult to feed them.
. Oedema at face, legs and arms.
. Sometimes enlargement of the liver.

. Looks like over rehydrated patient.
. Thin muscle.

Management

Several principles should be followed:-
- Resuscitation for dehydration.
- Nutrition therapy if possible.
- Diet- in the initial therapy of severe protein-energy malnutrition, the diet should be liquid or semisolid and high in calories, protein and other nutrients.
- Management of infections such as malaria, TB and intestinal parasites, all these infections should be treated as soon as possible.

SICKNESS CAUSED BY NOT EATING WELL

Good food is needed for a person to grow well, work hard and stay healthy. Many common sicknesses come from not eating enough of the foods the body needs.

A person who is weak or sick because he does not eat the right foods or does not eat enough is said to be poorly nourished or malnourished. He suffers from malnutrition.

Poor nutrition is the most common cause of the following health problems:

- Failure of a child to grow or gain weight normally.
- Slowness in walking, talking or thinking.
- Thin arms and legs.
- Sadness; lack of energy.
- Swelling of feet, face and hands, often with sore or marks on the skin.
- Thinning or loosing or hair or loss of its color or shine.
- Dryness of eyes, or blindness.
- Weakness and tiredness.
- Loss of appetite.
- Anemia.
- Sores in the corners of the mouth.
- Painful or sore tongue.

WHAT IT MEANS TO EAT RIGHT

To eat right means to eat enough. But it also means to eat a balance of the different foods the body needs. To be healthy a person needs to eat enough foods from each of the food groups just described, that is enough energy foods, and enough body building and protective foods. If you ask people what do you usually eat? they tell you only their main food or staple.

EATING RIGHT HELPS THE BODY RESIST SICKNESS

Not eating well may be the direct causes of the health problems just listed. But in addition, poor nutrition weakens the body's ability to resist all kinds of diseases, especially infections.
- Poorly nourished children are much more likely to get severe diarrhea and to die from it, than are children who are well nourished.
- Measles is especially dangerous in children who are malnourished.
- Tuberculosis is more common and gets worse more rapidly in those who are malnourished.
- Minor problems like a common cold are often worse and last longer in persons who are poorly nourished.

EATING RIGHT HELPS THE SICK GET WELL

Not only does good food helps prevent diseases, it also helps the sick body fight diseases and become well again; so when a person is sick, nutrition food is important.

Unfortunately some mothers stop giving a child nutritious foods when he is sick or he has diarrhea. So the child becomes weaker, cannot fight off the illness and may die. Sick children need nutritious food. If a sick child will not eat, encourage the mother in order to encourage the child.

Often the signs of poor nutrition first appear when a person has some other sickness. For example a child who has had diarrhea for several days may develop swollen hands and feet and a swollen face, mouth and skin sores. these are signs of malnutrition. The child needs more good food.

Some of the mothers shows sign of Malnutrition. She has not eaten enough nutritious food such as :- **Beans, meat, fish, eggs, fruits, and dark green vegetables.**

Because she was not eating well, her breasts did not produce milk for her baby as a result, he suffers from extreme malnutrition. He is may thin with a swollen abdomen, thin hair and probably he will be mentally slow (retarded) for the rest of the life.

THE FOLLOWING IS REQUIRED FOR EVERY BODY

1- BODY BUILDING FOOD: - Meat, milk,, sea food, fish, eggs & chicken.

2- ENERGY FOODS OR CARBOHYDRATES:- Maize, cereals (rice, wheat and sorghum), potatoes, sugar, honey and banana.

3- **FATS AND OILS:-** Cooking oil, meat, fat and butter, foods with some oil or butter, groundnuts (peanuts) sesame, coconuts and milk.

4- **PROTECTIVE FOODS (VITAMINS & MINERALS):-** Meat especially liver, chicken, eggs, fish, milk, vegetables and fruits.

ANAEMIA

A person with **Anaemia** has thin blood. This happens when blood is lost or destroyed faster than his body can replace it. Blood loss from large wounds, bleeding ulcers or dysentery can cause **Anaemia.**

A diet lacking meat, dark green leafy vegetables and other foods rich in iron can cause ANAEMIA or make it worse.

In children ANAEMIA can come from not eating foods rich in iron. It can also come from breastfeeding or bottle-feeding after 6 months without giving other foods too. Other common causes of anaemia including malaria, worms and chronic infection such as diarrhea.

SIGNS OF ANAEMIA

- Pale skin particularly face.
- Pale insides of eyelids.
- White fingernails.
- Weakness and fatigue.
- If the anaemia very severe, face and feet may be swollen, the heartbeat rapid and the person may have shortness of breath.
- Children and women who like to eat dirt are usually anaemic.

TREATMENT AND PREVENTION OF ANEMIA

- Eat foods rich in iron, such as meat, fish, chicken and eggs. Liver is especially high, dark green vegetable, beans and lentils also have some iron.
- If foods rich in iron are hard to get, or if the anemia is severe, the person should take iron tablets - 200mg - 1x3 daily; duration depending on the severity of the patient.

This is especially important for pregnant women who are anemic, for nearly all cases of anemia, ferrous sulfate pills are much better than liver extract or vit. B_{12}. As a general rule, iron should be given by mouth not injected, because iron injections are dangerous.

- Anemia can be caused by dysentery (diarrhea with blood) hookworm, malaria or another diseases. This should be treated.
- If the anemia is severe or does not get better, seek medical help. This is especially important for pregnant woman.

Many women are anemic. This is because they do not eat enough foods rich in iron to replace the blood they loose during menstrual periods or with childbirth. Anemic women can run a greater risk of miscarriage and of dangerous bleeding in childbirth. For this reason it is very important that woman eat beans, dark green vegetables and as much meat, chicken and eggs as possible, especially during pregnancy. Family planning allows 2-3 years between pregnancies lets the woman regain her strength and make new blood.

EYE PROBLEMS AND DISEASES

Blindness remains one of the major disabilities affecting man. The majority of blind people live in 3rd World countries. In the developed countries, blindness is caused by conditions that are, by and large, poorly understood and for which preventive treatment is not satisfactorily. In many ways, the rate of blindness in developed countries represents an unavailability of technology and forms of treatment. Millions of people in the developing countries are blinded by diseases that are either preventable or treatable.

There are a number of specific conditions that involve only the eye. These conditions include:- Conjunctivitis, trachoma and other important diseases.

DANGER SIGNS

The eyes are delicate and need good care. Get medical help fast when any of the following danger signs occurs:-

1- Any wound that cuts or ruptures the eyeball.
2- A painful, grayish spot on the cornea with redness around the cornea ulcer.
3- Great pain inside the eye.
4- If vision begins to fail in one or both eyes.
5- Any eye infection or inflammation that does not get better after 5 or 6 days of treatment with an antibiotic eye ointment.

INJURIES TO THE EYE

All injuries to the eyeball must be considered dangers that may cause blindness. Even a small cut on the cornea may get infected and harm vision, if not cared for correctly.
If a wound to the eyeball is so deep that it reaches the black layer behind the outer white layer, this is especially dangerous. Refer such patients immediately to the supervisor or nearest health facility.

TREATMENT

If the person still sees well with the injured eye, put an antibiotic eye ointment "Tetracycline eye ointment", 3 or 1%, on it. If the eye is not better in a day refer to your supervisor. If the person cannot see well with the injured eye, if the wound is deep , or if there is blood inside the eye, cover the eye with a clean bandage and refer to your supervisor for further diagnosis and treatment.

Do not try to remove thorns or other foreign objects in the injured eye. Refer immediately to your health supervisor.

RED, PAINFUL EYES " CONJUNCTIVITIS"

This infection causes redness, pus and mild burning in one or both eyes; lids often stick together during sleep.

TREATMENT

First clean pus from the eye with a clean water and soap, then put in antibiotic eye ointment of tetracycline. Pull down the lower eye lid and put the ointment inside; ointment put outside the eye does no good.

Early and compete treatment of eye disease helps prevent its spread to another. All people living with someone who has eye problem, especially children, should be referred immediately to your supervisor.

EARACHE AND EAR INFECTION

Ear infections are common in small children. The infection often begins after a few days with a cold, or stuffy or plugged nose. The fever may raise and the child often cries or rubs the side of his head. Sometimes pus can be seen in the ear. Small children often have diarrhea also, so when a child has diarrhea and fever, be sure to check his ear.

TREATMENT

It is important to treat ear infection early. Give an antibiotic like penicillin v tab. 250 or 125mg
- Adults 250mg 1 tab.x 4 times a day.
- Child. 125mg 1 tab.x 4 times a day.

Continue the treatment for five days.

Cotrimoxazole tab. 480mg refer Drug formula at the back of this manual. Carefully clean the pus out of the ear with cotton, but do not put plug cotton or anything else in the ear.
Children with pus from an ear should bathe regularly but should not swim for at least two weeks after they are well.

PREVENTION

Teach children not to wipe but to blow their noses when they have a cold. Do not bottle feed babies or if you do, do not let a baby feed lying on his back, as the milk can go up his nose and lead to an ear infection.

BLOOD IN URINE (SHISTOSOMAIASIS)

This infection, caused by a kind of worm that gets into the bloodstream, occurs only in certain parts of the world. It is common many parts of Somalia, particularly the areas close to the river banks.

SIGNS

* The most common sign is blood in the urine, especially when passing the last drops of urine.
* Pain may occur in the lower part of the belly and between the 2 legs, it is usually worst at the end of urinating.
* Low fever and itching may occur.
* After months or years without treatment the kidney may be badly damaged, causing general swelling and death.

PREVENTION

To prevent shistosomaiasis with program or without:-
* Everyone should use latrine for at least urination.
* Never urinate in or near water source.
* Treat the infected cases, meanwhile give proper health education.
* Not to swim in water pools and lakes.

REFERRAL CASES

Refer all the suspected cases to your supervisor in order to give proper and immediate treatment for the individual cases

BURNS

Minor burns (1st stage)
To help the pain and lessen damage caused by a minor burn, put the burned part in cold water at once. No other treatment is needed. Give Aspirin for pain.

BURNS THAT CAUSES BLISTERS (2ND DEGREE)

Do not break blisters.
If the blisters are broken, wash gently with disinfectant and put gentian violet on the burned area. Then put gauze on it. It is very important to keep the burn as clean as possible. Protect it from dirt, dust and flies. If signs of infection appear -- pus, bad smell, fever or swollen lymph nodes -- apply compresses of warm salt water (1 teaspoon salt to 1 liter of water) 3 times a day. Boil both the water and salt before use. With great care, remove the dead skin. In severe cases, consider taking an antibiotics such as penicillin.

DEEP BURNS (3RD DEGREE)

These destroy the skin and expose rows of charred flesh; these are always serious, as are any burns that cover large areas of the body. Take the person to the health center at once; in the meantime wrap the burned part with a very clean bandage or sterile gauze. Then refer or consult with your supervisor.

PREVENTION

- Most burns can be prevented. Take special care with children.
- Do not let small babies go near a fire.
- Keep lamps and matches out of reach of children.

CUTS, SCRAPES AND SMALL WOUNDS

Cleanliness is very important in preventing infections and helping infections to heal.

Treating a wound

First, wash your hands very well with soap and water. Then wash the wound well with soap and boiled water. When cleaning the wound; be careful to clean out all the dirt. Lift up and clean under any flaps of skin; you can use tweezers (forceps) but always boil them first to be sure they are sterile.

Never put animal or human feces or mud on a wound as these can cause dangerous infections such as Tetanus.

LARGE CUTS AND THEIR MANAGEMENT

Close a deep cut only if all the following are true:-
- the cut less than 12 hrs old,
- the cut is very clean, and
- it is impossible to get a health worker to clean it the same day.

Before closing the cut, wash it very well with water and disinfectant. Be absolutely sure that no dirt is left hidden in the cut.

STITCHES OR SUTURE WITH THREAD

To find if a cut needs stitches see if the edges of the skin come together by themselves. If they do, usually no stitches are needed.

To stitch a wound:-
- Get needle with sterile catgut.
- Wash or clean the wound with disinfectant.
- Wash your hands with soap and water.
- Sew the wound: make the first stitch in the middle of the cut and tie it closed; make enough other stitches to close the whole cut.
- Leave the stitches in place for 6 to 12 days:
    - on the face 6 days
    - on the body 8 days
    - on the hand or foot 12 days
- Then remove the stitches. Cut the thread on one side of the knot and pull the knot until the thread comes out.

WARNING

Only close wounds that are very clean and less than 12 hrs old. Old, dirty or infected wounds must be left open. Bites from people, dogs and other animals should also be left open. Closing these can cause dangerous infections.

If the wound that has been closed shows any signs of infection, remove stitches immediately and leave the wound

open. Ask help from your supervisor or any other experienced medical person.

BANDAGES

Bandages are used to help keep wounds clean. For this reason, bandages or pieces of clean cloth used to cover wounds must always be clean themselves. Cloths used for bandages should be washed and then dried with in the sun or by ironing.

If possible, cover the wound with sterile gauze pad before bandaging. These pads are often sold in sealed envelopes in local or private pharmacies.

INFECTED WOUNDS

A wound is infected if :-
- it becomes red, hot, swollen and painful,
- it has pus, or
- it begins to smell bad.

When infection spreads to the other parts of body:-
- it causes fever,
- there will be redness on the infected area, or
- lymph nodes becomes swollen and tender.

TREATMENT OF THE INFECTED WOUNDS

Keep the infected part elevated above the rest of the body.
Give penicillin v tab. 250mg as following :-
- Adults = 1 x 3 daily for 5 days.
- Children= 6-12 yrs= 1/2 x 3 for 5 days
  " " " => 6 yrs = 1/4 x 3 for 5 days
- Clean the wound with available disinfectant and close it.

SKIN PROBLEMS

Some skin problems are caused by disease or irritation that affected the skin, malnutrition, lack of hygiene, measles and others.

In this session we will learn the most common skin problems are scabies and abscesses.

GENERAL RULES FOR TREATMENT OF SKIN PROBLEMS

Although many skin problems need specific treatment, there are a few general measures that often help.

RULE # 1

If the affected area is hot and painful, treat it with heat
- put hot, moist cloths on it (hot compresses).

RULE # 2

If the affected area itches, treat it with cold. Put cool and wet cloths on it (cold compresses).

RULE # 3

If the skin shows signs of serious infection such as :-
- Inflammation (dark skin around the affected areas)
- Swelling
- Pain
- Heat (it feels hot)
- Pus

Do the following:-

- Keep the affected part still and elevate it (put it higher than the rest of the body)
- Apply hot cloths
- If the infection is severe or the person has a fever give antibiotics (penicillin or cotrimoxazole) than refer to immediately to your supervisor.

DANGER SIGNS OF SKIN INCLUDE

Swollen lymph nodes, a dark line above infected area or a bad smell. If these do not get better with treatment - use an antibiotic and seek medical help quickly.

INSTRUCTION FOR USING HOT COMPRESSES (HOT SOAKS)

1- Boil the water and allow it to cool until you can just hold your hand in it.
2- Fold a clean cloth so it is slightly larger than the area you want to treat, wet the cloth in the hot water and squeeze out the extra water.
3- Put the cloth over the affected skin.
4- Cover the cloth with sheet of thin plastic.
5- Wrap it with a towel or bandage to hold in the heat.
6- Keep the affected part raised.
7- When the cloth starts to cool, put it back in the hot water and repeat.

SCABIES

Scabies is especially common in children. It causes very itchy little bumps that can appear all over the body, but are most common:
- between the fingers
- on the wrist
- around the wrists, or

- on the genital area (itchy sores on the penis and testicles both adults and children).

Scabies is caused by little animals similar to tiny ticks which makes tunnels under the skin. It is spread by touching the effected skin or by cloths and bedding. Scratching can cause infection, producing swollen sores with pus at the infected areas.

TREATMENT OF SCABIES.

- Benzol Benzoate lotion massage all the body except the face and head.
- Use for adults and older children without water.
- Use for young children with water; follow the treatment guideline at the end of this manual.

HEALTH EDUCATION

- If one person has scabies, everyone in his family should came to the clinic for treatment, even if they don't have it.
- Personal cleanliness is first importance. Bathe and change clothes daily. Wash all the clothes and bed sheets, then hang them in the sun.
- Keep the fingernails short.
- If the case is severe, refer to your supervisor or nearest health service.

ABSCESSES

An abscess is an infection that forms a sac of pus under the skin. Sometimes it results from a puncture wound or an injection given with a dirty needle or wrong side. The area is swollen, hot, painful and may appear reddish on light skin. Although the abscess may break after several days, breaking through the surface and releasing the pus, with relief of pain, much quicker relief can be had by having the abscess cut open. Get medical help if possible.

TREATMENT

Put hot compresses over the boil several times a day
- let the abscess break itself. After it breaks, continue applying hot compresses. Allow the pus to drain, but never press, since this may cause infection to spread to other parts of the body.
- Give the patient with abscess penicillin v tablets follow the treatment guideline.
- Avoid draining the pus with fingers or dirty clothes which can cause severe infections.

RECORD KEEPING

Health Posts should have a register to record all the essential information for each patient. On this register is recorded all the following information:-

- Date - History - Physical examination
- Treatment - Advices - Age - Sex

This record should be kept at the clinic for reference for statistical purposes, monthly reports or any other reference (like health surveys).

The first principle to consider when developing a recording system is to collect only the kind of information which is reasonable, accurate and useful.

please shown the trainees health post register and make sure if they can do it properly. Let them practice for several minutes for every individual. Otherwise you can't sure who can and cannot use it.

IN GENERAL PEOPLE SHOULD BE SEEN IN THE SAME ORDER THEY ARRIVE AT THE HEALTH POST IN ORDER TO AVOID COMPLAINTS OF FAVORITISM. BUT THE STAFF SHOULD CHECK THE LINE OF WAITING, SO THAT NO SERIOUSLY ILL PATIENT HAS TO WAIT A FOR LONG TIME BEFORE HE/SHE IS SEEN.

SAVE THE CHILDREN US IN SOMALIA
DRUG FORMULA TABLE FOR HEALTH POSTS

DRUGS	1–5YRS	5–15YRS	>15YRS	INDICATIONS
Aspirin tab. 300–500mg	1/2X2X3	1X2X3	1X3X3	Pain,fever, cold & inflamation
Paracetamol tab. 100mg	1x3x2	1x3x2		Pain, fever and Cold
Mebendazole tab. 100mg	1x2x3	1x2x3	1x2x3	worms
Metranidazole tab. 250mg	1/2x3x7	1x3x7	3x3xx7	Amemiasis and gardia
Co–otranioxazole tab. 480mg		1x2x5	2x2x5	Otitis media, bloody diarrhea, pneumoni
Chloroquine tab 150mg base		2, 2 and 1	4,4 and 2	Malaria & fever suspect Malaria
Ferro/folic acid 200mg		1x3x7	1x3x7	Anemia
Vitamin C tab. 50mg		1x3x7	1x3x7	Anemia and scurvy
Aluminium hy. 500mg		1x2x7	1x3x7	Epigastric pain, peptic ulcer
Tetracycline eye oint.1%	1x2x7	1x3x7	1x3x7	Conjuctivitis, trachoma, eye trauma
Benzyl Benzuate lotion	use on skin only, keep away from the eyes. Dilute for the children			SCABIES
Benzonic acid ointment 500gr	use on infected area			Fungus and eczema
Gentain violet powder				wounds
ORS	500–1200ml	1200–2200ml	2200–4000ml	watery/bloody diarrhea & dehydration
Pencillin v tab. 250mg	1/2x2x7	1x2x7	2x2x7	skin infection, pneumonia, sore throat

BEST AVAILABLE COPY

Annex 8 -- UNICEF Health Post Renewable Kit contents

Acetylsalicylic Acid tablets (300 mg)	1,000
Aluminum Hydroxide tablets (500 mg)	500
Ascorbic Acid (50 mg)	1,000
Chloroquine tablets (150 mg)	2,000
Ferrous Salt + Folic Acid tablets (6+0.25 mg)	2,000
Mebendazole tablets (100 mg)	600
Metronidazole tablets (250 mg)	400
Oral Rehydration Salt sachets (for 1 liter)	300
Paracetamol tablets (100 mg)	1,000
Phenoxymethylpenicillin tablets (250 mg)	1,000
Sulfamethoxazole + Trimethoprim tablets (400 + 80 mg)	1,500
Benzyl Benzoate Saponated Solution 90% (1 liter)	2
Chlorhexidine Concentrated Solution 20% (100 ml)	3
Gentian Violet powder (25 g)	3
Tetracycline Eye Ointment 1% (5 g)	50
High-potency Retinol capsules (200,000 IU)	1,000
Non-sterile Gauze Bandage (75mm x 9m)	30
Non-sterile Absorbent Gauze 200mm x 6m	8
Non-adhesive Elastic Bandage (75mm x 5m)	10
Sterile 12-ply Gauze-pad (76 x 76mm; pkt of 20)	5
Non-sterile Absorbent Cotton Wool (500 g)	3
Surgical Adhesive Plaster Tape (25mm x 10m)	20
Non-sterile Latex Examination Gloves (medium; box)	1
Toilet soap (113 g bar)	36
Blue Ball-point Pen	8
Ruled Wirebound Notebook (130 x 200mm; 50 sheets)	4
Plain Note Pad (105 x 148mm; 100 leaves)	10

Annex 9

SAVE THE CHILDREN FEDERATION / USA

QORIOLEY IMPACT AREA

AGREEMENT

Date __/__/__

This agreement is binding between SCF/USA and the community of district/village:

_____ / _____ .

The agreement factors are listed below:

1. SCF/USA will construct or renovate the health post, as needed by the community.

2. SCF/USA will supply equipment and drugs to be used by the health post, to provide the community with a health facility.

3. SCF/USA will provide training as required for CHWs from the community, who will work at the health post.

4. The district/village committee and elders will guarantee the security of the health post and drugs.

5. The district/village committee and elders guarantee that they will pay incentives to the CHWs in the community. The CHWs also promise to work as volunteers for their communities.

SCF/USA Representative

_____

Names of district / village committee / elders

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Annex 10

CPHSS -- Morbidity and Mortality Surveillance Report

Save the Children / US -- Lower Shabelle Region

Collection date:

Primary Sypmtoms/ Diagnosis	<5 yrs	5-14 yrs	>15 yrs	TOTAL
1. Diarrhea (not cholera or dysentery)				
2. Suspected Cholera				
3. Bloody Diarrhea				
4. Moderate / Severe ARI (pneumonia)				
5. Fevers and Chills / Suspected Malaria				
6. Measles				
7. Suspected Meningitis				
8. Suspected Pulmonary TB				
9. Suspected Yellow Fever				
10. Jaundice (excluding yellow fever)				
11. Other / unknown				
TOTAL VISITS				