

# DETAILED IMPLEMENTATION PLAN

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## Child Survival XI

(Project #FAO-0500-A-00-5025-00)

**Chipata and Chadiza Districts  
Eastern Province  
Zambia  
1995-1999**

Submitted to:  
**United States Agency for International Development**  
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## TABLE OF CONTENTS

page

Acronyms .....	4
Section A. Field Project Summary .....	5
Section B. Project Goals and Objectives .....	6
Section C. Project Location .....	12
C.1 Location Maps .....	12
C.2 Location Description .....	12
Section D. Project Design .....	13
D.1 Summary of Overall Project Design .....	13
D.2 Collaboration and Formal Agreements .....	15
D.3 Technical Assistance .....	15
D.4 Detailed Plans by Intervention .....	15
D.4.a Immunization .....	15
D.4.b Nutritional Improvement .....	18
D.4.c Control of Vitamin A Deficiencies .....	23
D.4.d Diarrhea Case Management .....	24
D.4.e Pneumonia Case Management .....	26
D.4.f Malaria Control .....	26
D.4.g Maternal and Newborn Care .....	26
D.4.h Family Planning .....	29
D.4.i HIV/AIDS prevention .....	31
D.5 Schedule of Field Project Activities .....	34
Section E. Human Resources .....	35
E.1 Organizational Chart .....	35
E.2 Table D: Training and Supervision Summary .....	35
E.3 Training and Supervision Plan .....	37
E.4 Community Health Workers .....	37
E.5 Community Committees and Groups .....	37
E.6 Role of Country Nationals .....	37
E.7 Role of Headquarters Staff .....	37
Section F. Project Monitoring/Health Information System .....	38
F.1 HIS Plan .....	38
F.2 Data Variables .....	38
F.3 Data Analysis and Use .....	38
F.4 Other HIS Issues .....	38
Section G. Budget .....	39
Section H. Sustainability Strategy .....	44
H.1 Sustainability Goals, Objectives, and Activities .....	44
H.2 Sustainability Plan .....	45
H.3 Community Involvement .....	45
H.4 Phase-over Plan .....	45
H.5 Cost Recovery .....	46

## ATTACHMENTS

- Annex I. Response to Proposal Review Comments
- Annex II. Project and Area Maps
- Annex III. Multi-Country Budget Summary
- Annex IV. Health Information System Forms
- Annex V. Ministry of Health Guidelines/Protocols
- Annex VI. Community Health Worker Training Manual
- Annex VII. Traditional Birth Attendant Training Manual
- Annex VIII. Letters of Support
- Annex IX. Job Descriptions
- Annex X. Resumes
- Annex XI. Key health messages for each intervention. (Taken from 'Facts for Life', a UNICEF publication 1993)
- Annex XII. Organizational Chart

## ACRONYMS

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ADRA	Adventist Development & Relief Agency	MOA	Ministry of Agroculture
AIDS	Acquired Immune Deficiency Syndrome	MOE	Ministry of Education
ALRI	Acute Lower Respiratory Infection	MOH	Ministry of Health
BP	Blood Pressure	MPH	Masters in Public Health (degree)
CBD	Community Based Distributor	NG	Naso Gastric
CMD	Case Management of Diarrhea	NGO	Non Governmental Organization
CHW	Community Health Worker	OPV	Oral Polio Vaccine
CS	Child Survival	ORS	Oral Rehydration Salt
CSSP	Child Survival Support Project	ORT	Oral Rehydration Therapy
DCM	Diarrheal Case Management	PHC	Primary Health Care
DIP	Detailed Implementation Plan	PIE	Planning, Implementation and Evaluation
DPT	Diphtheria, Pertussis, Tetanus (triple vaccine)	PVO	Private Voluntary Organization
DMO	District Medical Officer	QA	Quality Assurance
EOP	End of Project	RHC	Road to Health Chart
EPI	Expanded Program on Immunization	RN	Registered Nurse
FP	Family Planning	SCM	Standard Case Management
GM	Growth Monitoring	SD	Standard Deviation
GOZ	Government of Zambia	SED	Small Enterprise Development
HC	Health Center	SM	Safe Motherhood
HEPS	High Energy Protein Supplement	STD	Sexually Transmitted Diseases
HIS	Health Information System	TA	Technical Assistance
HIV	Human Immunodeficiency Virus	TBA	Traditional Birth Attendant
HQ	Headquarters	TOT	Training of Trainers
IEC	Information, Education, Communication	TT	Tetanus Toxoid
IMR	Infant Mortality Rate	UCI	Universal Childhood Immunization
IUD	Intra Uterine Device	UNICEF	United Nations Children's Fund
IV	Intra-Venus	USAID	United States Agency for International Development
JHU	John Hopkins University	UTI	Urinary Tract Infection
KPC	Knowledge, Practice and Coverage	VHC	Village Health Committee
LBW	Low Birth Weight	WCBA	Women of Child Bearing Age
MCH	Mother and Child Health	WHO	World Health Organization
MD	Medical Doctor		

**Section A. FIELD PROJECT SUMMARY**

**DIP Table A: Field Project Summary**

Cooperative Agreement No: #FAO-0500-A-00-5025-00

Project Duration (mm/dd/yy):

Start Date - October 1, 1995

Estimated Completion Date - September 30, 1999

1. Percent of total USAID contribution by intervention

Intervention	Percent of Total Project Effort (%)	Percent of Total USAID Funds in US \$
Immunization	15	\$134,991
Diarrhea Case Management	15	\$134,991
Nutrition/Vit A/GM	25	\$224,986
Micro nutrients		
Pneumonia Case Management		
Maternal Care/FP	25	\$224,986
Malaria Prevention & Management		
HIV/AIDS Prevention	20	\$179,988
Total	100%	\$899,942

2. Size of the Potential Beneficiary Population

Current Population within Each Age Group	Number of Potential Beneficiaries
Infants, 0-11 months	4,967
Children, 12-23 months	4,166
Children, 24-59 months	14,422
Children, 60-71 months	4,807
Females, 15-49 years	28,630
Total Potential Beneficiaries per Year	56,992

**Section B Project Goals and Objectives**

**DIP Table B: Project Goals and Objectives**

*Project Goals:* To improve the health of mothers and children in rural Chipata District and five contiguous wards of Chadiza District

(1) Project Objective	(2) Measurement Method for Objectives	(3) Major Planned Inputs	(4) Outputs	(5) Measurement Method for Outputs
<b>IMMUNIZATION (15%)</b>				
<p>Increase the percent of children 12-23 months of age who are fully immunized from 77.8% to 85%.</p> <p>Decrease the overall immunization dropout rate from 12.2% to 8%.</p> <p>Assess, improve, and monitor the cold chain.</p>	<p>Percent of children 12-23 months who received DPT1. [Survey]</p> <p>Percent of children 12-23 months who received DPT3. [Survey]</p> <p>Percent of children 12-23 months who received measles vaccine. [Survey]</p> <p>Percent change between DPT1 and DPT doses for children 12-23 months. [Survey]</p> <p>Change in number of working refrigerators.</p> <p>Temperatures of vaccines at all stages of cold chain. [Observation; HC records, Daily cold chain temperature monitoring report]</p>	<ol style="list-style-type: none"> <li>1. Training for 100 new CHWs.</li> <li>2. Refresher course for existing CHWs.</li> <li>3. Training for 50 new TBAs.</li> <li>4. Refresher course for 35 existing TBAs.</li> <li>5. Monitor vaccine accessibility.</li> <li>6. Train HC staff in Quality Assurance of cold chain.</li> <li>7. Monitor cold chain.</li> <li>8. Seek funding to replace broken refrigerators.</li> <li>9. Collaborate with MOH in disease surveillance .</li> </ol>	<ol style="list-style-type: none"> <li>1. 100 CHWs trained.</li> <li>2. 50 CHWs retrained.</li> <li>3. 50 TBAs trained.</li> <li>4. 35 TBAs retrained.</li> <li>5. Supervision of outreach clinics for accessibility coverage.</li> <li>6. Staff at 14 health centers. trained in Quality Assurance of cold chain.</li> <li>7. Supervision of cold chain monitoring.</li> <li>8. Proposals written for funding for refrigerators.</li> <li>9. Regular monthly meetings with MOH to discuss disease surveillance</li> </ol>	<ol style="list-style-type: none"> <li>1. Training Report.</li> <li>2. Training Report.</li> <li>3. Training Report.</li> <li>4. Training Report.</li> <li>5. Monthly Supervision Report.</li> <li>6. Training Report.</li> <li>7. Monthly Supervision Report (Daily cold chain temperature monitoring report).</li> <li>8. Observation.</li> <li>9. Quarterly Activity Reports.</li> </ol>

(1) Project Objective	(2) Measurement Method for Objectives	(3) Major Planned Inputs	(4) Outputs	(5) Measurement Method for Outputs
<b>NUTRITION/Vitamin A/GM (20%)</b>				
<p>Increase the percent of children less than four months of age who are being exclusively breastfed from 2.2% to 20%.</p> <p>Increase the percent of children less than 24 months of age who were breastfed within the first 8 (eight) hours after birth from 77% to 87%.</p> <p>Increase the percent of children between 20-24 months still being breastfed from 60.5% to 70%.</p> <p>Increase the percent of mothers with infants under 24 months of age who know that solid/semi-solid food should be given from four months onward from 96.2% to 100%.</p> <p>Increase the percent of mothers with &lt;24 month infants with a growth-monitoring card indicating the child has been weighed in the preceding four months from 68.3% to 80%.</p> <p>Decrease the percent of children less than 24 months old who are underweight for age from 31% in Chadiza District to 20% and from 26% to 20% in Chipata South . (Note: A complete anthropometric survey report will be submitted to USAID at a later date)</p> <p>Increase the percent of women who ate more food than usual during the last pregnancy from 32.4% to 55%</p> <p>Increase the percent of women with kitchen gardens from 69.4% to 80%.</p>	<p>Percent of children less than four months of age who are being exclusively breastfed. [Survey]</p> <p>Percent of children less than 24 months of age who were breastfed within the first 8 (eight) hours after birth. [Survey]</p> <p>Percent of children between 20-24 months still being breastfed. [Survey]</p> <p>Percent of mothers with infants under 24 months of age who know that solid/semi-solid food should be given from four months onward. [Survey]</p> <p>Percent of mothers with infants under 24 months of age who have a growth monitoring card and have been weighed in the preceding four months. [Survey]</p> <p>Percent of children underweight for age. [Health Center data.]</p> <p>Percent of women with kitchen gardens. [Survey]</p>	<ol style="list-style-type: none"> <li>1. Training for 100 new CHWs.</li> <li>2. Refresher course for existing CHWs.</li> <li>3. Training for 50 new TBAs.</li> <li>4. Refresher course for 35 existing TBAs.</li> <li>5. Community thought leaders (elders, VHCs, teachers, religious leaders, traditional healers, leaders of youth and women's groups) trained in key messages.</li> <li>6. Child-to-child leaders trained in peer education.</li> <li>7. Key messages to children through Child-to-child leaders.</li> <li>8. Key messages to children through peer education.</li> <li>9. Supervision follow-up.</li> <li>10. Ethnographic research to determine why many children are not fed properly.</li> <li>11. Design teaching/learning materials and strategies based on results of research..</li> </ol>	<ol style="list-style-type: none"> <li>1. 100 CHWs trained.</li> <li>2. 50 CHWs retrained.</li> <li>3. 50 TBAs trained.</li> <li>4. 35 TBAs retrained.</li> <li>5. 1000 community leaders trained.</li> <li>6. 100 Child-to-child leaders trained and supervised.</li> <li>7. 50 Child-to-child leaders deliver at least one key message monthly during academic year.</li> <li>8. 1000 children conduct peer education .</li> <li>9. Monthly meetings with 150 CHWs; quarterly supervision by HC/project staff.</li> <li>10. Ethnographic research conducted to determine why many children are not fed properly.</li> <li>11. Teaching/learning materials and strategies designed, tested, used.</li> </ol>	<ol style="list-style-type: none"> <li>1. Training Report.</li> <li>2. Training Report.</li> <li>3. Training Report.</li> <li>4. Training Report.</li> <li>5. Training Report.</li> <li>6. Training Report and Monthly Supervision Report.</li> <li>7. Monthly CHW Report, Quarterly Child-to-child Meeting/Report.</li> <li>8. Observation by CHWs/-Community leaders.</li> <li>9. Monthly supervision Report; Quarterly Report; HC reports .</li> <li>10. Research Report.</li> <li>11. Materials Developed; Training Reports.</li> </ol>

(1) Project Objective	(2) Measurement Method for Objectives	(3) Major Planned Inputs	(4) Outputs	(5) Measurement Method for Outputs
<b>VITAMIN A</b>				
Increase the percentage of children 12-23 months who have received at least one dose of Vitamin A in the last six months from 48.6% to 70%.	Percent of children 12-23 months who have received at least one dose of Vitamin A in the last six months. [Survey]	<ol style="list-style-type: none"> <li>1. Training for 100 new CHWs.</li> <li>2. Refresher course for existing CHWs.</li> <li>3. Refresher course for HC staff.</li> <li>4. Monitoring Vit. A distribution</li> </ol>	<ol style="list-style-type: none"> <li>1. 100 CHWs trained.</li> <li>2. 50 CHWs retrained.</li> <li>3. Staff at 14 health centers trained in Vit. A protocol.</li> <li>4. Regular random checking of Children's Clinic Card for Vit. A.</li> </ol>	<ol style="list-style-type: none"> <li>1. Training Report.</li> <li>2. Training Report.</li> <li>3. Training Report.</li> <li>4. Monthly Supervision Report.</li> </ol>

(1) Project Objective	(2) Measurement Method for Objectives	(3) Major Planned Inputs	(4) Outputs	(5) Measurement Method for Outputs
<b>CONTROL OF DIARRHEAL DISEASES (15%)</b>				
<p>Increase the percent of children less than 24 months of age with diarrhea during the last two weeks who were treated with: ORS from 81.1% to 90%; cereal-based ORT from 4.1% to 25%.</p>	<p>Percent of children less than 24 months of age with diarrhea during the last two weeks who were treated with ORS and with cereal-based ORT. [Survey]</p>	<ol style="list-style-type: none"> <li>1. Training for 100 new CHWs.</li> <li>2. Refresher course for existing CHWs.</li> <li>3. Training for 50 new TBAs.</li> <li>4. Refresher course for 35 existing TBAs.</li> <li>5. Community thought leaders (elders, VHCs, teachers, religious leaders, traditional healers, leaders of youth and women's groups) trained in key messages.</li> <li>6. Child-to-child leaders trained in peer education.</li> <li>7. CHWs advise, treat, and refer.</li> <li>8. Key messages to children through Child-to-child leaders.</li> <li>9. Key messages to children through peer education.</li> </ol>	<ol style="list-style-type: none"> <li>1. 100 CHWs trained.</li> <li>2. 50 CHWs retrained.</li> <li>3. 50 TBAs trained.</li> <li>4. 35 TBAs retrained.</li> <li>5. 1000 community leaders trained.</li> <li>6. 100 Child-to-child leaders trained and supervised.</li> <li>7. 150 CHWs advise, treat, and refer properly.</li> <li>8. 50 Child-to-child leaders deliver at least one key message monthly during academic year.</li> <li>9. 1000 children conduct peer education.</li> </ol>	<ol style="list-style-type: none"> <li>1. Training Report.</li> <li>2. Training Report.</li> <li>3. Training Report.</li> <li>4. Training Report.</li> <li>5. Training Report.</li> <li>6. Training Report and Monthly Supervision Report.</li> <li>7. Monthly CHW Report, HC staff observation.</li> <li>8. Monthly CHW Report, Quarterly Child-to-child Meeting/Report.</li> <li>9. Observation by CHWs/-Community leaders.</li> </ol>

(1) Project Objective	(2) Measurement Method for Objectives	(3) Major Planned Inputs	(4) Outputs	(5) Measurement Method for Outputs
<b>MATERNAL HEALTH AND FAMILY PLANNING (25%)</b>				
<p>Increase the percent of mothers who have at least one prenatal visit with a health professional from 40.0% to 70%.</p> <p>Increase the percent of mothers who know a pregnant woman should first see a health professional during the first trimester of the pregnancy from 28.1% to 50%.</p> <p>Increase the percent of mothers of children less than 24 months of age who wish to delay their next pregnancy by two years who use a modern birth control method from 26.4% to 40% in the target region.</p>	<p>Percent of mothers who have at least one prenatal visit with a health professional. [Survey]</p> <p>Percent of mothers who know a pregnant woman should first see a health professional during the first trimester of the pregnancy. [Survey]</p> <p>Percent of mothers of children less than 24 months of age who wish to delay their next pregnancy by two years who use a modern birth control method. [Survey]</p>	<ol style="list-style-type: none"> <li>1. Training for 100 new CHWs.</li> <li>2. Refresher course for existing CHWs.</li> <li>3. Training for 50 new TBAs.</li> <li>4. Refresher course for 35 existing TBAs.</li> <li>5. Community thought leaders (elders, VHCs, teachers, religious leaders, traditional healers, leaders of youth and women's groups) trained in key messages.</li> <li>6. Supervision follow-up.</li> </ol>	<ol style="list-style-type: none"> <li>1. 100 CHWs trained.</li> <li>2. 50 CHWs retrained.</li> <li>3. 50 TBAs trained.</li> <li>4. 35 TBAs retrained.</li> <li>5. 1000 community leaders trained.</li> <li>6. Monthly meetings with 150 CHWs and 85 TBAs; quarterly supervision by HC/project staff.</li> </ol>	<ol style="list-style-type: none"> <li>1. Training Report.</li> <li>2. Training Report.</li> <li>3. Training Report.</li> <li>4. Training Report.</li> <li>5. Training Report.</li> <li>6. Monthly supervision Report; Quarterly Report.</li> </ol>

(1) Project Objective	(2) Measurement Method for Objectives	(3) Major Planned Inputs	(4) Outputs	(5) Measurement Method for Outputs
<b>AIDS PREVENTION (20%)</b>				
<p>Increase the percent of WCBA who know the means of HIV/AIDS transmission: mother to child, from 9.7% to 40%; blood, 46.3% to 65%; sexually, from 58.7% to 80%.</p> <p>Increase the percent of youth who know the means of HIV/AIDS transmission: mother to child, from 2.8% to 40%; blood, needles, 37.2% to 70%; sexually, from 69.4% to 90%*</p> <p>Increase the percent of adult males who used a condom during their last sexual intercourse with a non-regular sexual partner from 29.1% to 55%.*</p> <p>Increase the percent of youth who say they have changed their sexual behavior to avoid getting AIDS from 42.7% to 75%.*</p> <p>*(Note: A complete survey report will be submitted to USA at a later date.)</p>	<p>Percent of WCBA who know the means of HIV/AIDS transmission: mother to child, blood, and sexually. [Survey]</p> <p>Percent of youth who know the means of HIV/AIDS transmission: mother to child, blood, and sexually. [Survey]</p> <p>Percent of males who used a condom during their last sexual intercourse with a non-regular sexual partner. [Survey]</p> <p>Percent of youth who say they have changed their sexual behavior to avoid getting AIDS. [Survey]</p>	<ol style="list-style-type: none"> <li>1. Training for 100 new CHWs.</li> <li>2. Refresher course for existing CHWs.</li> <li>3. Training for 50 new TBAs.</li> <li>4. Refresher course for 35 existing TBAs.</li> <li>5. Community thought leaders (elders; VHCs; teachers; religious leaders; traditional healers; leaders of youth, men and women's groups) trained in key messages.</li> <li>6. Child-to-child leaders trained in peer education.</li> <li>7. Key messages to children through Child-to-child leaders.</li> <li>8. Key messages to children through peer education.</li> </ol>	<ol style="list-style-type: none"> <li>1. 100 CHWs trained.</li> <li>2. 50 CHWs retrained.</li> <li>3. 50 TBAs trained.</li> <li>4. 35 TBAs retrained.</li> <li>5. 1200 community leaders trained.</li> <li>6. 50 Child-to-child leaders trained and supervised.</li> <li>7. 100 Child-to-child leaders deliver at least one key message monthly during academic year.</li> <li>8. 1000 children conduct peer education.</li> </ol>	<ol style="list-style-type: none"> <li>1. Training Report.</li> <li>2. Training Report.</li> <li>3. Training Report.</li> <li>4. Training Report.</li> <li>5. Training Report.</li> <li>6. Training Report and Monthly Supervision Report.</li> <li>7. Monthly CHW Report, Quarterly Child-to-child Meeting/Report.</li> <li>8. Observation by CHWs/-Community leaders.</li> </ol>

## Section C. PROJECT LOCATION

### C.1 Location Maps

(See Annex II)

**C.2 Location Description** The project will be located in the Eastern Province of Zambia, within the Chadiza and Chipata Districts. Project coverage of the Chadiza District will be district-wide (10,430 households), while coverage in the Chipata District will focus on the catchment area of the Mwami Adventist Hospital (6,785 households). The selected areas are overwhelmingly rural in a province that is 85 percent rural.

Current levels of infant, child, and maternal mortality in the Eastern Province of Zambia, and in the targeted areas are high, and have been rising for the various age groups over the past 14 years. Reports indicate that national infant mortality rates rose to 89/1000 in the mid-1980s and to 108/1000 in the period from 1987-1991. (*Zambia Demographic and Health Survey*, 1992). UNICEF reports that informed health professionals currently place the IMR between 100 and 120/1000 (*Zambia Country Programme Report*, GRZ/UNICEF, 1990).

The government of the Republic of Zambia's National Plan of Action reports that "during infancy, respiratory infection, diarrheal diseases, and malaria account for just over 30% of deaths." It lists principal causes of mortality in newborns as prematurity (eight percent of all deliveries), birth asphyxia, infection (including tetanus), and congenital malformations.

Zambia's under-five mortality rate was documented at 202/1000 in 1992 (*ZDHS*). Nationally, the major causes of morbidity and mortality for children between the ages one to five years are malnutrition (contributing between 20-30 percent of pediatric admissions, and accounting for 40% of hospital pediatric deaths), and diarrheal disease (accounting for 20-25 percent of pediatric admissions), with dysentery and cholera adding to the mortality. Malaria accounts for 15 percent of pediatric admissions, and acute respiratory infections 20-25 percent. AIDS causes significant morbidity in special populations (*National Plan of Action*). Morbidity due to immunizable diseases has declined since the launching of the Universal Child Immunization (UCI) Programme in 1987, though rates of immunization have recently dropped.

Maternal mortality, based on hospital data, is estimated at 202/100,000 live births (*Zambia Country Programme*). The major underlying causes of maternal mortality are reported as young age at first pregnancy (average 17.9 years), lack of birth spacing, lack of knowledge about high risk pregnancies on the part of both service providers and users, high numbers of deliveries supervised by untrained personnel, poorly equipped health facilities, poor referral

systems, and the use of some damaging traditional practices during labor (*Zambia Country Programme*).

The Eastern Province is among Zambia's poorest. Surveys have demonstrated that there is a higher incidence of poverty among rural Eastern Province households (*Zambia Country Programme*, UNICEF), and that rural infant mortality rates and child mortality rates are higher than in the other provinces (*ZDHS*, 1992). In the Eastern Province 56 percent of rural residents earn less than official poverty level for Zambia.

The majority of rural Zambian households do not consume their own produce, but rather sell it immediately after harvest to generate income. Therefore, food security is poor, particularly during the seasons between harvests, as cash from the previous harvest is depleted. Rising food prices, inflation, and unemployment have hit women and children most heavily. Malnutrition is on the increase, from a national figure of 6.1% underweight in the under-five age group in 1980 to 20% in 1990. In rural areas, the percentage of underweight children is more than double that of urban areas. In the Eastern Province, the figures are among the highest in the country, with fully 48% of the children recorded as stunted, 23% undernourished, and 5% wasted. To add to the area's vulnerability, fully 30 percent of Eastern Province households are female-headed, the largest share in the country. These households are among the poorest in the districts.

The Eastern Province is the third most populated province in the country, yet its health coverage is among the lowest, with only 75 TBAs per 100,000 population, and 54 CHWs per 100,000 population. The District Health Offices of Chadiza and Chipata Districts cite as a critical problem a lack of adequate numbers of personnel for health extension services. In the Chipata District there are currently only 99 trained CHWs and 154 trained TBAs. District health staff in both target districts were unable to estimate those CHWs and TBAs still active in their villages.

At present, three major factors in the Chadiza and Chipata districts of Zambia combine to produce the poor health status of rural mothers, their infants and children. First is the lack of physical access to primary health care. In the Eastern Province half of the population's access to rural health clinics and hospitals is below optimum levels: 41% are within 6-15 km, and 10% are 16 km or further. Rural health center (RHC) staff in both districts reported to the ADRA planning team that patients typically are not brought to the clinic until the illness has reached acute stages.

The second factor is the weak health care structure at the district level. Even for those enjoying closer proximity to health facilities, this does not always translate into adequate primary health care. The serious lack of staff and

resources at the district level has significantly reduced the effectiveness of the rural health clinic (RHC). Extension efforts beyond the RHC are typically sporadic. Residents usually receive health services only when they travel to the RHC, when staff are present at the time of the visit, and when medicines and materials are available at the time of the visit. Only when all of these conditions coexist is health care provided.

The weakest link, however, is in the village itself. Mothers lack a basic knowledge of home management of disease. Because of a shortage of resources, the District Health Office is unable to hold refresher training sessions for TBAs and CHWs, who constitute the main sources of information for the mother. In the past two years, except for the limited training given by the Mwami SDA Hospital in the Chipata District for TBAs and CHWs, and a recent training session in DCM for CHWs in the Chipata District, no training has been undertaken by the MOH in Chipata District, and no training whatsoever was available in Chadiza District. There is, therefore, a minimal and often nonexistent capacity at the village level to provide home based management of the major causes of maternal and child morbidity/mortality.

## Section D. PROJECT DESIGN

### D.1 Summary of Overall Project Design

This project is designed primarily as a support to the existing or planned services of Mwami Hospital and the Chipata and Chadiza Districts' Ministry of Health. It is based on a community development approach to creating sustainable health promotion activities. The project office is located at Mwami Hospital which has an active community outreach program in southern Chipata District. Most project activities will be fully integrated with the Ministry of Health, Ministry of Education, and/or the Ministry of Agriculture. For example, all training and supervision of CHWs and TBAs will be done jointly with

the MOH. The role of the project is to organize, facilitate, assist, and monitor; the MOH will actually continue to be in charge of the CHWs and TBAs as they are currently. While the basic MOH curricula will be followed, ADRA staff will ensure that all aspects of CS interventions are thoroughly covered. Refresher courses in CS interventions for existing CHWs and TBAs will also be conducted jointly with MOH staff.

Another component of the CS activities involves training and facilitating Child-to-child health educators. This will be a joint activity of the project and the MOE which already has begun introducing this program into some schools. MOE and ADRA staff will cooperate in all aspects of project activities relating to Child-to-child education. Anti-AIDS clubs have also already begun through the MOE; ADRA's role will again be to facilitate.

In cooperation with Ministry of Agricultural extension agents, CHWs, community members and school children will be taught methods of food and seed preservation as well as inexpensive fertilizer and insect control techniques. This practical education will reduce the need for continued input of food, seeds and fertilizer from outside agencies to provide proper nutrition for mothers and children.

Baseline survey results were used to develop project objectives. The survey utilized a modified standardized questionnaire developed by John Hopkins University and was conducted using the 30-cluster sampling method. It was given to a random sampling of mothers with children below the age of 24 months (n=300 children) in Chadiza District and the five contiguous wards of Chipata District. The baseline percentages were used in setting the objective percentages and in determining the emphasis of the interventions. The mean age of children in the survey was 11.4 months. Key effect and knowledge indicators are shown in the following chart:

Intervention	Key Effect Indicators	Baseline Survey Results %
Nutrition Improvement	1. Appropriate Infant Feeding Practices: Initiation of Breast-feeding (a) Percent of children less than 24 months old who were breastfed within first hour after birth. (b) Initiation of breastfeeding within the first eight after birth.	46.3
	2. Appropriate Infant Feeding Practices: Exclusive Breast-feeding Percent of children (<4 months) who are being given only breastmilk.	2.2
	3. Appropriate Infant Feeding Practices: Introduction of Foods. Percent of infants/-children between 5-9 months who are being given solid or semi-solid foods.	96.2
	4. Appropriate Infant Feeding Practices: Persistence of Breast-feeding. Percent of children between 20-24 months who are still breastfeeding (and being given solid/semi-solid foods).	60.5

Intervention	Key Effect Indicators	Baseline Survey Results %
DCM	5. Management of Diarrheal Diseases: Continued Breast-feeding. Percent of infants/children (<24 months) with diarrhea in the last two weeks who were given the same amount or more of breastmilk.	56.1%
	6. Management of Diarrheal Diseases: Continued Fluids. Percent of infants/children (<24 months) with diarrhea in the past two weeks.	52.6%
	7. Management of Diarrheal Diseases: Continued Foods. Percent of infants/children (<24 months) with diarrhea in the past two weeks who were given the same amount or more food.	35.1%
	8. Management of Diarrheal Diseases: ORT Usage. Percent of infants/children (<24 months) with diarrhea in the past two weeks who were treated with ORT.	81.1%
EPI	10. Immunization Coverage (Card): EPI Access. Percent of children 12-23 months who received DPT1.	96.5%
	11. Immunization Coverage (Card): EPI Coverage. Percent of children 12-23 months who received OPV3.	87.5%
	12. Immunization Coverage (Card): Measles Coverage. Percent of children 12-23 months who received measles vaccine.	84.7%
	13. Immunization Coverage (Card): Dropout Rates. (a) Percent of 'drop-outs' between DPT1 and DPT3. (b) Overall dropout rate: Percent of 'dropouts' between BCG and measles.	10.8% 12.2%
MCH	14. Maternal Care: Maternal Card. Percent of mothers with a maternal card.	46.0%
	15. Maternal Care: Tetanus Toxoid Coverage (Card). Percent of mothers who received two doses of tetanus toxoid vaccine.	33.7%
	16. Maternal Care: One or More Prenatal Visits. Percent of mothers who had at least one prenatal visit.	40.0%
	17. Maternal Care: Modern Contraceptive Usage. Percent of mothers who desire no more children in the next two years, or are not sure, who are using a modern contraceptive method.	26.4%
	<b>Recommended Knowledge Indicators</b>	
	1. Mother's Literacy. Percent of mothers who are literate.	33.6%
	2. Immunization Knowledge: Timeliness of Measles Vaccine. Percent of mothers who know measles vaccine should be given at nine months.	25.0%
	3. Immunization Knowledge: Tetanus Toxoid Protection. Percent of mothers who know that tetanus toxoid protects both the child and the mother.	27.4%
	4. Maternal Care Knowledge: Timeliness of Ante-Natal Care. Percent of mothers who know that pregnant women should start prenatal care before the third trimester.	97.7%

Project interventions by percentage of activity are: Nutrition/Vitamin A, 25%; Maternal Care/Family Planning, 25%; HIV/AIDS Prevention, 20%; Immunization, 15%; Diarrheal Control, 15%.

In addressing these issues, ADRA will focus chiefly on the mother, the CHW, and the TBA as the primary care givers. During the first two and a half years of the project, 100 new and 50 current CHWs will be trained in the project interventions. Community Health Workers and Traditional Birth Attendants, both new and existing, will be trained in the main messages related to all interventions. The training schedule for Year One is: refresher course for 25 CHWs and 10 TBAs; training for 20 new CHWs and 10 new TBAs. The training schedule for Year Two is: refresher course for 25 CHWs and 25 TBAs; training for 60 new CHWs and 30 new TBAs. In Year Three, 20 CHWs and 10 TBAs will be trained. For content of training in

nutrition, see Table D; CHW Manual (Annex VI), pages 1-9, 16-21.

Each CHW, in turn, will cooperate with the MOH, Mwami Hospital, and the project in community health promotion activities. They will publicize both static and mobile clinics, following up on immunization defaulters. They will be trained and assisted in promoting key intervention messages to the individual mothers, families, and community groups. CHWs will learn and teach health promotion/disease prevention skills and home management methods for diarrhea.

The TBAs will similarly be given training in pre- and post-natal care, and in how to recognize danger signs for high risk pregnancies, raising the number of active TBAs by 50. Essential knowledge will be transferred from the project to health workers and then to mothers, thereby empowering women within their villages. Beneficiaries will be

identified mainly by CHWs and TBAs who will encourage them to become involved in interventions; others will be enrolled directly at the HC or hospital.

Community thought leaders (elders; members of Village Health and Development Committees; teachers; religious leaders; traditional healers; leaders of youth, men and women's groups) will be trained in the key messages of all interventions so they may support the work of the CHW and TBA. CHWs will be assisted in conducting health education meetings with formal and informal community groups. Child-to-child leaders will be trained in the key messages (where appropriate) which they will communicate to school children; health messages will be given to other children through peer education.

## D.2 Collaboration and formal agreements

The project is designed to rely heavily on the Ministry of Health to provide the majority of direct services. ADRA will pursue a strategy of joint implementation of activities with MOH counterparts, thereby strengthening their supervisory and training skills, and encouraging the continuation of activities initiated by the project. Other organizations that are also involved in community development have been part of the planning process and will be included in the monitoring: Ministry of Education's Child-to-child program; Ministry of Agriculture; Mwami Hospital; Mwami Nursing School; Sacred Heart Parish; St. Anne's Schools; and the Seventh-day Adventist Regional Health Department. The referral centers for malnourished children will be rural health centers, the three hospitals accessible to inhabitants of the project area (Mwami Adventist Hospital, Chipata General Hospital, St. Francis Hospital), and non-governmental nutritional organizations, like the Chipata Nutrition Group, and Muzeyi.

Planned Parenthood Association of Zambia, the ADRA CBD project, and the Family Planning Association of Zambia (funded by John Snow, Inc.) have been involved in project planning and will continue to be an integral part of activities such as condom supply, development of health education materials, and community sensitization/-motivation.

Participants at the five day DIP workshop included representatives from: Ministry of Health (regional as well as both districts); Regional and district Ministry of Education; Ministry of Agriculture; Provincial Child care Office; Chipata Nursing School; Mwami Hospital; Mwami Nursing School; Planned Parenthood Association of Zambia; Sacred Heart Parish; St. Anne's Schools; Seventh-day Adventist Regional Health Department. During the workshop, delegates from the various organizations collaborated together to refine a plan of action for the project.

## D.3 Technical Assistance

Technical assistance will be sought for supervision training, Quality Assurance of the cold chain, ethnographic research, and development of health education materials. The first source of assistance will be USAID/Zambia and the BASICS project. Further assistance in HIS/IEC and QA will be sought from PVO CSSP at JHU in September 1996, and March 1997 respectively.

The first workshop for MOH staff will be on Quality Assurance of the cold chain. It will be conducted after the needs assessment has been made and more functional hardware are in place.

Five sets of workshops on supervision training are scheduled to coincide with the training of CHWs and TBAs. MOH staff will be trained in supervisory skills on a phase-in basis; MOH staff will be trained as additional CHWs and TBAs are added to their catchment areas. The first training will be early in the Second Year of the project with the final supervisory training taking place in the latter half of the Third Year.

Ethnographic research in nutrition followed by the development of appropriate health education, methods and materials will begin in Year Two. It is anticipated that technical assistance will be required to understand why many children are not properly fed and how to change that situation.

## D.4 Detailed Plans by Intervention

### Section D4.a Immunization

#### 4a.1 Incidence & Outbreaks

Immunization coverage in Zambia was reported to be 64% in 1993. In that year there were outbreaks of measles in the Eastern Province where 700 cases and 50 fatalities were reported. (Zambia Child Health Project Paper, USAID, May 1995)

Chipata and Chadiza districts monitor some vaccine preventable diseases in hospitals and static/outreach clinics; data is reported monthly to the Provincial Health Office. While the data is good, it has two limitations: a) not all health centers submit reports monthly; and b) the target population is not based on reliable census data resulting in questionable denominators and/or the inability to determine percentages of coverage.

In 1995 reported cases of vaccine preventable diseases in children under five years old were as follows: for Chipata District, there were 596 cases of measles while in Chadiza District there were 68; there were 124 and 2 reported cases of whooping cough in the two districts respectively; acute poliomyelitis cases were 284 in Chipata while Chadiza had none; suspected cases of tuberculosis were 104

and 19 . (Eastern Province MOH Statistical Office, 1995 cumulative report) [The lower Chadiza figures may be more an under-reporting error than an actual difference in incidence rates; Chadiza has more logistical challenges

than Chipata in terms of location, transportation, and communication between health centers and the district office.]

#### 4a.2 Baseline Coverage Estimates

BCG Status for 145 children 12-23 months of age			
No BCG		Yes BCG	
#	%	#	%
8	5.6	137	94.4

OPV Status for 145 children 12-23 months of age							
OPV1		OPV2		OPV3		Drop Out	
#	%	#	%	#	%	DO Freq	DO Rate
140	97.2	133	92.4	126	87.5	14	10.0

DPT Status for 145 children 12-23 months of age							
DPT1		DPT2		DPT3		Drop Out	
#	%	#	%	#	%	DO Freq	DO Rate
139	96.5	132	91.7	124	86.1	15	10.8

Measles Status for 145 children 12-23 months of age			
No Measles		Yes Measles	
#	%	#	%
22	15.3	122	84.7

Fully Immunized Status for 145 children 12-23 months of age			
Not Fully Immunized		Fully Immunized	
#	%	#	%
33	22.2	112	77.8

#### 4a.3 MOH Policies

See Annex IV for MOH Immunization schedule and policies.

**4a.4 Knowledge & Practice Reported**  
**Immunizations:** 91.7% of mothers surveyed reported that their child had received at least one immunization.

**Knowledge of age for measles immunization:** 75% did not know that a child should receive the measles vaccine at nine months of age.

**Knowledge of reasons for tetanus toxoid vaccinations:** 27.4% stated that the main reason pregnant woman need to be vaccinated with the tetanus toxoid (TT) vaccine is to protect both mother and new born. 8.4% said it protects only the mother, and 39.5% said it only protects the new born. 24.7% stated that they did not know or reported something other than the categories listed in question 25.

**Knowledge of number of tetanus toxoid vaccinations necessary for protection:** 53.4% stated that a pregnant woman needs more than two TT injections to protect the new born infant from tetanus. 15.4% said that a pregnant woman needs two TT, 14.4% said that a pregnant woman needs one injection, and 2.3% said that none were needed. 14.4% said that they did not know. In summary, 68.8% stated that a pregnant woman needs at least two TT injections to protect the new born infant from tetanus; and 31.2% stated that none was needed, one was needed or did not know.

**Tetanus toxoid injections indicated on maternal health card:** 73.2% had two or more TT vaccinations. 15.2% had one TT injection indicated on the card. 11.6% had none.

**Possession of immunization card:** 93.6% were able to show an immunization card for their child. 4.7% said their child had never had an immunization card and 1.7% of the mothers reported that they had lost the card.

The baseline survey results in this module were surprisingly high, although immunization statistics for Zambia are also relatively high (according to MOH and *State of the World's Children 1995* estimates). However, occasional outbreaks of some childhood diseases (e.g. measles) indicate a possible problem with either the system of recording immunizations or with the quality of the cold chain (vaccine viability).

#### 4a.5 Immunization Objectives

(a) Increase the percent of children 12-23 months of age who are fully immunized from 77.8% to 85%.

(b) Decrease the overall immunization dropout rate from 12.2% to 8%.

**4a.6 Approach** Coverage is fairly good (77.8% fully immunized) but outreach clinics have two problems: quality of the vaccines and attendance at the clinics. Long distances are a major barrier to achieving full immunization coverage in the project area. Training an additional 100 CHWs in Year Two will enable better publicity of outreach clinics so attendance can be higher. A refresher course in Year One will update the existing 50 CHWs and encourage them to fully participate in promoting immunizations. TBAs can also play a larger role in encouraging immunizations; both new and existing

TBAs will be trained in the value and schedule of immunizations in Year Two. For content of training in immunization, see Table D; CHW Manual (Annex VI), pages 67-69; and TBA Training Manual (Annex VII), page 18.

Actual immunizations are given only by trained medical staff with CHWs motivating and mobilizing the community.

The outbreaks of measles and whooping cough, even though coverage is high, indicates an apparent problem with the quality of the cold chain. An assessment of cold chain supply hardware needs will be completed in the third quarter of the first year. Additional funding will be sought to replace the large items (refrigerators) and the project will supply the small ones such as thermometers, sterilizing units, and cold packs.

In the second year Health Center staff will be trained in techniques of Quality Assurance as they apply to the cold chain. Project staff will assist MOH in monitoring the cold chain. Technical Assistance will be sought for both training in Quality Assurance and setting up the monitoring system.

Monthly meetings will be held at each Health Center where immunization coverage, disease surveillance, and Quality Assurance of the cold chain will be discussed. Quarterly meetings will be held with district-wide MOH, MOE, MOA on items of common interest as they relate to Child Survival.

**4a.7 Individual Documentation** The Project will use the attached Children's Clinic Card for immunizations and growth monitoring. (See Annex IV.) When lost, a new card is issued and marked "Second Card". No mass campaigns are anticipated as the coverage will be achieved through regularly scheduled static and mobile clinic services. The MOH plans to assume all costs of cards and forms. Project expenses will be mostly related to transport.

At the present time, TT vaccinations are recorded on a separate card kept by the mother. (See Annex IV.) Once the child is born, the card is usually discarded. There is also a space on the Ante-natal/Post-natal card to record TT. In collaboration with the MOH, the project will assess the best place to record TT and ways to encourage women to keep their cards.

**4a.8 Drop-outs - Children** Many drop-outs were caused because some scheduled outreach clinics never happened. Lack of transport was one reason. Even more significant has been the failure of at least two RHC refrigerators. Since vaccines had to be carried from a

distance just to reach the HC, regularly scheduled mobile clinics could not take place from the static clinic. When outreach clinics became irregular, many people stopped attending. Assessing and addressing the hardware needs of the cold chain will decrease the number of drop-outs as well as improve the quality of the vaccines.

Some mothers have lost confidence in the measles vaccine since children with the vaccine were still getting measles. Regular monitoring of temperatures should ensure more viable vaccines and thus encourage the vaccination of children against measles and other diseases. CHWs will be encouraged to keep records of children in their catchment area and follow-up on defaulters.

**4a.9 Drop-outs - Women** Women drop out of the immunization program for the same reasons that children do. In addition, many women (and their advice givers) do not feel it is important for a woman to have immunizations. CHWs and TBAs will be encouraged to keep records of women in their catchment area and follow-up on defaulters.

**4a.10 Population:** The estimated beneficiary population for women of childbearing age, all of whom will be targeted for TT, is 28,630.

Children 0-11 months of age will be targeted for immunizations. The estimated beneficiary population of children 0-11 months is 4,967. Five visits will be required to reach full coverage by 12 months of age (4967 children x 5 visits = 24,835 the first year). The number of visits for years two, three and four will be slightly larger as it is estimated that 5520, 5560 and 5920 children will be born in each of those respective years.

**4a.11 Cold Chain Support** HC staff will be trained in Quality Assurance which should improve the existing system. The project will purchase cold packs, sterilizing units, and thermometers after a needs assessment is conducted. The survey of the status of cold chain equipment will be completed during the third quarter of the first year; small items will be purchased in the following six months. Other moneys will be sought for replacing at least two refrigerators which are no longer working properly.

**4a.12 Surveillance** EPI disease surveillance will be conducted at the HC level. Project staff will analyze data with HC staff at regular meetings. Technical assistance will be sought in the development of monitoring tools, but it is assumed they will be based on those used elsewhere. (See Annex IV.)

#### Reference Materials

1. EPI Manual: Universal Child Immunization Programme, Zambia. Published by the Ministry of Health, Zambia, 1992.

2. Zambia Child Health Project Paper, USAID, May 1995.
3. 1995 Cumulative Report of Eastern Province MOH Statistical Office.

## Section D.4b Nutritional Improvement

### 4b.1 Nutritional Improvement

**4b.1a Baseline:** The 1992 Zambia Demographic and Health Surveys analyzed the nutritional status of children. Percentages of moderate or severely underweight children as measured by weight for age was as follows: less than six months old, 4.3%; 6-11 months, 22.8%; 12-23 months, 44.5%; 24-35 months, 43.4%. (*Zambia Child Health Project Paper*, USAID, May 1995)

Even though clinic data is not representative of the entire population, it does give some information. Of all children under five seen at Chadiza MCH clinics in Dec.'94-Jan.'95, 27% were underweight (below lower line on the MOH children's clinic card, which records weight for age). Chipata reported 39% for the same period (*Food Security, Nutrition and Health Monitoring System*, January/February 1995 Report)

In 1995 the three Chipata hospitals and 29 rural health centers reported 864 and 2772 cases respectively of malnutrition in children under five years of age. Chadiza's total for the same period was 1390. Growth is measured by weight for age using Salter scales. (Eastern Province MOH Statistical Office, 1995 cumulative report). Chipata District data indicates a 31% malnutrition rate. 6.1% of the under-fives are severely malnourished and eligible for food supplementation.

The CS Project has done a weight-for-age survey using the 30 cluster random sampling techniques. Draft results showed, 58.5% were growing well, 16.9% were not growing, 24.6% were losing weight. Based on the child's middle upper arm circumference, 71.7% were normal, 19.1% were in a dangerous category, and 9.2% were very dangerous. Full analysis will be done in the next few weeks.

Due to widespread economic insufficiency, the nutritional status of children is closely related to seasonality and to the farming practices common in the area. During the rainy season (September-March), most of the planting and cultivating takes place. During this time, last year's harvest is consumed, but by January and February, the food is gone, and the new harvest is not yet ready. Protein foods are planted to a very limited extent, and these are often cash crops. Young children are hard hit by the lack of food, especially since many mothers/caretakers feed children of all ages together, and the smallest are often left hungry, or do not get food which is appropriate for their age and taste. Also, during the most work-intensive parts

of the year, the parents may be in the field most of the day, leaving young children to fend for themselves. In addition to the agriculture-based problems, child spacing is poor, resulting in smaller infants, and less breastfeeding of older infants/young children. Supplementary foods are introduced much too early, and are usually of low nutritional quality, or limited variety.

#### **4b.1b Current Knowledge and Practice**

**Prevalence and persistence of breastfeeding:** 94.7% of mothers reported that they are currently breastfeeding their child. Of those mothers in the survey with a child 20 - 23 months of age, 39.5% said that they were not breast feeding. 85.7% said that they had breastfed their child in the past and 14.3% said they had not breastfed.

**Exclusive breastfeeding:** Of the children, 0-3 months of age (n=45), 2.2% were being exclusively breastfed. In other words, they were not being given any of the food/fluid categories listed in question 8a- 8i. Of the 97.8% of the mothers who were not exclusively breastfeeding, 88.4% were adding water and herbal teas.

**Improvement of breast-feeding:** Respondents gave the following suggestions as to what a mother could do in the baby's first four months of life to keep breastfeeding: frequent sucking to stimulate production, 19.7% exclusive breastfeeding during the first four months, 15.3% care of breasts/nipples, 4.0% breastfeed as soon as possible after delivery, 2.7% avoid bottle feeding of baby, 1.7% relactation, 1.7% 33.7% of the mothers gave an answer not listed in the question. 31.0% said they did not know.

**Introduction of supplements:** Of the children 5-9 months of age (n=52), 98.1% were being given complementary foods. 44.3% of the mothers responded that they should start giving a child foods in addition to breastmilk earlier than four months of age. 44.0% said a mother should start adding foods other than breastmilk between 4-6 months of age. 6.7% said to start adding other foods about 6 months of age. 2.7% reported to start adding later than 6 months of age. 2.3% said they did not know.

Estimating based on the baseline survey, almost one half of mothers initiate breastfeeding during the first hour after birth. Also, it is very likely that about three-fourths of the mothers in the project area breastfed for the first time within the first eight hours after delivery. As shown by the baseline survey results, exclusive breastfeeding is practiced by a very small percentage of mothers of infants less than four months. On the other hand, the great majority (> 90%) of mothers of infants between five and eight months of age are giving their infant complementary foods.

Though the sample size for measuring this specific practice is relatively small, it can be approximated that more than

half of the mothers of children 20-23 months of age are continuing to breastfeed their child.

The rate of early initiation of breastfeeding seems relatively high, since more than three-fourths of mothers surveyed reported that they breastfed within the first eight hours after birth. However, it is of concern to the project that only a small percentage of infants less than 4 months old surveyed were being exclusively breastfed. Given that poverty-induced malnutrition is relatively high in the project area, and water sources are neither certain nor free of health hazards, young infants who are not exclusively breastfed are likely to be malnourished, and in poor health. Many myths affect breastfeeding and the early introduction of other fluids and foods; these will need to be discerned and addressed before community acceptance for exclusive breastfeeding can be gained.

Approximately forty-four percent of the mothers surveyed seem to believe that breastfeeding should be supplemented with other foods earlier than the age of four months. The project will emphasize the importance of exclusive breastfeeding for the first four months.

Traditional beliefs and certain social practices are in part to blame for the poor nutritional status of many children in the project area. The father often gets the biggest and best portions of food. Children who are being weaned are given mainly maize meal, which is not adequate for their physical development. Eggs are thought to be a cause of epilepsy, and meat is withheld so as not to accustom children to it. When children are sick, mothers usually give them porridge made of cornmeal or of HEPS, (High-Energy Protein Supplement made of mainly soy flour). Since sick children are often not hungry, if they refuse food, the mothers may be less likely to encourage the child to eat. In addition, malaria and parasitic infections can contribute to a lack of appetite, and consequently, malnutrition.

Through the educational efforts of MOH and district staff, however, mothers are becoming aware of the types of "body-building" foods young children need. Also, the Ministries of Agriculture and Education, respectively, are implementing various programs and activities which aim to improve the production, availability, preparation and consumption of varied and nutritious foods for children and pregnant/lactating women.

**4b.1c Nutrition Objectives** (a) Increase the percent of children less than four months of age who are being exclusively breastfed from 2.2% to 20%. (b) Increase the percentage of children less than 24 months of age who were breastfed within the first 8 (eight) hours after birth from 77% to 87%. (c) Increase the percentage of children between 20-24 months still being breastfed from 60.5% to 70%. (d) Increase the percent of mothers with

infants under 24 months of age who know that solid/semi-solid food should be given from four months onward from 96.2% to 98%.

**4b.1d Approach** Community Health Workers and Traditional Birth Attendants, both new and existing, will be trained in the main messages related to nutrition. The training schedule for Year One is: refresher course for 25 CHWs and 10 TBAs; training for 20 new CHWs and 10 new TBAs. The training schedule for Year Two is: refresher course for 25 CHWs and 25 TBAs; training for 60 new CHWs and 30 new TBAs. In Year Three, 20 CHWs and 10 TBAs will be trained. For content of training in nutrition, see Table D; CHW Manual (Annex VI), pages 1-9, 16-21.

CHWs and TBAs will meet with MOH and project staff monthly to discuss what they have done and how people are responding to their teaching. CHWs will work with Child-to-child leaders in educating children in key messages of nutrition and how to teach those to their peers.

Community meetings with elders, VHCs, teachers, religious leaders, traditional healers, leaders of youth and women's groups will be held in each sector.

Another component of the CS nutrition activities involves training and facilitating Child-to-child health educators. This will be a joint activity of the project and the MOE which already has begun introducing this program into some schools. Project staff will join MOH and MOE in educating 50 Child-to-child teachers in selected schools on the key points regarding nutrition. The teachers joined by the local CHW will train 1000 children to be peer educators on these points.

**4b.1e Low Birth Weight Babies** Both TBAs and CHWs will be trained in the importance of proper care and monitoring of low birth weight babies. They will learn where and how to refer the infants.

## 4b.2 Growth Monitoring

**4b.2a Baseline Possession of growth monitoring card:** 93.3% of mothers had a growth monitoring card for their child. 1.3% said they had lost the card. 5.3% said they had never had a growth monitoring card.

**Use of growth monitoring card:** 68.3% of the children with growth monitoring cards had been weighed in the last 4 months. 31.7% had not.

Health center data indicated that the percent of children less than 24 months old who are underweight for age was 31% in Chadiza District and 20% in Chipata. To check the reliability of the data, the project conducted a separate

survey using the 30 cluster sampling technique to determine the percentage of children 6-23 months old who were underweight for age. Preliminary analysis showed that 31% of those surveyed in Chadiza and 26% of those surveyed in Chipata were underweight. Further analysis will be detailed in the annual report.

**4b.2b Knowledge & Practices** Less than seven percent of the mothers surveyed did not have a growth monitoring card for their child (including the 1.3% who lost the card). Retention of the card appears to be relatively high, but coverage by the growth monitoring aspect of primary health care could be improved. Even though MOH policy mandates that infants (children under the age of one year) be weighed monthly, and children between 12 and 23 months be weighed every two months, survey data show that about one third of the children under 24 months of age who had a growth monitoring card had not been weighed at all in the last four months. This may signify a gap in service delivery or a difficulty with access for mothers.

Mothers of young children in the project area are reached through the growth monitoring sessions of health outposts (each rural health center has about four) and through the services offered at each rural health center. These include counseling and health education for mothers of children with nutrition related problems.

## 4b.2c Growth Monitoring Objectives

(a) Increase the percent of mothers with infants under 24 months of age who have a growth monitoring card and have been weighed in the preceding four months from 68.37% to 80%. (b) Decrease the percent of children less than 24 months old who are underweight for age from 31% in Chadiza District to 20% and from 26% to 20% in Chipata South .

**4b.2d MOH Protocol & Practices** According to MOH guidelines, a child/infant must be weighed every month during the first two years of life. During the third year children are weighed every two months, and during the fourth year, quarterly. Children with moderate growth problems should be weighed monthly regardless of age. Those with severe growth problems should be weighed every one or two weeks. The scale recommended by the MOH and routinely used is the *Salter* scale.

Family health nurses train health workers (trained Traditional Birth Attendants and Community Health Workers) in growth monitoring clinical and counseling skills during the six weeks course of their training. The majority of these health workers are able to correctly weigh infants and children, plot their weight, and counsel the child's caregiver regarding dietary improvements needed when there are problems.

Children who are growth faltering are identified by health workers who follow the standard MOH protocol for referral. Extra food or medicine is recommended for them, or the child will be given some food supplementation or referred to a rural health center, hospital, or nutrition center, depending on severity of problem and/or access. Some of the nutrition supplementation/rehabilitation centers or agencies are NGOs. HEPS is the most widely used supplement for under-weight babies and children. Protocol for identification of malnutrition and subsequent referral are well established. The gaps in the system are due to children unidentified because they do not attend clinics and/or there is not enough person-power for follow-up on referrals.

**4b.2e Individual Documentation** The MOH growth monitoring card is on the same card as the immunizations. (See attachment D4a.7.) When lost, a new card is issued and marked "Second Card". No mass campaigns are anticipated. The MOH plans to assume all costs of cards and forms. Project expenses will be mostly related to transport and promotion/education.

**4b.2f Approach** Growth monitoring is already an established responsibility of community health workers and specific health center staff. Thus, the project will not be introducing anything new in terms of skills or knowledge of growth monitoring. Instead, it will strengthen and support the already existing MOH system by expanding coverage through training additional community health workers and providing/arranging for monitoring and supervision for them (monthly reports from CHWs, regular but random spot-checks for quality of growth monitoring techniques, counseling skills, etc.).

Training will be six-weeks long, and enrolled family health nurses will be recruited to instruct the CHWs in growth monitoring skills and knowledge. The CHWs trained by the project will have the same growth monitoring skills and responsibilities as MOH-trained workers. They will weigh children, plot their weight on MOH-supplied growth monitoring cards (weight and age) and interpret individual growth trends. CHWs will learn to follow standard MOH protocol in assessment and take appropriate action, in the form of counseling or referral. For content of training in growth monitoring and nutritional assessment, see Table D; CHW Manual (Annex VI), pages 10-15, 30-33; and TBA Training Manual (Annex VII), page 18.

Currently, long distances to the rural health centers and to referral locations, are a major constraint which stands in the way of weighing infants/young children regularly, and providing counseling and follow-up for their care. In the rainy season, distance is compounded by flooding which makes it impossible to reach growth monitoring services. The project will deal with this problem by training more

CHWs and TBAs, thus increasing the number and the distribution of health care providers who can perform growth monitoring services, and refer when necessary.

**4b.2g Follow-up on Children** Through CHW reports, daily outreach programs/home visits, and nutrition clubs, the project will keep track of the number of children who did not gain weight in the last three months. After identifying a growth-faltering child he/she will be placed on a supplementary diet, and their mothers will be taught better food preparation techniques which emphasize sufficient variety (the three food groups: body-building, protective, and energy foods). Project-trained and supervised health workers will refer children for continued/better management. The referral centers will be rural health centers, the three hospitals accessible to inhabitants of the project area (Mwami Adventist Hospital, Chipata General Hospital, St. Francis Hospital), and non-governmental nutritional organizations, like the Chipata Nutrition Group, Muzeyi. These referral centers engage in supplementary feeding and additional medical assessment and treatment as well as nutrition counseling.

The project will utilize, reinforce, and strengthen the nutrition messages and the information/education/communication system already in use (i.e. cooking demonstrations, etc.). CHWs will monitor the progress of children referred from their catchment area to nutrition centers, following-up on any defaulters from the program.

Note: The project will use a multi-line weight chart (using Gomez classification) at the health center level to determine degree of malnutrition (mild, moderate, and severe). A master chart showing weight levels at ten percent intervals for use in collecting information from mothers attending the health centers will be introduced. This is simplified using reference (100%) -2SD (approximately 80%) -3SD (approximately 70%) and -4SD (approximately 60%).

**4b.2h Population** Estimated beneficiary population of children:

0-11 months	4,967
12-23 months	4,166

Enrollment in nutrition interventions will be by referral of the CHW and TBA and through static and mobile clinics as well as hospitals.

**4b.3 Nutrition Improvement for Pregnant & Lactating Women**

**4b.3a Baseline** Accurate knowledge of pregnancy nutrition seems relatively good, with over four-fifths of mothers surveyed knowing that green leafy vegetables and eggs/meat/are rich in iron and essential for the health of

pregnant mothers. Whether mothers actually eat such foods or not was asked in the survey, but according to qualitative information, they do not as frequently as is needed. According to the baseline data, less than one-third of the women in the project area eat more during pregnancy. Almost one-third of women believe that, during pregnancy, mothers should only gain only the same weight the baby will weigh at birth.

#### **4b.3b Knowledge & Practices** *Knowledge of pre-natal care:*

Foods good for a pregnant woman to eat to prevent pregnancy anemia were reported as follows: leafy green vegetables, 80.3%; proteins rich in iron (eggs, meat, fish), 51.3%; other foods (such as mangoes) were mentioned by 45.7%, 5.4% said they did not know.

Knowledge of how much weight a woman should gain during pregnancy was reported as follows: 8 to 10 kilograms, 10.0%; gain weight of baby, 30.7%; other responses, 10.3%; said they did not know, 49.0%.

*Pre-natal care behavior:* When pregnant with the last child, the amount of food eaten was more than usual for 32.4%; same as usual, 24.7%; less than usual, 42.8%. Did not know, 0%.

The diet of pregnant women in the project area is seriously influenced by traditional taboos which discourage the consumption of certain foods. For example, popular belief holds that eating eggs during the pregnancy may result in bald-headed children, and eating high-protein foods in general (eggs, meat, etc.) may cause the fetus to grow too big, complicating the delivery. Eating sugar cane is thought to cause a child to be born with segmented arms. There is also the belief that eating okra during pregnancy may cause spontaneous abortion (because okra is slippery). Also, if women become pregnant while they are breast-feeding another child, they will stop immediately, because according to traditional beliefs, the milk will become poisonous for the infant/child.

Unfortunately, women take almost no precautions during either pregnancy or lactation, except perhaps if under medical duress. Since the livelihood of most families depends entirely on what they harvest from their land, pregnant women work as hard as, if not harder than, most other family members involved in peasant farming.

During pregnancy and lactation, mothers seek advice from health center staff, from CHWs and TBAs (trained or untrained), from traditional healers, relatives, during antenatal clinics and outreach programs, and during postnatal clinics. In the project area, pregnant women receive iron supplementation and if needed, food supplementation (HEPS) if underweight, and Vitamin A after delivery.

#### **4b.3c Nutritional Objectives**

(a) Increase the percent of women who ate more food than usual during the last pregnancy from 32.4% to 55%.

(b) Increase the percentage of women with kitchen gardens from 69.4% to 80%.

**4b.3d Approach** Pregnant women will be identified mainly by CHWs and TBAs who will encourage them to become involved in nutrition interventions. For content of training in nutrition during pregnancy, see Table D; CHW Manual (Annex VI), pages 34-35.

Also the improvement of both dietary practices and nutrition status will be targeted through neighborhood committees, women's groups, agricultural workshops, and school programs. Existing MOH key messages on healthy nutrition for children and mothers are comprehensive and very appropriate, and the project will use these to promote awareness of the essential elements of good nutrition.

The main constraints to improving mothers' practices and nutritional status are both economic and cultural in nature. One major barrier is the strength of dietary tradition which forbids women from consuming eggs while pregnant, and assigns some of the best portions of food (e.g. chicken) to the plate of husbands, and men in general. Poverty is another problem. The great majority of pregnant women living in the project area are the primary farmers of their families, and as has been stated before, cannot really work less while pregnant. Also, while many women have kitchen gardens, the larger proportion of produce is sold in order to enable the family to survive, so little if any of the vegetables or legumes grown are actually consumed by the women who need them most (while pregnant or breast-feeding).

In collaboration with the MOH, ADRA staff, and Village Health/Development Committees, CHWs will conduct community meetings with thought leaders and any existing groups to address the constraints to good nutrition during pregnancy. Cultural traditions will be discussed in an effort to analyze them honestly and encourage communities to make adjustments where beneficial.

In cooperation with Ministry of Agricultural extension agents, CHWs, community members and school children will be taught methods of food and seed preservation as well as inexpensive fertilizer and pesticide techniques. This practical education will reduce the need for continued input of food, seeds and fertilizer from outside agencies to provide proper nutrition for mothers and children.

**4b.4 Supplementary Foods** The project will not provide supplementary foods directly to beneficiaries since the clinics/hospitals already have a system for doing this. The project will be involved in transport of the food from warehouse to health center or other referral site when the

organization is unable to do it themselves. Referral centers provide the supplementary foods.

**4b.5 Health Messages** The MOH has assembled a number of key messages on nutrition, to be shared with those served by community health workers and trained traditional birth attendants. The project will utilize most of these.

*"We need food for growth and repair of our body, to regulate the body and for energy to do work."*

*"We need to eat a variety of foods for good health."*

*"Foods rich in energy, protein, iron and vitamin A, should be included in the diet every day."*

*"Children need plenty of food to grow strong and healthy."*

*"Pregnant and breastfeeding women need extra food."*

*"Small children should eat from their own plate."*

Additional nutrition messages will be developed based on the findings of the ethnographic study on nutrition. (See appendix XI for key nutrition messages from *Facts for Life*)

#### Reference Materials

1. Nutrition and Health in Community Programs: the National Food and Nutrition Commission. Published by the National Food and Nutrition Commission of Zambia, with assistance from UNICEF, 1993.
2. Potluri SKR, (ed.). Manual for Community Health Worker and His Training in Zambia. Office of the Provincial Medical Officer, Central Province, Kabwe, 1981.
3. Two Halves Make a Whole: Balancing Gender Relations in Development. Canadian Council for International Co-operation, MATCH International Centre, Ottawa, 1991.
4. Children, Health and Science: Child-to-Child Activities and Science and Technology Teaching, UNESCO, Paris, 1991.

### Section D4.c Control of Vitamin A Deficiencies

**4c.1 Baseline** Under the direction of Dr. B. Wiafe, Mwami Adventist Hospital conducted research on the prevalence of xerophthalmia in 1991. Vitamin A deficiency among children less than 5 years old, in the project area, was found to be 32%.

Other micro-nutrient deficiencies will not be addressed.

**4c.2 Knowledge and Practice** In the project baseline, 48.6% (70 of 145 children ages 12-23 months with Growth Monitoring Cards) had received at least one dose of Vitamin A in the last six months.

#### 4c.3 Vitamin A Objectives

(a) Increase the percentage of children 12-23 months who have received at least one dose of Vitamin A in the last six months from 48.6% to 70%.

**4c.4 MOH Protocol and Practices** For protocol, see annex V. As a member of the Zambia National Vitamin A task force, Dr. Wiafe, Medical Director of Mwami Hospital, and project medical advisor, has been one of the key figure's in Zambia's use of Vitamin A. He has been instrumental in obtaining funds for the research and development of a Vitamin A program in Chipata and Chadiza.

The MOH in Zambia has developed a solid strategy for preventing Vitamin A deficiency. Education and interventions target specifically the groups at risk: infants not breast-fed, children between 6 months and 6 years of age, children who are malnourished, have measles, diarrhea or other serious infections, and pregnant/lactating women. Education includes informing families about locally available, common foods with high Vitamin A content. The messages given to all health workers are: (1) children sick with measles, diarrhea, malnutrition, or who are experiencing night blindness, are at risk of Vitamin A deficiency and its permanent consequences; and (2) such children should be given Vitamin A capsules at health centers. According to the MOH the main means of preventing Vitamin A deficiency are breast-feeding immediately after delivery, and during the first six months of life, introducing Vitamin A rich choices among weaning foods, continuing to breast-feed during the first 2 years of life, feeding all children Vitamin A-rich foods, and adding fat or oil to children's diets to help their body use Vitamin A.

Mwami Hospital implements the MOH policies by giving prophylactic doses of Vitamin A to all children between 6 months and 6 years of age, and to lactating mothers. Also, specific dosages are given to children who show clinical manifestations of Vitamin A deficiency (xerophthalmia, measles, diarrhea, and protein caloric malnutrition).

**4c.5 Individual Documentation** Vitamin A supplementation is recorded on the MOH Children's Clinic Card or the mothers' Ante-natal/Post-natal Card. (See Annex IV.) When lost, the mother is advised on the importance of the card, a new card is issued and marked "Second Card". No mass campaigns are anticipated.

**4c.6 Approach** MOH staff will be given a refresher course in Vitamin A so that all are knowledgeable on current protocol. Regular random checking of individual child and maternal Clinic Cards plus HC records for appropriate Vitamin A administration will be made by ADRA as well as MOH staff. An assessment will be made of existing stocks and a regular system of monitoring

storage and distribution will be instituted. Quality Assessment skills learned in the Cold Chain workshop will be applied to Vitamin A distribution.

Community Health Workers and Traditional Birth Attendants, both new and existing, will be trained in the main messages related to Vitamin A. The training schedule for Year One is: refresher course for 25 CHWs and 10 TBAs; training for 20 new CHWs and 10 new TBAs. The training schedule for Year Two is: refresher course for 25 CHWs and 25 TBAs; training for 60 new CHWs and 30 new TBAs. In Year Three, 20 CHWs and 10 TBAs will be trained. For content of training in Vitamin A, see Table D; CHW Manual (Annex VI), pages 36-37.

Community thought leaders (elders; members of Village Health and Development Committees; teachers; religious leaders; traditional healers; leaders of youth, men and women's groups) will be trained in the key messages of all interventions so they may support the work of the CHW and TBA. CHWs will be assisted in conducting health education meetings with formal and informal community groups.

#### 4c.7 Population

Population groups eligible for Vitamin A interventions:

children 6-71 months	25,795
pregnant/lactating women	11,398

Each eligible child needs two doses of Vitamin A per year, for a total of 73,670 visits (46,044 children x 2 visits x 80%), and each pregnant/lactating woman requires one dose, for a total of 6,519 visits (8,239 women x 1 visit x 80%). The beneficiary population will be enrolled at the monthly weighing/immunization sessions and pre/post-natal visits.

#### Reference Materials

1. *Vitamin A deficiency*. The National Food and Nutrition Commission.

## Section D4.d Diarrhea Case Management

**4d.1 Baseline** According to the 1992 Zambia Demographic and Statistical Survey, the overall incidence of diarrhea in the two weeks prior to the survey was 22%. A household survey conducted by the National Control of Diarrheal Disease Programme showed a two-week prevalence of diarrhea to be 28%. Diarrheal diseases increase during the rainy season of December-March. Emerging patterns of resistance indicate the need for stocking expensive and/or unavailable drugs. (*Zambia Child Health Project Paper*, USAID, MAY 1995)

Chipata and Chadiza districts monitor cases of diarrheal diseases treated in hospitals/clinics and the data is reported monthly to the Provincial Health Office. While the data is

good, it has two limitations: a) not all health centers submit reports monthly; and b) the target population is not based on reliable census data, resulting in questionable denominators and/or the inability to determine percentages of coverage. In 1995 the three Chipata hospitals and 29 rural health centers reported 2744 and 15,980 cases of diarrhea in children under five years of age. Chadiza's total for the same period was 4529. (Eastern Province MOH Statistical Office, 1995 cumulative report)

#### 4d.2 Knowledge & Practice

**Incidence of diarrhea:** 40.7 % of the mothers reported that their child had diarrhea within the past two weeks prior to the survey. None of the mothers stated that they didn't know if their child had diarrhea in the past two weeks.

**Continuation of breastfeeding during diarrhea:** Of the 112 infants/children in this survey who were still being breastfed and had diarrhea in the past two weeks, 38.4% were given breastmilk the same as usual. 18.8% were given more than usual. 35.7% mothers gave their child less breastmilk than usual and 7.1% gave less breastmilk or stopped giving breastmilk completely during the diarrheal episode.

**Continuation of fluids other than breastmilk during diarrhea:** Of the 109 infants/children in the survey who were not being exclusively breastfed and who had diarrhea in the past two weeks, 55.0% were given fluids other than breastmilk more or the same amount as usual. 45.0% gave less fluids or stopped completely giving fluids other than breastmilk during their child's diarrheal episode.

**Continuation of solid/semi-solid foods during diarrhea:** Of the 111 infants/children in the survey who are not being exclusively breastfed but had diarrhea in the past two weeks, 36.0% were given more or the same as usual solid/semi-solid foods during the diarrhea episode. 64.0% gave less or stopped completely giving solid/semi-solid foods during their child's diarrheal episode.

**Treatment of diarrhea:** 76.9% mothers used the ORS sachet. 13.2% gave a sugar-salt solution as treatment. 9.9% mothers gave their child anti-diarrheals or antibiotics as treatment for their child's diarrhea. 4.1% used a cereal-based ORT. 0.8% gave home fluids to their child. 11.6% gave something other than the categories listed in question 17. 5.0% did not give any treatment for their child's diarrhea.

**Seeking advice or treatment for diarrhea:** 62.8% of mothers with a child with diarrhea in the past two weeks sought advice or treatment for their child's diarrhea. 60.5% went to a clinic or health center. 27.6% went to a general hospital. 7.9% sought advice from friends and relatives. 3.9% went to a traditional healer. 2.6% went to a traditional birth attendant. 1.3% went to a village health

worker. 5.3% sought help from sources other than those listed in question 19. No mothers sought advice/treatment from a private clinic/pharmacy.

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**signs/symptoms of diarrhea that cause mothers to seek advice for diarrhea:** weakness/tiredness, 54.0%; diarrhea of prolonged duration, 34.7%; loss of appetite, 33.7%; fever, 24.0%; dehydration, 15.7%; blood in stool, 8.0%. 10.7% responded with a sign other than those listed in the question. 4.3% said they did not know.

**Actions taken when a child has diarrhea:** When asked what important actions a mother should take when her child had diarrhea, the women responded as follows: take a child to the hospital/health center, 70.3%; proper mixing and administration of ORS, 38.3%; gave the child more to drink than usual, 10.3%; initiate fluids rapidly, 2.3%; give the child smaller more frequent feeds, 2.3%; withhold fluids, 2.0%; withhold foods, 0.3%. 7.3% responded with an action other than those listed in the question. 1.7% said they did not know.

**Actions taken when a child is recovering from diarrhea:** Mothers responded in the following manner when asked to list important actions a mother should take when her child is recovering from diarrhea: give more foods than usual, 45.3%; give foods with high caloric content, 22.7%; give the child smaller more frequent feeds, 20.7%. 13.3% responded with an action other than those listed in the question. 12.7% said they did not know.

More than forty percent of the children whose mothers were interviewed had experienced a diarrheal episode during the last two weeks. This demonstrates significant need for interventions which aim to control diarrheal disease. Furthermore, the questions which explored mothers' knowledge regarding diarrhea and its treatment revealed a need for more health education which will enable mothers to take measures which prevent and/or correctly treat (or refer) diarrheal episodes.

More than three-fourths of the mothers surveyed use ORS packets to treat their child's diarrhea, and more than 13% use sugar-salt solution. Although sugar-salt solution is no longer internationally recommended, the MOH of Zambia continues to support its use, only if correctly made, in the eventuality that ORS packets are unavailable.

With regard to the surveyed children's dietary changes during a diarrheal episode, relatively high percentages of mothers breastfeed less or not at all, and give less solid/semi-solid foods if at all. This is problematic, since nutrition is critical during diarrheal episodes.

Mothers in the project area are aware that ORT is being offered in the Rural Health Centers (RHCs) for treatment/for replacement of fluids, and they are also aware that

ORT corners exist in each RHC in Chipata district and most health centers in Chadiza District. However, some of the mothers are not aware of the contents of an ORS sachet, as a result they do not know what to give when ORS has run out. Also, there are mothers who lack confidence in the use of ORS, and believe that antibiotics or anti-diarrheal drugs or traditional medicines (herbs, like mango or guava leaves) are a better choice.

#### 4d.3 Case Management of Diarrheal

**Diseases Objectives** Increase the percent of children less than 24 months of age with diarrhea during the last two weeks who were treated with: ORS from 81.1% to 90%; cereal-based ORT from 4.1% to 25%.

#### 4d.4 MOH Protocols & Practices

The Ministry of Health in Zambia has made control of diarrheal diseases a priority, acknowledging the close tie between diarrheal diseases and the malnutrition which is at the root of childhood morbidity and mortality. The DCM objectives of the Fourth National Plan (1989-1993) include promoting good maternal hygiene and food preparation habits, breast-feeding in order to reduce the risks of bottle-feeding, and the proper management of diarrhea both at home and by health professionals. Some activities which have been undertaken by the MOH are training TBAs and CHWs on diarrhea, establishing ORT corners in all health centers, ensuring a regular and adequate supply of ORS packets to Rural Health Centers, and intensifying health education on diarrhea prevention and treatment.

The MOH case management strategy includes the four components of fluids, feeding, appropriate drug use, and referral. For home-based therapy, all anti-diarrheal drugs provided to Ministry of Health facilities were removed, and ORS was fully upheld as "the drug of choice" for diarrhea. In the event that ORS is unavailable, the Ministry advises the use of sugar-salt solution only if properly made according to the instructions of community health workers and other health professionals. In addition to these, the MOH of Zambia endorses the use of thin cereal-based porridges (maize meal, millet, sorghum) and rice or maize water, fruit juices, or water. Small and frequent feedings are advised (5-7 per day) and continued breast-feeding in the case of breast-fed infants. Home therapy should be stopped and the child taken to a community health worker or health center if (1) the diarrhea persists longer than three days, or (2) the child develops any of several specific danger signs, such as blood in the stool.

**4d.5 Approach** The project plans to intensify the already existing health education campaign on public awareness of diarrheal disease prevention and treatment. In addressing these issues, ADRA will focus chiefly on the mother, the CHW, and the TBA as the primary care givers. During the first two and a half-years of the project, 100

new and 50 current CHWs will be trained in the project interventions. They will be trained and assisted in promoting key intervention messages to the individual mothers, families, and community groups. CHWs will learn and teach health promotion/disease prevention skills and home management methods for diarrhea. The TBAs will similarly be given training in diarrhea prevention and treatment. For content of training in diarrhea control, see Table D; CHW Manual (Annex VI), pages 22-29 on prevention, 43-60 on sanitation, 70-73 on personal cleanliness; and TBA Training Manual (Annex VII), page 18.

Mothers will be taught by CHWs to provide other home available fluids such as maize water. The project will train community health workers and traditional birth attendants (who, again, are simply additions to the current numbers and to be trained along MOH guidelines) in diarrheal diseases, and also promote the utilization of already existing ORT/Family Health corners. Teachers will be trained as trainers in the Child-to-child program by project staff in cooperation with MOH and MOE. Community leaders will be instructed so they can confirm the message given by HC staff, CHWs, TBAs, and children.

While ORS sachets are available in the project area, the supply is not a steady and continuous one, so the project will endeavor to strengthen the system of distribution by instituting monthly inventory checks and resupplying CHWs and TBAs when they deliver their monthly reports; currently CHWs are resupplied only once in two months.

**4d.6 ORS** One of the key messages given to mothers by the MOH and its health workers is "The mother who gives ORS saves life". ORS is usually available to mothers in the project area. ORS sachets are given out free of charge at Rural Health Centers and by CHWs when the mother takes a child with diarrhea to be seen by health center staff, or by a community health worker.

**4d.7 Home Available Fluids** The home available fluids common in the project area are: rice water, pounded maize water, salt and sugar solution, sorghum and millet (pounded) water.

**4d.8 Health Education** The main DCM messages which the project will give mothers are those already used by MOH workers. These are: "Give ORS", "Continue breast-feeding", "Give other fluids", and "Continue feeding". The following are specific messages given to mothers in regards to administering ORS and other fluids: "Give ORS often in small amounts (1 cup for children)"; "Give other fluids such as boiled water (cooled), maize water, tea, and soup" (For recipe, see Annex VI, page 25a.)

"Give breastmilk."

Ethnographic studies are planned on DCM. Results of this study will be utilized to develop IEC materials. See appendix XI for additional key messages on DCM.

**4d.9 Prevention** CHWs, TBAs, community leaders, and Child-to-child trainers will be given messages related to the following to prevent diarrhea: early and exclusive breastfeeding the first four months, breastfeeding to continue during diarrhea; improved weaning practices; use of clean water; hand-washing; use of latrines; proper disposal of stools; and immunization against measles.

**4d.10 Population** Estimated beneficiary population of children:

0-11 months	4,967
12-23 months	4,166
Total under two	9,133

Each mother will have at least four contacts/home visits by CHWs, TBAs, project staff and/or hospital/HC staff to reach the desired level of coverage of ORT knowledge and use. (9,133 children x 4 visits for year one = 36,532)

#### Reference Materials

1. Guidelines for Health Workers on Diarrhoea Case Management and Prevention. Published by the Ministry of Health, Zambia, 1992.
2. Management of Childhood Illnesses. WHO (The Division of Diarrhoeal and Acute Respiratory Disease Control), and UNICEF, 1995.
3. Nutrition and Health in Community Programmes: A Teaching Manual. The National Food and Nutrition Commission, Zambia, 1993.
4. Werner D. Helping Health Workers Learn. The Hesperian Foundation, 1994.

**Section D4.e Pneumonia Case Management:** Not a project objective.

**Section D4.f Malaria Control:** Not a project objective.

#### Section D4.g Maternal and Newborn Care

**4g.1 Baseline Information** *Pre-natal care visits:* 89.9% had cards with space to record ante-natal care visits. 10.1% did not. 8.9% made one ante-natal visit. 89.4% made two or more visits. 1.6% made no ante-natal care visits.

*Knowledge of pre-natal care:* 28.1% knew that a pregnant woman should see a health professional within the first trimester. 69.6% said that the first visit should be in the middle of the pregnancy. 1.3% said it should be in the last trimester. 1.0% said they did not know when to see the health worker. No one said there was no need to see a health worker.

**Pre-natal care behavior:** 95.3% reported that they had a visit to a health facility for pregnancy/prenatal care during their last pregnancy. 4.7% said they had not visited a health facility.

It is of concern that almost one third of mothers surveyed delivered their last child with only the aid of a family member. Also, health-care seeking behaviors seem hampered by incorrect knowledge. For example, a majority of women thought that the best time to receive prenatal care is in the middle of the pregnancy.

National maternal mortality based on hospital data was 202/100,000 live births. Major underlying causes were identified as: young age at first pregnancy; lack of birth spacing; lack of knowledge about high risk pregnancies; deliveries by untrained personnel; poorly equipped health facilities; poor referral system; and some traditional practices during labor. (Zambia Country Program)

The Chipata General Hospital 1995 report listed 15 maternal deaths. Major causes of maternal mortality were identified as obstructed labor; hemorrhage; sepsis; anemia; and eclampsia. MOH Regional data showed the three area hospitals had the following: 2376 normal deliveries; 395 abortive outcomes; 66 complications of puerperium; 44 antepartum hemorrhage and placenta praevia; 8 obstructed labor; 5 hypertension/toxemia; 5 postpartum hemorrhage/-retained placenta; 79 other related problems.

In the case of an obstetric emergency for a woman in the project area, a number of things may or may not happen and decide the fate of mother and/or unborn baby. In the worst-case scenario, a woman lives in a remote rural area (70 km may be the maximum distance to a hospital), the TBA is unavailable, the husband is gone, and there is no vehicle to take her to the health center or hospital. In the best scenario, the TBA is available at the first sign of trouble and is able to mobilize help to arrange transport to a hospital, and a vehicle is somehow accessible.

**4g.2 Maternal Care Objectives** (a) Increase the percent of mothers who have at least one prenatal visit with a health professional from 40.0% to 70%. (b) Increase the percentage of mothers who know a pregnant woman should first see a health professional during the first trimester of the pregnancy from 28.1% to 50%.

**4g.3 Prenatal Care** In the project area, there are 15 (fifteen) rural health centers (4 in Chipata District, 11 in Chadiza District), one health post, one hospital, and one private clinic (the latter three are all in Chipata District). The prenatal services offered at these facilities include one or more of the following: vitamin and iron supplementation, tetanus toxoid immunizations, weight

monitoring, blood pressure monitoring, detection and treatment of UTIs and STDs (hospital only). Problem pregnancies (abnormal blood pressure, edema (pre-eclampsia), anemia) are usually identified at the hospital and possibly health center level. Multiple pregnancies and previous Cesarean sections are referred.

**4g.4 Delivery/Emergency Care** The fifteen rural health centers and hospital mentioned above all offer intrapartum/delivery care. According to district and province level health care officers, the staff of these facilities are well-trained, but not sufficient in number, and poorly equipped to fulfill their responsibilities. The delivery kits (including gloves) provided to health centers and hospitals are of poor quality. There are not enough lab facilities, and the reagents needed for urine testing are unavailable. The delivery/operating rooms are small, poorly lit, there are no blood pressure machines, limited supplies of gloves, no needles for suturing, no sterilizers/-autoclaves. The essential elements of obstetric care, such as are available, are provided by professionals such as enrolled nurses, midwives, and clinical officers.

Transport capabilities for obstetric emergencies are limited to buses, ox carts (oxen are fewer in number due to disease), and bicycles, all of which can usually be hired. The farthest possible distance from emergency obstetric care (hospital) can be traveled in about 24 hours of walking, or 3-4 hours of driving.

**4g.5 Postpartum Care** Sexually transmitted diseases are currently identified through observation and after patient complaints. Mother is told to return for a check-up six days after delivery. Hemorrhaging is referred. The following services are routinely provided: physical/pelvic examination, breastfeeding and immunization counseling, nutrition counseling, family planning advice and contraceptives.

**4g.6 Constraints** Distance is probably the primary difficulty for women in need of maternal care. Training additional TBAs will provide better coverage of such services. Transportation and communication are another problematic issue. The only ambulance even remotely close to Chipata is 130 km away. In general, there are no telephones or radios with which to communicate emergencies. Though it is not realistic for the project to purchase ambulance(s), it can collaborate with the health delivery facilities and train its TBAs to increase the mothers' prenatal care/health care-seeking behaviors, and help make them aware of danger signs. Also, if health centers were kept open 24 hours every day through after-hours on-call staff, this may answer to some emergency obstetric situations.

At the health care facilities themselves, the constraints are those of limited supplies, even such basics as light and water. Possible solutions: training TBAs to get help from nearest health center; or, always keeping paraffin on hand in the event there is no power.

**4g.7 Population** Estimated beneficiary population for women of childbearing age (15-49), all of whom will be targeted for this intervention: 28,630.

**4g.8 Approach** TBAs will be given training in pre and post natal care, and in how to recognize danger signs for high risk pregnancies, raising the number of active TBAs by 50. CHWs will be taught the importance of good pre/post natal care and the risk factors for problem pregnancies. Essential knowledge will be transferred from these health workers to mothers. The training schedule for Year One is: refresher course for 25 CHWs and 10 TBAs; training for 20 new CHWs and 10 new TBAs. The training schedule for Year Two is: refresher course for 25 CHWs and 25 TBAs; training for 60 new CHWs and 30 new TBAs. In Year Three, 20 CHWs and 10 TBAs will be trained. For content of training in maternal care, see Table D; CHW Manual (Annex VI), pages 61-63; and TBA Training Manual (Annex VII), pages 5-10 on prenatal care and 11-13 on intrapartum care.

Community thought leaders (elders; members of Village Health and Development Committees; teachers; religious leaders; traditional healers; leaders of youth, men and women's groups) will be trained in the key maternal health messages so they may support the work of the CHW and TBA. CHWs will be assisted in conducting health education meetings with formal and informal community groups.

**4g.8a Maternal Care Providers and Birth Attendants Delivery:** 38.0% (114 of 300 who responded to this question) reported that a traditional birth attendant tied and cut the cord at the delivery of their last child. 29.3% (88 of 300) said that it was done by a family member. 28.7% (86 of 300) went to a health professional (physician/nurse / midwife). 2.0% (6 of 300) tied the cord themselves. For 0.7% (2 of 300) the cord was tied by someone other than those listed in question 42 and 1.3% (4 of 300) said they did not know.

Using the Zambia MOH "Manual for Traditional Birth Attendants" and the "Gold Standards for Maternal Care" developed by PVOCSSP, JHU in 1995, 50 untrained birth attendants will be trained as TBAs. Trained TBAs will be given refresher courses after assessing the needs. Nurse/midwives from the health centers and the project nurse/midwife will supervise the TBAs. CHWs and community leaders will be taught the importance of having a trained attendant at the delivery.

**4g.8b Prenatal Care** In collaboration with the MOH, the project will be involved in training personnel (traditional birth attendants) to provide prenatal care services and women's groups health education. Care will be provided by trained traditional birth attendants, who will receive patients either in their homes or will perform home visits for prenatal care, and educate the community in general on the benefits of prenatal care. Pregnant women will be urged to have at least two prenatal visits, with one specifically during the first trimester and the other during the last month of pregnancy (to determine factors which may complicate delivery and necessitate referral and transportation arrangements).

Prenatal care provided by trained TBAs will include the following: educating women on the importance of timely and appropriate prenatal care; identifying high-risk pregnancies; nutrition during pregnancy; essential immunizations; danger signs; common pregnancy discomforts and ways to relieve them; physical assessment and analysis of potential complications/risks based on obstetric history. Tetanus toxoid vaccinations will not be provided by TBAs, in accordance with MOH regulations which require that any type of injections be performed only by professionally trained personnel. The role of TBAs will not be that of vaccinators, but they will educate pregnant women and all WCBA on the importance of TT immunization for the health of both mother and child, will refer pregnant women to the nearest Health Center for such immunizations, and follow-up to ensure women received immunizations.

TBA kits will not include scales or blood pressure equipment. Women will be referred to the health center if TBA identifies a history of high blood pressure, or problems with either too much or too little weight gain. Also, common infections (syphilis, other STDs) will be referred to the health center for treatment.

Gestational age will be determined from information provided by the woman, and from the physical assessment. TBAs will be trained to recognize fetal position, and to take appropriate action (referral) in the event of malpresentation. After birth, the mother is referred to the Health Center for the Children's Clinic Card which will be a record of the child's growth and immunization status. Each TBA will keep a record of each woman whose pregnancy she is monitoring, and the outcome of each delivery she attends.

The major risk factors TBAs will encounter are early first pregnancy, more than 5 pregnancies, short stature, a preexisting medical condition (e.g. diabetes, hypertension, heart disease), and previous poor pregnancy outcome (C-section; stillbirth; instrumental delivery, etc.). For the first two, the TBA should regularly monitor the pregnant

woman, and arrange for transportation in the event of an emergency prior to or during delivery. For the third risk factor, the TBA should refer depending on specifics of the pregnancy (if prima gravida, large fetus). In the case of referral, the status of mother and/or child may benefit from the higher level of care available at the Health Center or hospital level, and no valuable time will be wasted. In the case the mother is not referred, but kept under observation, she may benefit from being able to deliver in her own home, by the trained TBA with whom she may be well acquainted.

CHWs and community leaders will be taught the importance of having good prenatal care.

#### **4g.8c Delivery/Emergency/Newborn Care**

In collaboration with the MOH, the project will train new and current TBAs in safe delivery practices. The training will be according to MOH guidelines, and the curriculum used will include MOH, MotherCare and Life-Saving Skills Manual for Midwives. At the present time the MOH curriculum does not include emergency skills for obstetric first aid; project staff will initiate such training.

Complications/emergencies are referred to the hospitals. The TBA obtains help by sending messages through the family to village leaders who send the patient to the nearest health center. Emergency transport is available only from the Chadiza District MOH office to the hospital in Chipata. The project will explore the feasibility of procuring stretchers to be kept by Village Health Committees or CHWs/TBAs for faster transport to the roads/centers.

Relationships with the referral hospitals will be strengthened as CHWs and TBAs visit them and learn of their services as part of their training. Staff from referral facilities will be consulted during CHW/TBA trainings and participate in the quarterly Project review process.

TBA training for care of the newborn includes: appropriate cord care; premature baby care; danger signs in newborns (birth injury, jaundice, infection, tetanus).

Supervision of TBAs will be done by Project staff in collaboration with MOH staff. A training on supervision is planned for MOH and Mwami hospital MCH staff. After training, supervision of the TBAs will be delegated to the clinical officer or nurse at the nearest rural health center. TBAs will report to the RHC.

Community meetings will be conducted to strengthen the messages the TBAs and CHWs will be giving regarding: the need for pre and post natal care; high risk pregnancies; danger signs to look for; and what to do when there is an obstetrical emergency.

**4g.8d Postpartum Care** The project will not be provide postpartum care services. In collaboration with the MOH, the project will train current and new CHWs and TBAs in postpartum care. Both cadres will encourage mothers to go for post-partum care. Since post-partum attendance is much lower than it should be, the project will conduct ethnographic research to determine barriers and methods of reducing those constraints. A system will be devised for CHWs to follow-up post-partum women.

**4g.9 Documentation** The Project will use the MOH Ante-natal/Post-natal Record to keep track of maternal care provided. (See Annex.) When lost, the mother is advised, and a new card is issued marked "Second Card".

#### Reference Materials

1. A Review of Maternal Care Messages and Curricula Used in PVO Child Survival Projects. Johns Hopkins University PVO Child Survival Support Program, 1995.
2. Assessing the Quality of Service. Module 6, User's Guide. Primary Health Care Management Advancement Programme, Aga Khan Foundation, 1993.
3. Marshall MA, and Buffington ST. Life-Saving Skills Manual for Midwives. American College of Nurse Midwives, 1991.
4. Morrow H, and Anderson F. Gold Standards in Maternal Care Curricula for Use by PVO Child Survival Projects. Johns Hopkins University School of Hygiene and Public Health, PVO Child Survival Support Program, 1995.
5. MotherCare: Lessons Learned 1989-1993. John Snow, Inc., in collaboration with USAID.

### **Section D4.h - Family Planning**

**4h.1 Baseline Information** Modern family planning has not been widely accepted in the country as a whole. The State of the World's Children 1995 lists Zambia's contraceptive prevalence rate as 15%. In 1995, Chadiza reported 851 new acceptors to equal 3616 participants, 20% of women of childbearing age. In Chipata district there were 2696 new acceptors and 6328 continuing acceptors to equal 11% of women ages 14-49. (Eastern Province MOH Statistical Office, 1995 cumulative report)

**Contraception:** When asked if they wanted to have another child in the next two years, 52.3% said yes. 44.3% said they did not know. Of the 125 non-pregnant women who said they did not want to have a child in the next two years or did not know if they did, 36.0% said they are currently using any method to avoid/postpone pregnancy. 64.0% reported they are not using any method.

Of the 43 who are using some form of birth control, 62.8% took the pill. 27.9% used condoms. 11.6% had tubal ligations. 4.7% used injections and also 4.7% used a

barrier/diaphragm. No one said that they were using: vasectomy, Norplant, IUD, foam/gel, exclusive breastfeeding, rhythm, or coitus interruptus as a method. Other methods not listed in the question were used by 18.6%.

Birth control usage is very low in the project area. Two thirds of women not wanting another child in the next two years (or not yet sure), use no birth control.

**4h.2 Family Planning Objectives** (a) Increase the percent of mothers of children less than 24 months of age who wish to delay their next pregnancy by two years who use a modern birth control method from 26.4% to 40% in the target region.

**4h.3 Current Family Planning Services and Constraints** All rural health centers and hospitals offer family planning services. There are also several NGOs which are providing family planning education and commodities (Planned Parenthood Association of Zambia) and working in close connection with the MOH. With the exception of condoms, contraceptive devices/supplies are not easily available, but health care facilities do offer a modest range of choices. The Chadiza District pharmacy, for example, makes available condoms, birth control pills; Mwami Adventist Hospital has injectable contraceptives (Depo-Provera) and can perform surgical sterilization procedures, and health centers throughout the project area have pills, condoms, and injectable contraceptives. The constraints in the area of family planning are those related to the difficulty of maintaining a sufficiently diverse, consistent, and geographically comprehensive system of contraceptive distribution.

ADRA has a separately funded Family Planning Health Services in Chipata District. 29 Community Based Distributors operate in the project's catchment area, distributing contraceptives and providing family planning education to couples in their respective catchment areas. Also, CHWs have been responsible for some time for family planning services at the community and neighborhood level. Occasionally, NGO or other outside donors have provided a larger array of family planning alternatives but this has not been sustainable; once the source of, say spermicidal jelly, "dries up", the users of that specific method tend to stop using contraceptives, temporarily or permanently.

It also appears that, although condoms are widely available, they are mainly used for STD protection, and not in the family planning context, where men are reluctant to take on contraceptive responsibilities and behaviors. Thus, targeting men (at church, political gatherings, social gathering places, village headmen meetings) in family planning education seems absolutely imperative.

**4h.4 Population** Estimated beneficiary population for women of childbearing age (15-49), all of whom will be targeted for this intervention: 28,630.

Estimated beneficiary male population: 27,485

**4h.5 Approach** The project will be involved in three aspects related to family planning services: training of personnel (CHWs and TBAs), motivating community leaders, and improving access to services. Community Health Workers and Traditional Birth Attendants, both new and existing, will be trained in the main messages related to family planning. They will meet with MOH and project staff monthly to discuss what they have done and how people are responding to their teaching. For content of training in family planning, see Table D; CHW Manual (Annex VI), page 66.

Since ADRA conducts a separately funded project in south Chipata for Community Based Distribution of contraceptives, collaboration between the two projects will be close. CS can benefit from the successful experience of the CBD project, using their methods and materials where applicable. It is expected that most existing CBD agents will be trained as CHWs to further strengthen the connection between family planning and other aspects of primary health care; at minimum, the CBD agents will be included in monthly CHW/TBA briefing sessions at the health centers.

Community meetings with elders, VHCs, teachers, religious leaders, traditional healers, leaders of youth and women's groups will be held in each sector to motivate families toward family planning and allay any of their concerns about it.

**4h.6 Health Education Messages** To be developed in collaboration with Zambia Family Planning Project/John Snow. (See Annex.)

**4h.7 Documentation** CHWs will note on their monthly report how many people they have advised/-referred and how many health talks on the topic they have conducted. CBDs report monthly to the ADRA Project Manager. Monthly clinic records report on number of women who used family planning services. Each female acceptor has her own card. (See Annex.)

#### Reference Materials

1. Facts for Life: A Communication Challenge. UNICEF, WHO, UNESCO, and UNFPA, 1993.
2. Family Planning Policy Guidelines and Standards, Republic of Zambia Ministry of Health, November 1995.

3. Kutengera Kalera Khomo Ndi Khomo. (Manual for Community Based Family Planning Services), Malawi, c.1993.

4. Potluri SKR, (ed.). Manual for Community Health Worker and His Training in Zambia. Office of Provincial Medical Officer, Central Province, Kabwe, 1981.

## Section D4.i - HIV/AIDS Prevention

### 4i.1 Baseline Information *Rate of HIV*

**Infection:** According to the 1995 data reported by Mwami Hospital's clinical officer for STD/AIDS, 18.3% (36 of 197) of asymptomatic blood donors tested positive. Of new hospital patients suspected of being infected, 79.8% (166 of 208) tested positive in 1995. The Chipata district reported 4,262 cases of AIDS during 1993 (According to the 1993 district annual report).

### 4i.2 Knowledge and Practice *Knowledge of*

**transmission:** 58.7% of mothers mentioned sexual intercourse as a method of transmitting HIV. 46.3% stated that sharing blood contaminated razors/needles was a means of transmission. 9.7% mentioned transmission from mother to child. 5.3% said that sharing clothing/towels could spread HIV. 3.0% reported that kissing was a means of transmission. 2.0% stated that the following could transmit HIV: shaking hands; mosquitoes; and eating contaminated foods. 16.3% stated other methods of transmission.

**Knowledge of prevention:** 30.0% of the mothers stated that AIDS can be prevented by avoiding unsterilized needles/razors. 29.0% mentioned abstinence as a method of prevention. 23.0% listed use of condoms in prevention of transmission. 11.4% mentioned mutual fidelity between uninfected partners. 3.3% stated the avoidance of unscreened blood transfusions. 49.5% reported that there were other ways of preventing AIDS.

Knowledge levels regarding HIV/AIDS prevention are relatively low. Only 11.4% of the women interviewed mentioned mutual fidelity between uninfected partners as methods of prevention. Only a little over half of the women mentioned sexual contact as a way of transmitting the HIV/AIDS virus, and less than 10% knew that it can be transmitted from mother to child.

The spread of HIV infection is or may be facilitated by several key factors, both cultural/social, and economic in nature. The tradition of *cleansing* for example, dictates that a newly widowed woman must sleep with or marry a relative (often a brother) of her deceased husband in order that she may be "set free" to remarry. If the husband died of AIDS, the woman may infect the partner who "cleanses" her, or she may become infected by her partner. This practice is further complicated by the fact that it is often concealed (i.e. because of the shame of an older woman

compelled to sleep with a boy, etc.), and not widely discussed, due to its sensitive, sexual nature. Poverty is also a factor in the spread of HIV, because it forces some young women to become involved in commercial sex work. Recreational drug use is rare in Zambia, so knowledge of this as a means of transmission is low.

### 4i.3 Objectives for the prevention of HIV/AIDS

a) Increase the percent of WCBA who know the means of HIV/AIDS transmission: mother to child, from 9.7% to 40%; blood, 46.3% to 65%; sexually, from 58.7% to 80%. (b) Increase the percent of youth who know the means of HIV/AIDS transmission: unprotected sex with infected persons, from 69.4% to 90%; dirty (bloody) needles/instruments, from 37.2% to 70%; mother to child from 2.8% to 40%. (c) Increase percentage of adult males who used a condom during their last sexual intercourse with a non-regular sexual partner from 29.1% to 55%. (d) Increase the percent of youth who say they have changed their sexual behavior to avoid getting AIDS from 42.7% to 75%.

### 4i.4 MOH Policies and Protocols and Other Activities

The goals of the MOH in this very sensitive area are mainly focused on health behavior change. These include efforts to educate the Zambian people regarding existing misconceptions and misinformation about AIDS, the close link between HIV/AIDS and other sexually transmitted diseases, and the critical need for informed, selective, and responsible sexual behavior.

It appears that condoms are widely available. However; men are reluctant to use them for STD protection, since they believe it hampers reproduction. Thus, targeting men for education is imperative. The health centers in the project area attempt to screen all mothers who come for antenatal care for STDs. However, since laboratory supplies are limited, the screening is done on the basis of clinical symptoms alone. If pregnant mothers meet the criteria for being diagnosed with STDs, treatment is provided--if drugs are available. If drugs are not available, they are referred with a prescription. Normally drugs are delivered to the health centers by the DMO who gets them from the regional MOH drug supply in Chipata. ADRA Zambia will continue to educate mothers in the community to attend antenatal clinic services at these health centers, be screened for STDs, and get prompt treatment for STDs if required. Those women who have STDs will be encouraged to refer their partner(s) for treatment. The antenatal card monitored by the MOH requires that every mother be checked for STDs.

**4i.5 Approach** HIV/AIDS intervention is a new activity for this project. A constraint in implementing HIV/AIDS interventions relates to the traditional opposition to condom distribution activities both inside

and outside religious circles in Zambia. This issue is non negotiable as far as the official local Catholic and most Protestant churches. However, ADRA/Zambia will try to develop a system, whereby accessibility for contraceptives, especially condoms, is improved through it's family planning and child spacing intervention. Inclusion of community groups, such as church institutions, political committees, village elders groups, in the education of the communities is imperative. Condom accessibility and distribution will be enhanced through integrating the HIV/AIDS and FP activities in all the health centers and health units, counseling and referral by CHWs to health centers and other centers in the community where condoms are available, by assuring the constant supply of condoms, and by linking with other NGOs, such as the Family Planning Association of Zambia, who are operating in the region. In addressing HIV/AIDS, ADRA will target Women of Child Bearing Age, adult males, and youth ages 6-16. During the first two and a half years of the project, 100 new and 50 current CHWs will be trained in the project interventions. Each CHW, in turn, will cooperate with the MOH, Mwami Hospital, and the project in community health promotion activities. They will be trained and assisted in promoting key messages to the individual mothers, families, and community groups.

The TBAs both new and existing, will similarly be given training in HIV/AIDS prevention. The training schedule for Year One is: refresher course for 25 CHWs and 10 TBAs; training for 20 new CHWs and 10 new TBAs. The training schedule for Year Two is: refresher course for 25 CHWs and 25 TBAs; training for 60 new CHWs and 30 new TBAs. In Year Three, 20 CHWs and 10 TBAs will be trained. For content of trainings in HIV/AIDS see Table D.

Community thought leaders (elders; members of Village Health and Development Committees; teachers; religious leaders; traditional healers; leaders of youth, men and women's groups) will be trained in the key messages of all interventions so they may support the work of the CHW and TBA. CHWs will be assisted in conducting health education meetings with formal and informal community group. Meetings will be conducted with combined groups as well as with men's and women's groups separately.

Another component of the CS activities involves training and facilitating Child-to-child health educators. This will be a joint activity of the project and the MOE which already has begun introducing this program into some schools. MOE and ADRA staff will cooperate in all aspects of project activities relating to Child-to-child. Child-to-child leaders will be trained in the key messages which they will communicate to school children as appropriate to their age level; messages will be given to other children through peer education. Anti-AIDS clubs for youth 6-16 years old have also already begun through

the MOE; ADRA's role will again be to facilitate. Schools having a teacher already trained in either anti-AIDS club objectives or in the Child-to-child program will be targeted for this aspect of the AIDS intervention. It is anticipated that 50 educators in 25 schools will receive further training and support from the project. CHWs will work with the teachers to facilitate drama, story-telling and other health education activities by children in their villages.

Specific activities of the AIDS prevention program include:

- Training health center staff, CHVs, TBAs, on IEC skills for HIV/AIDS
- Conducting community awareness campaigns through CHVs, TBAs, community leaders during their scheduled meetings.
- Developing outreach programs to youth through child to child activities. (incorporate school sports and other fun activities to keep youth busy and away from trouble)
- Outreach to youth through teachers, and drama clubs, (puppets, talks, skits, songs)
- Outreach to parents/men through CHVs and drama clubs.
- Counseling and medical services to teenagers/men needing care needing services.
- Condom availability to adolescents (11-16 years old) who wish to use them with specific instruction on appropriate use.
- Referral protocols for STD testing with treatment at the health centers.

The strategy for pre adolescent AIDS prevention focuses on the provision of specific key messages. The key messages are:

- "Be sexually abstinent until marriage"*
- "Resist having sex with 'sugar daddies' or 'sugar mummies'"*
- "Looking after yourself makes you strong and bright"*
- "Spend your time wisely and not sexually"*
- "Be active in sports and other club and community activities"*
- "Discuss with your parents and teachers if you have questions about sex"*
- "Avoid meeting boys/girls in secret locations for sexual activity"*
- "If anyone forces you to have sex, report to authorities"*

The messages for adolescents are as follows:

- "All the above key messages"*

*"If you insist on having sex, use, but don't rely on, condoms"*

*"If you use condoms follow the correct procedure"*

*"AIDS has no cure"*

#### **4i.6 Health Education Messages**

*"AIDS is an incurable disease. It is caused by a virus which can be passed on by sexual intercourse, by infected blood, and by infected mothers to their unborn children."*

*"People who are sure that both they and their partner are uninfected and have no other sex partners are not at risk from AIDS. People who know or suspect that this might not be the case should practice safer sex. This means either sex without intercourse (penetration), or intercourse only when protected by a condom."*

*"Any injection with an unsterilized needle or syringe is dangerous."*

*"Women infected with HIV should not become pregnant. There is a one-in-three chance that their babies will also be born infected with HIV."*

These messages will be conveyed at health centers by health center staff for WCBAs, in the communities by CHWs/TBAs for WCBAs. during anti-AIDS clubs

meetings in schools for youth, by teachers, by youth peer groups/drama groups, and by CHWs for adult males.

Formative research will be conducted using WCBAs, adult males and adolescents separately. The purpose of this research will be to obtain information on sexual behavior and use it to develop appropriate IEC messages for promotion of family planning education and HIV/AIDS prevention. This study would also help determine the factors which influence the sexual behavior of youth from the parents point of view.

**4i.7 Population** Estimated beneficiary population for women of childbearing age (15-49), 28,630.  
Estimated beneficiary male population: 27,485  
Estimated beneficiary youth (6-15): 7,000

#### **Reference Materials**

1. Common Questions and Answers on HIV/AIDS/STD/TB. National AIDS/STD/TB/Leprosy Programme, MOH of Zambia, and WHO 1995.
2. Facts for Life: A Communication Challenge. UNICEF, WHO, UNESCO, and UNFPA, 1993.
3. Guidelines for the Clinical Management of HIV Infection and AIDS in Adults and Children (v. 1 and 2). Zambia National AIDS Prevention Programme and WHO, 1992.
4. Living with AIDS in the Community. WHO, 1992.
5. Mukonde CW. Too Young to Die. Zambia Educational Publishing House, 1992.
6. The Malawi Prescriber's Companion. MOH, Malawi, 1993.
7. Child-to-Child in Zambia Orientation Manual, UNICEF, 1993

## D.5 Schedule of field project activities

**Table C: Field Project Schedule of Activities**

	Year 1				Year 2				Year 3				Year 4			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
<b>1. Personnel in Position</b>																
a. Project Manager	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
b. Technical/Health Coordinator		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
c. Health Information System Manager			X	X	X	X	X	X	X	X	X	X	X	X	X	X
d. Community/Village Health Workers			X	X	X	X	X	X	X	X	X	X	X	X	X	X
e. Other support		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>2. Baseline Survey</b>																
a. Design/Preparation	X								X							X
b. Data Collection and Analysis	X	X							X							X
c. Feedback to Community		X								X						X
<b>3. Health Information System</b>																
a. Consultants/Contracts to Design HIS		X														
b. Develop and Test HIS		X	X													
c. Implementation			X	X	X	X	X	X	X	X	X	X	X	X	X	X
d. Feedback to Community			X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>4. Training</b>																
a. Design		X	X			X				X				X		
b. Training of Trainers			X	X	X	X	X	X	X	X	X	X	X	X	X	X
c. Training Sessions				X	X	X	X	X	X	X	X	X	X	X	X	X
d. Evaluation of Knowledge of Skills					X	X	X	X	X	X	X	X	X	X	X	X
<b>5. Procurement</b>																
a. Supplies																
- Other		X	X		X			X				X				
b. Equipment	X	X	X					X								
<b>6. Service Delivery to be Initiated</b>																
i) CDD			X	X	X	X	X	X	X	X	X	X	X	X	X	X
ii) MCH/FP			X	X	X	X	X	X	X	X	X	X	X	X	X	X
iii) Nutrition			X	X	X	X	X	X	X	X	X	X	X	X	X	X
iv) Immunization			X	X	X	X	X	X	X	X	X	X	X	X	X	X
v) HIV/AIDS			X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>7. Technical Assistance</b>																
a. Headquarters		X		X		X		X		X		X		X		X
b. Consultants																
<b>8. Progress Reports</b>																
a. Annual Reports					X								X			
b. Mid-Term Evaluation									X							
c. Final Evaluation																X

## Section E. HUMAN RESOURCES

### E.1 Organizational chart

See Annex XII.

### E2 Training and Supervision Summary

**DIP TABLE D: TRAINING AND SUPERVISION SUMMARY**

PVO/Country: ADRA/Zambia

Project Duration: Start Date October 1, 1995

Estimated Completion Date: September 30, 1999

TRAINEE		NO. OF HOURS			Per Month	CONTACTS
JOB TITLE	COURSE TITLE	Per Month		Supervisor		INTERVENTION(S)
		Monthly	In service			
CHW/TBA	GM EPI	16	16	Lead Staff with Health Center Staff	1	correct method of weighing, checking accuracy of/recording date of birth, plotting weight by age and connecting point to last point charted; interaction with mother: educational, informative, sensitive, motivational; distinguishing problem cases and prompt referral for medical attention and/or nutritional rehabilitation; asking/answering questions, giving appropriate counseling, explanations, recommendations. cold chain function and maintenance; significance of the six immunizable childhood diseases: consequences, benefits of vaccinating; key messages for parents and community; I.D. of high risk children and referral for vaccination at HC or promotion of immunization campaigns/outreach sessions
	FP	32	48	Lead Staff with Health Center Staff	1	the essentials of male and female reproductive systems; the purpose and importance of family planning, and answers to commonly asked questions and potential conflicts; listening and observation skills; key messages: both content and presentation are important; positive, non-inflammatory interaction with couples/community; basic types of contraceptives available and easily accessible in the project area; knowledge of correct use, possible difficulties (and solutions), and potential side effects and action to be taken
CHW/TBA	AIDS	20	10	Lead Staff with Health Center Staff	1	accurate information about transmission and prevention of HIV/AIDS; the connection between STDs and HIV infection (i.e.: STDs facilitate HIV infection); good interpersonal skills, listening, counseling; positive, supportive, nonjudgmental rapport; presentation of key messages targeting men, women, and youth; treatment of HIV/AIDS patients: good nutrition/hydration, rest, TLC, inclusion in everyday activities as much as possible
CHW	Nutrition/ Gardening/ Vitamin A	40	20	Lead Staff with Health Center Staff with Ministry of Agriculture Staff	1	signs of malnutrition and specific deficiencies (marasmus, kwashiorkor, night blindness, anemia, etc.); key messages and cooking demonstrations teaching balance, variety, sufficient amount in each meal, especially for children and pregnant/lactating mothers; positive, respectful, interaction with families and community, listening skills; building on what people know, since food beliefs and thinking are deeply rooted, and difficult to change; the basic elements of vegetables and legume gardening during the dry season; sources of Vitamin A, and their inclusion in each meal

TRAINEE		NO. OF HOURS			CONTACTS	
JOB TITLE	COURSE TITLE	Per Month	Supervisor	Per Month	INTERVENTION(S)	
CHW	Maternal Care	16	16	Lead Staff with Health Center Staff	1	general health education targeting pregnant women (nutrition, rest, good hygiene, danger signs which require immediate medical attention etc.); promote early TT vaccination and refer to the nearest HC; emphasize the critical need for timely and appropriate prenatal care, provided either by a TBA or at the HC/MCH Clinics; educate the community on the importance of maternal health, and involve community leaders, committees, etc. in ensuring the health of mothers, arranging a system for transporting obstetric emergencies; key messages delivered to all WCBA and community; CHW should be a resource person for all mothers with questions or concerns
CHW	Control of Diarrheal Diseases	16	16	Lead Staff with Health Center Staff	1	understand the spread of gastrointestinal microbes (fecal-oral route) and prevention; key messages on diarrhea prevention, treatment, and rehabilitation (MOH); promotion of ORS packets and home-available fluids (rehydration is key); promotion of ORT/family health corners in HCs; know and teach on the danger signs which mean child needs immediate medical attention; referral of severely dehydrated children, or those with dysentery
TBA	Prenatal Care/ Safe Deliveries/ Post-Partum Care	160	60	Lead Staff with Health Center Staff	1	present key messages (timely and appropriate prenatal care, TT immunization); physical assessment of pregnant woman take an obstetric/medical history; identifying high-risk mothers and referring; education/counseling on proper nutrition (iron-rich foods, adequate weight gain) and other pregnancy-related issues; education on danger signs/possible complications and when to access medical help immediately; preparation of the woman for labor and delivery; maintenance of a safe-birth kit normal deliveries performed cleanly/safely; management of appropriate first-aid if needed; arranging for a quick-response system (transportation, etc.) in the event of an obstetric or neonatal emergency; care of the newborn and immediate initiation of breast-feeding; counseling mother on child care, immunizations, exclusive breast-feeding; counsel and educate parents on family planning
Teachers/ Community Leaders/ Village Health committees	GM/EPI/ Nutrition/ Gardening/ Vitamin A	4 8	2 4	Lead Staff with Ministries of Health, Education, and Agriculture Staff	1	key messages promoting GM/EPI/Nutrition/Gardening/Vitamin A at community events, social gatherings, in schools through the Child-to Child program as needed, collaboration with the CHWs and TBAs in the community education/communication/information on the above topics
Teachers/ Community Leaders/ Village Health committees	FP AIDS	4 20	2 10	Lead Staff with Ministries of Health, Education, staff	1	key messages on FP delivered at community gatherings; educational activities on FP and HIV/AIDS which target men, specifically; support of the work of TBAs and CHWs motivational efforts to raise awareness of transmission and prevention of HIV/AIDS; listening skills; sensitivity training
Teachers/ Community Leaders/ Village Health committees	Maternal Care DCM	8 4	4 2	Lead Staff with Ministries of Health, Education, staff	1	key messages on the importance of early prenatal care; promotion of the trained TBAs in the community; obstetric emergency plan of action for the community; key messages on ORS/ORT corners in HCs; education on good hygiene in the home/community
Total		348	210		10	

**E.3 Training and supervision plan:** The project will train CHWs and TBAs in accordance with MOH guidelines. With the exception of the training coordinator, all trainers will be nationals, either project staff or MOH/District Medical Office personnel. The project will train 100 new CHWs and 50 new TBAs in six-week training sessions. The trainees will spend about 20% of the training time either in the field or in practice sessions which will provide the potential for applying newly acquired concepts and utilizing new skills. Evaluation will take place throughout the training, with trainers maintaining a performance checklist for each trainee. MOH curriculum will be utilized to train CHWs and TBAs, and mastery of specific concepts and skills will be evaluated. Each CHW and TBA will be assigned a catchment area; he/she will complete a report form which will be turned in every month to the health center responsible for overseeing his/her activities (see Annex).

Five project staff will function as supervisors of CHW and TBA activities, and make unannounced supervisory visits to assess the quality of care being provided. The ratio of health workers to supervisors will be 10 TBAs and 20 CHWs to each supervisor. Also, these supervisors will act as linkages in the Health Information System the project plans to help implement. Once a month, CHWs will all gather at their respective health center where they will submit their report forms. Project supervisors and their MOH/district office counterparts will tabulate the data, which will then be included in the district and province HIS, and also in the project's evaluation of health workers' activities.

#### **E.4 Community health workers**

The total number of Community Health Workers in the project will be 150. Already trained semi-active CHWs number 50. One hundred new CHWs will be recruited and trained. Recruitment will follow the MOH model of presenting the qualifications needed to the community and asking them to choose the person. The MOH defines essential qualifications for a CHW: respected in the community, long-term resident of community, literate, able to communicate, having sufficient time to devote to CHW duties.

CHWs work through the MOH hospitals/health centers and with Mwami Hospital. Each CHW reports to a specific health unit monthly. The ratio of CHWs to households will be 1:115 when all CHWs are trained.

Project staff will supervise individual CHWs quarterly with MOH staff. CHWs will meet monthly as small groups at each health center with MOH and project staff for in-service and monitoring of activities.

Very little dropout is expected for several reasons: a) CHWs are chosen by the community who will have a level of expectations for them; b) monthly meetings to discuss activities will be an encouragement for continued work; c) quarterly supervision in the field will sort out problems before they become large; d) CHWs will have the opportunity to save for a bicycle and purchase it at half cost; the project will pay for the other half; e) community meetings with thought leaders will affirm the work of the CHW.

#### **E.5 Community committees and groups**

Project staff will work with leaders of most community groups, training them in key messages for each intervention and enlisting their support/cooperation for project activities. CHWs will be encouraged to meet with groups in their respective catchment areas. The project field supervisors and MOH staff will coordinate and strengthen the integration of CHWs into the groups where they will deliver key intervention concepts. Project staff plan to participate with CHWs in ten community group meetings a month.

**E.6 Role of country nationals** Country nationals have the positions of field supervisors and HIS coordinator. In addition, the project has and will continue to rely heavily on temporary and part-time nationals for trainings and other field work. National staff have been involved in the writing of the DIP. One staff member has already spent ten days learning what her ADRA/Malawi counterpart is doing. National staff will receive in-service training in planning and personnel management from expatriate staff. For upgrading other skills, they will be sent for seminars/classes as the needs and opportunities arise.

**E.7 Role of headquarters staff** The project will have technical support and supervision from ADRA's regional office in Harare, Zimbabwe. This office is under the direction of Mr. Nick Brightman, MPH (Loma Linda University) who will visit the project three times per year for a period of three to four days per visit. The visits will provide opportunity for project evaluation, strategy planning and troubleshooting.

The ADRA/USA office will be represented by Mr. Milton McHenry of ADRA International. He will visit the project two times per year staying for one week per visit. His visits will provide quality control and ensure that project is following its design. At least two of his visits will coincide with those of the regional officer in order to provide opportunity for in-depth program monitoring and planning. Dr. Mike Negerie, Assistant Health Director at ADRA/I

is responsible for technical backstopping; he is expected to visit the project yearly for two weeks each.

## **Section F. PROJECT MONITORING/ HEALTH INFORMATION SYSTEM**

**F.1 HIS plan** Project progress will be monitored in several ways. The existing system of Health Center data collection will indicate trends in disease as well as use of services such as nutritional rehabilitation, family planning and pre-natal care. In addition, analyzing monthly activities and services provided to and with beneficiaries will indicate quantity of work done on project interventions. Formal and informal evaluations after each training will show training strengths and weaknesses. Ethnographic studies will determine methods and materials for health education on sensitive/difficult topics. Mid-term and final cluster surveys will measure impact on the target populations.

**F.2 Data variables** Data collection will begin with the Community Health Workers who each have a designated catchment area. The CHW monthly report will contain data collected from community leaders as well as that tabulated from their own records. Information collected from the community includes the vital statistics of births and deaths as well as number of children under two and number of pregnant women. Vital statistics are kept by the CHWs in exercise books which they maintain. From their own records, the CHW will tabulate: a) how many people they advised/treated/referred according to the situations for which they are trained; and b) how many times they conducted health education, on which topics.

Also beginning at the community level is the data collected by the Traditional Birth Attendants. (See Annex IV for TBA reporting form.) Their monthly reports contain: the numbers of pregnant women seen; pre-natal visits; home deliveries; days of labor; status of new mother; maternal deaths; health status of newborn; referrals to hospital.

CHWs and TBAs will turn in their reports at a monthly meeting conducted jointly by project and MOH staff at the Health Center to which the CHW or TBA is attached. (This system is already in place but not formalized or standardized. HC staff are encouraged, but not required, to collect monthly data.) As is currently done, HC staff will compile their monthly reports which are sent on to the District and then to the Regional MOH. Project staff assisted by MOH personnel will routinely, randomly check on CHWs and TBAs to determine the validity of their data. Project staff will also complete monthly reports of their training, supervision, and monitoring activities.

With each training will be pre and post tests to determine areas of need. Project and MOH staff will together devise supervisory worksheets to determine levels of CHW and TBA competency. Project and HC staff will be trained in the use of these monitoring tools. Technical assistance may be needed.

Since there is a shortage of health education/health promotion teaching/learning aids, ethnographic research is needed to discover what materials and methods would work best. Certain aspects of AIDS prevention, family planning and cooperation with Village Health Committees, and nutritional habits need further study to find culturally appropriate avenues of education. Project and MOH staff along with a consultant will conduct the research.

Selected portions of the baseline surveys will be conducted mid-project. All portions will be conducted for the final evaluation. ADRA Headquarters will assist with these evaluations.

**F.3 Data analysis and use** Data tabulation and initial analysis will begin with the monthly meetings at each Health Center when CHWs and TBAs bring their reports. MOH and ADRA staff will do on-the-spot tabulations to facilitate immediate feedback to the participants. CHWs and TBAs can then take any conclusions/recommendations back to the Village Health Committees for discussions at the community level. MOH staff will put the data in their monthly report to be forwarded to the District. District level staff compile all reports and prepare a summary report which is sent to the Regional office. Project staff will take the same data from CHW and TBA reports plus selected information from health center OPD records to prepare quarterly reports to the local USAID mission and ADRA Headquarters.

ADRA will facilitate a quarterly meeting of all parties involved in child survival activities in the catchment area, both governmental and private voluntary agencies, to discuss the reports. Weak areas will be noted and arrangements made for strengthening them together. The HIS will thus lead to improved and targeted programs.

### **F.4 Other HIS issues**

Personal health data will not be kept by the project. In most cases, it is kept by the individual or parent. The project will assist the MOH in photocopying the new CHW forms as they are put into place. The main material need is logistical (transportation). Some health centers are remote and do not have a system for getting records to the main office in a timely fashion; the project will assist planning sustainable solutions with the health centers.

Training on the new CHW reporting form will begin in March. All existing CHWs should begin using it in April. The problem is that the population base is not clear, so percentages cannot be determined. Because each CHW has a large territory to cover, it may take several months to conduct a census. (As new CHWs are trained, the areas covered by CHWs will be smaller and more manageable.) In cooperation with the Village Health Committees, CHWs will develop household registers for their area to monitor vital statistics as well as pregnant women and children under two. For content of training in registry development, see CHW Manual (Annex VI), pages 74-76.

## **Section G     BUDGET**

**Working Budget** The following four pages are the detailed working budgets for the program. The first two sheets are the HQ costs and the field costs which are paid and managed at HQ for currency and point of payment reasons. The second pair of budgets are the actual costs that are spent and managed in the field.

# ADRA ZAMBIA CHILD SURVIVAL XI

## Headquarters budget

	First Year		Second Year		Third Year		Fourth Year		All Years	
	USAID	ADRA	USAID	ADRA	USAID	ADRA	USAID	ADRA	USAID	ADRA
<b>A. Personnel</b>										
1 Direct Backstopping										
a Grant Manager	4,688	1,563	2,321	1,656	2,460	1,756	2,608	1,861	12,077	6,836
b Health Advisor	5,625		2,321		2,460		2,608		13,014	
c Financial Compliance	4,688		1,275		1,352		1,433		8,747	
Subtotal direct backstopping	15,001	1,563	5,917	1,656	6,272	1,756	6,648	1,861	33,838	6,836
2 Technical support										
a Evaluation	750	250	750	265	1,800	281	900	298	4,200	1,094
b Accounting	850	283	600	300	636	318	674	337	2,760	1,239
c Support staff	950	317	750	336	795	356	843	377	3,338	1,385
Subtotal technical support	2,550	850	2,100	901	3,231	955	2,417	1,012	10,298	3,718
Subtotal Personnel	17,551	2,413	8,017	2,557	9,503	2,711	9,065	2,874	44,136	10,554
<b>E. Other HQ costs</b>										
1 Communication										
a Telephone	450		477		506		536		1,969	
b Fax	250		265		281		298		1,094	
c Mail/express	800		848		236		236		2,120	
Subtotal Communication	1,500		1,590		1,023		1,070		5,182	
2 Report Preparation	400		424		449		476		1,750	
Subtotal other HQ costs	1,900		2,014		1,472		1,546		6,932	
<b>Total HQ.</b>	<b>19,451</b>	<b>2,413</b>	<b>10,031</b>	<b>2,557</b>	<b>10,975</b>	<b>2,711</b>	<b>10,611</b>	<b>2,874</b>	<b>51,068</b>	<b>10,554</b>
Total HQ Field Costs	40,305	7,697	40,043	1,375	25,176	1,657	39,821	1,545	145,345	12,275
Total Field Costs	143,404	87,360	142,725	49,676	130,989	49,736	118,129	50,450	535,247	237,222
23 % Indirect Costs	46,727	22,418	44,344	12,330	38,442	12,444	38,769	12,620	168,282	59,812
4 % Unrecovered IdC		8,126		7,712		6,686		6,742		29,266
<b>TOTAL PROGRAM</b>	<b>249,887</b>	<b>128,014</b>	<b>237,142</b>	<b>73,650</b>	<b>205,582</b>	<b>73,234</b>	<b>207,330</b>	<b>74,231</b>	<b>899,942</b>	<b>349,129</b>

## ADRA ZAMBIA FIELD EXTERNAL COSTS

	First Year		Second Year		Third Year		Fourth Year		All Years	
	USAID	ADRA	USAID	ADRA	USAID	ADRA	USAID	ADRA	USAID	ADRA
<b>C. HQ field costs</b>										
1 Consultants										
a. Health	2,875	225	1,875	239	1,988	253	2,107	268	8,844	984
b. Management	2,875	200	1,875	212	1,988	225	2,107	238	8,844	875
c. Financial	2,875	6	1,875	6	1,988	6	2,107	7	8,844	24
d. Training										
e. Evaluation			10,000				11,200		21,200	
f. HIS	2,500		2,650		2,809				7,959	
g. A-133 Auditor	2,400		2,544		2,697		2,858		10,499	
Subtotal Contractual	13,525	431	20,819	456	11,468	484	20,379	513	66,191	1,883
2 International travel/per diem										
a. Health	2,600		2,544		2,697		2,858		10,699	
b. Management	4,800		2,544		2,697		2,858		12,899	
c. Financial	2,600		2,544		2,697		2,858		10,699	
d. Evaluation			6,292				7,070		13,362	
e. HIS	2,400		2,544		2,697				7,641	
f. DIP wkshp	2,400								2,400	
g. Baseline surveys	2,400						700		3,100	
h. Auditing	2,600	867	2,756	919	2,921	974	3,097	1,032	11,374	3,791
Subtotal travel/perdeims	19,800	867	19,224	919	13,708	974	19,442	1,032	72,174	3,791
Subtotal Consultants+Travel	33,325	1,297	40,043	1,375	25,176	1,457	39,821	1,545	138,365	5,675
3 Equipment										
a. Computers		6,400								6,400
b. Printer	900								900	
c. Copier	1,300								1,300	
d. UPS	480								480	
e. Fax machine	1,200								1,200	
f. Radio system	2,500								2,500	
g. Typewriter	600					200			600	200
h. Cold Chain equip.										
Subtotal Procurement	6,980	6,400				200			6,980	6,600
4 Other costs										
a. Baseline surveys										
b. DIP orientation										
Subtotal other costs										
<b>Total HQ Field costs</b>	<b>40,305</b>	<b>7,697</b>	<b>40,043</b>	<b>1,375</b>	<b>25,176</b>	<b>1,657</b>	<b>39,821</b>	<b>1,545</b>	<b>145,345</b>	<b>12,275</b>

## ZAMBIA CHILD SURVIVAL XI FIELD COSTS

ITEM	YEAR 1		YEAR 2		YEAR 3		YEAR 4		ALL YEARS		NARRATIVE
	USAID	ADRA	USAID	ADRA	USAID	ADRA	USAID	ADRA	USAID	ADRA	
<b>A. Salaries</b>											
# Administrative											
a Regional Director		3,570		3,784		4,011		4,252		15,617	1 pm/yr @ 3750/mo w/6% annual inflation
b Country Director		4,840		5,130		5,438		5,765		21,173	4 pm/yr @ 1210/mo w/6% annual inflation
c CS Project Director	7,000		7,420		7,865		8,337		30,622		14 pm/yr @\$500/m w 6% annual inflation
Subtotal Administrative	7,000	8,410	7,420	8,915	7,865	9,449	8,337	10,016	30,622	36,791	
# Technical											
a Cashier/bookkeeper	1,750		1,855		1,966		2,084		7,656		14 pm/yr @\$125/m w 6% annual infl.
b Medical Advisor		1,800		1,908		2,022		2,144		7,874	3pm/yr @\$600/m w 6% annual infl.
c HIS Coordinator	2,100		2,226		2,360		2,501		9,187		14 pm/yr @\$150/m w 6% annual infl.
d Training Coordinator	5,400		2,100		2,226		2,360		12,086		14 pm/yr @\$150/m w 6% annual infl.
e Logistics manager	2,800		2,968		3,146		3,335		12,249		Vehicle, supplies, control
f Field Supervisors	5,250		5,565		5,899		6,253		22,967		3 x14 pm/yr @\$125/m w 6% annual infl.
g Temporal Workers	7,000		7,420		7,865		8,337		30,622		Workers on leave from MOH
Subtotal Technical	24,300	1,800	22,134	1,908	23,462	2,022	24,870	2,144	94,766	7,874	
# Support											
a Secretary/data clerk	2,800		2,968		3,146		3,335		12,249		2x14pm/y @\$100/m w 6% annual inflation
b Watchmen	840		890		944		1,000		3,675		1x14pm/y @\$60/m w 6% annual infl..
c Driver	1,400		1,484		1,573		1,667		6,124		14 pm/yr @\$100/m w 6% annual inflation
Subtotal support	5,040		5,342		5,663		6,003		22,048		
Subtotal Salaries	36,340	10,210	34,896	10,823	36,990	11,472	39,210	12,160	147,436	44,665	
<b>B Fringe Benefits</b>											
# Employe health	4,800		5,088		5,393		5,717		20,998		Health and ADD insurance
# Employe housing	6,840		7,250		7,685		8,147		29,922		Rent/utilities for 3 flats
# Expat allowance	19,200	15,250	12,000	16,165	12,720	17,135	13,483	18,163	57,403	66,713	Shipping, Homebase, allowances,
Subtotal Fringe	30,840	15,250	24,338	16,165	25,799	17,135	27,347	18,163	108,324	66,713	
Total Personnel	67,180	25,460	59,235	26,988	62,789	28,607	66,556	30,323	255,760	111,378	
<b>C. Travel</b>											
# Domestic											
a Country Director	4,200		4,452		4,719		5,002		18,373		6 round trips Lusaka/chipata/year @\$350
b Hotels/perdeim	1,080		1,145		1,213		1,286		4,725		Hotels/per deim for Director
c Training	1,200		1,272		8,000		6,000		16,472		Travel & perdiem for TOT and Trainers
Subtotal Domestic	6,480		6,869		13,933		12,289		39,570		
# International											
a CS Lessons Learned	600								600		Regional exchange with CS IX in Malawi
b PHC Conferences			2,400		2,544		2,697		7,641		Administrative travel to CS conferences
Subtotal International	600		2,400		2,544		2,697		8,241		
Subtotal Travel	7,080		9,269		16,477		14,985		47,811		

ITEM	YEAR 1		YEAR 2		YEAR 3		YEAR 4		ALL YEARS		NARRATIVE
	USAID	ADRA									
<b>D Equipment</b>											
# Vehicle		32,000								32,000	1 toyota landcruiser
# Bicycle	1,000	5,000		4,000		2,000			1,000	11,000	300 bikes subsidized @\$40/bike
# Fax line		7,000								7,000	New phone and fax lines into office
# Voltage stabilizer		500								500	Electric equipment
# Desk, Table and Chair	2,500	800			500				3,000	800	Office furniture
Subtotal equipment	3,500	45,300		4,000	500	2,000			4,000	51,300	
<b>E. Supplies</b>											
# Office Supplies	4,000		4,240		4,494		4,764		17,498		Routine Office Supplies, paper, identification sig
# Teaching aids	1,400		1,484		1,573		1,667		6,124		Teaching supplies
# Nutrition Supplies	2,400		1,600	2,000	1,000	2,000	1,000	2,000	6,000	6,000	Nutritional teaching supplies/seeds
# CHW/TBA supplies	3,800		1,800		1,600		1,000		8,200		Notebooks, pencils,scales, TBA supplies.
# Cold chain supplies	900		400		300				1,600		Thermometers, cold boxes, monitoring supplies
# Medical Supplies	900	2,800	954	2,968	1,011	3,146	1,072	3,335	3,937	12,249	Basic supplies for referral hospital
Subtotal supplies	13,400	2,800	10,478	4,968	9,979	5,146	9,503	5,335	43,360	18,249	
<b>F. Contractual</b>											
# a Kitchen gardening		1,800		1,000		500		500		3,800	Agriculture consultant/trainer from Government
b Technical	2,600		2,000		1,000		500		6,100		Local water, SED, Literacy,
Subtotal Contractual	2,600	1,800	2,000	1,000	1,000	500	500	500	6,100	3,800	
<b>G. Other Direct Costs</b>											
# Training/services											
a Administrative ser	3,600		3,816		4,045		4,288		15,749		Country office supplies/monitoring
b MOH Trainers	11,760	9,600	35,280	10,176	11,760	10,787		11,434	58,800	41,996	10 training sessions @6 weeks each with 4 train
c Formative research	2,800								2,800		
d Staff training/upgra	3,000		3,180		3,371		502		10,053		Professional upgrading for CS staff
Subtotal Training	21,160	9,600	42,276	10,176	19,176	10,787	4,790	11,434	87,402	41,996	
# Communications	2,100		2,600		2,600		2,600		9,900		Telephone, fax, express mail
# a Office Rental		2,400		2,544		2,697		2,858		10,499	Office space at MAH @\$200
b Equipment Insura	500		530		562		596		2,187		Insurance against loss of equipment
c Utilities	180		191		202		214		787		Water/electricity
Subtotal Facilities	680	2,400	721	2,544	764	2,697	810	2,858	2,975	10,499	
# a Vehicle fuel/oil	7,700		8,162		8,652		9,171		33,685		For one vehicle
b Vehicle rental	6,500		3,000		3,180		3,371		16,051		Fuel/km costs for additional transport
c Vehicle Maintenanc	4,000		1,300		1,378		1,460		8,138		For project vehicle
d Vehicle Insurance	3,004		3,184		3,375		3,577		13,141		For project vehicle
e Shipping/Clearing	2,000		500		470				2,970		Customs and transport paperwork
f DIP/Baseline work	2,500				650		806		3,956		Costs related to in-country DIP preparation
Subtotal other	25,704		16,146		17,705		18,385		77,940		
Subtotal Other Direct Cost	49,644	12,000	61,743	12,720	40,245	13,483	26,584	14,292	178,216	52,495	
<b>TOTAL FIELD COSTS</b>	<b>143,404</b>	<b>87,360</b>	<b>142,725</b>	<b>49,676</b>	<b>130,989</b>	<b>49,736</b>	<b>118,129</b>	<b>50,450</b>	<b>535,247</b>	<b>237,222</b>	

## Section H SUSTAINABILITY STRATEGY

### H.1 Sustainability goals, objectives, and activities

DIP TABLE E: SUSTAINABILITY GOALS, OBJECTIVES, AND ACTIVITIES

Sustainability Goals	Objectives	Activities Required
1. MOH continues health promotion activities.	<ol style="list-style-type: none"> <li>In the area of MCH, the MOH will continue the provision of quality training, supervision and a system of incentives for TBAs and CHWs.</li> <li>Continued incentives for TBAs.</li> <li>CHW dropouts become minimal.</li> </ol>	<ol style="list-style-type: none"> <li>In collaboration with the community, devise a clear-cut, mutually adequate policy of remunerating TBAs for their services.</li> <li>Educate community regarding TBA remuneration.</li> <li>Monitor TBA remuneration.</li> <li>Establish regular supervision of CHWs.</li> <li>Train HC staff in supervisory checklists.</li> <li>Develop supervisory checklists.</li> </ol>
2. Church-based family planning, nutrition education and HIV/AIDS education.	<ol style="list-style-type: none"> <li>A transfer of primary health care knowledge to various levels of the PHC system.</li> <li>Sharing effective supervisory/-management strategies.</li> <li>CS activities are integrated into the MOH plan of action .</li> </ol>	<ol style="list-style-type: none"> <li>Involve religious leaders in planning/training aspects of activities.</li> <li>Collaboration with MOH, other PVOs.</li> </ol>
3. Ministry of Health will collaborate with Ministry of Education and the Ministry of Agriculture in educational activities and sensitizing the community.	<ol style="list-style-type: none"> <li>Collaborate with MOA/MOE to teach children gardening techniques and nutritional education which can then be shared with parents.</li> <li>Increase the desire for AIDS education</li> </ol>	<ol style="list-style-type: none"> <li>Train teachers in collaboration with MOH/MOE/MOA.</li> <li>Educate schoolchildren on the importance of a balanced diet (Micro nutrients, variety); peer education</li> <li>Drama groups, role play and other methods for AIDS education.</li> </ol>
4. Ministry of Agriculture and local nutrition NGOs will collaborate in continuing nutrition education / rehabilitation activities.	<ol style="list-style-type: none"> <li>Increase preventive awareness at the community level.</li> <li>Help community attain food security.</li> <li>Show value of locally available fertilizers/pesticides.</li> </ol>	<ol style="list-style-type: none"> <li>Educate CHWs, community.</li> <li>Teach women improved methods of food management, preparation, preservation.</li> <li>Promote income generating activities .</li> <li>Establish demonstration gardens.</li> </ol>
5. Local NGOs will take over family planning activities and education, and incorporate them into those already in progress.	<ol style="list-style-type: none"> <li>Ensure a stable supply of family planning commodities.</li> <li>Conduct family planning education.</li> <li>Increase use of FP services.</li> </ol>	<ol style="list-style-type: none"> <li>Monitor supplies, assess logistical problems and help to solve them.</li> <li>Target men, women, and youth through a variety of venues for FP education.</li> <li>Cooperate fully with other projects at every level.</li> </ol>

Sustainability Goals	Objectives	Activities Required
6. MOH will continue the HIS activities strengthened or initiated by the Project, with the aim of firmly integrating HIS in the national primary health delivery system.	<ol style="list-style-type: none"> <li>1. MOH will see importance of regular systematic reporting and make plans based on data collected.</li> <li>2. TBAs and CHWs will see value in the data they collect.</li> <li>3. Communities will benefit from the HIS.</li> </ol>	<ol style="list-style-type: none"> <li>1. Monthly meetings with HC staff, TBAs, CHWs.</li> <li>2. Quarterly meetings to review HIS/Project activities.</li> <li>3. Establish method of community feedback from HIS.</li> <li>4. Conduct meetings with community leaders to explain how the HIS can help them help themselves.</li> </ol>

**H.2 Sustainability plan:** By the end of the CS grant, the project expects to leave the following in place: a) 150 Volunteer Community Health Workers and 85 Traditional Birth Attendants who are trained and experienced in health promotion; b) church-based health education through the Seventh-day Adventist and Catholic churches; c) a strengthened working relationship between the Ministries of Health, Education, and Agriculture in areas of common interest; d) community expertise in food security and nutrition for children and pregnant/lactating women; e) expanded participation in family planning services; f) a more accurate community-based Health Information System.

To continue these activities it will be necessary to have some regular financial and supervisory input from the MOH as well as other organizations. As new information arises, CHWs and TBAs will need training to update their skills; the MOH will also need to continue the monthly monitoring system with some form of tangible incentive for these cadres. The MOH as well as PVOs will need to include church health leaders in their activities planning sessions. The Ministries of Health, Education, and Agriculture will need to continue meeting together on a regular basis to determine best methods of collaboration. Community leaders need to be kept informed of local markets and other issues affecting food security; families need continued encouragement in the proper feeding of their children. MOH and PPAZ need to ensure the continued supply of contraceptive commodities. Regional and district MOH need to facilitate the timely reporting of HIS to and from the Health Center level.

MOH and PVOs have been a part of the project from the time of the proposal writing. Mwami Hospital has a history of collaboration with the MOH; in fact most of its national medical personnel are MOH employees seconded to the hospital. Mwami has also been working closely with PPAZ in the supply of family planning commodities for both the hospital and the ADRA CBD project. A broad range of representatives from the MOH, MOE, MOA,

PVOs, religious organizations, and other government and non-government entities with an interest in maternal/child health participated in the five day Detailed Implementation Plan Workshop. Collaboration has been there from the planning stages and will continue throughout monitoring. Key agencies are aware that the project has a limited life span and that they must assume an increasing amount of responsibility for activities if they are to continue.

**H.3 Community involvement:** The community will be heavily involved in planning sustainability strategies for CHWs, TBAs, food security, and the HIS. Community members will select their own candidates for CHW/TBA training and will be part of the process of deciding how they can be maintained. Since the entire community will benefit from their increased knowledge and experience in nutrition and food security, it is expected that they will continue to cooperate with appropriate agencies such as home-craft and agricultural extension workers. As community leaders participate in regular HIS feedback sessions and see how that information is beneficial, they will want to continue the same system even after the project is over -- and they will retain the skills to do so.

Information gathered from the community indicates that general priorities center on access to clean water, food security, and freedom from disease. Members appear eager to have project activities in their villages and willingly cooperated with baseline exercises. Project staff will make concerted efforts to integrate felt needs with project objectives and activities.

**H.4 Phase-over plan:** Most project activities will be fully integrated with the MOH, MOE, and/or the MOA from the beginning. For example, all training and supervision of CHWs and TBAs will be done jointly with the MOH. The role of the project is to organize, facilitate, assist, and monitor; the MOH will actually continue to be in charge of the CHWs and TBAs as they are currently. While the basic MOH curricula will be followed, ADRA

staff will ensure that all aspects of CS interventions are thoroughly covered. Refresher courses in CS interventions for existing CHWs and TBAs will also be conducted jointly with MOH staff. Using this method, trained CHWs and TBAs will be fully accepted by the MOH and the community. Workshops for MOH staff in Quality Assurance and supervision will ensure that their skills are in place to continue all activities once the project has ended.

The HIS is also a joint activity of the project and the MOH but it will require more input from the project until the system is functional. The project has initiated a revised CHW reporting form which has been accepted by the MOH at regional and district level. Project staff have begun training CHWs and MOH staff at each health center. Once data collection begins, project staff will meet with CHWs, TBAs, and MOH staff at each health center monthly. Together MOH and ADRA staff will summarize and analyze the data before it is sent to the district office. MOH staff as well as CHWs/TBAs will thus gain valuable skills and experience in the Health Information System. As the HIS becomes functional, more and more

responsibility will be given to the MOH for collection, tabulation and interpretation of the data. By the fourth year, project responsibilities in this and other activities will be in a supportive rather than an initiative role.

Another component of the CS activities involves training and facilitating Child-to-Child health educators. This will be a joint activity of the project and the MOE which already has begun introducing this program into some schools. MOE and ADRA staff will cooperate in all aspects of project activities relating to Child-to-Child. Anti-AIDS clubs have also already begun through the MOE; ADRA's role will again be to facilitate. Thus phase-over has already begun. The activities really belong to the schools, with ADRA simply assisting what they have already started or had hoped to start.

**H.5 Cost recovery:** An experiment will be made with the assembling and selling of birthing kits; MOH and project staff will work together in the design of the kits and strategy for introducing them to the community.

# ANNEX I

## RESPONSE TO PROPOSAL REVIEW COMMENTS

## ANNEX I. RESPONSE TO PROPOSAL REVIEW COMMENTS

Percentages of contribution by intervention have been slightly altered to reflect information gained from the baseline survey and DIP workshop. The new percentages follow: Immunization, 15%; control of Diarrheal Diseases, 15%; Nutrition, 25%; Maternal Care/Family Planning, 25%; HIV/AIDS Prevention, 20%.

Objectives have been expanded and include baseline as well as target levels. See table B.

In consultation with Regional and District Management Teams, the monthly CHW reporting form was revised. It now includes process indicators for number of referrals by condition and number of educational sessions conducted by topic. CHW reports are completed monthly and turned into the supervising health center together with a project supervisor. HC staff will discuss individual and collective reports with CHWs and TBAs in a regularly scheduled monthly meeting

Detailed maps of the project area have been included. See section C . 1

### Case Management of Diarrheal Diseases

As described in MOH Guidelines, the fundamental strategy for diarrheal control is good case management which includes four key components: fluids; feeding; appropriate drug use; and referral. Child Alive will emphasize the components of fluids, feeding, and referral.

Fluids used in home therapy vary according to Province. In the Project catchment area, thin porridges made from maize meal, sorghum, and millet are appropriate. ORS will also be promoted. Both methods of fluid treatment are necessary since ORS may not be available in every circumstance.

The USAID Mission in Zambia has a Child Health Project with a CDD component. One of their stated potential roles is to give long and short term technical assistance to the MOH "in guideline development, district action plan review, new training strategy development and implementation, training material development, and epidemic preparedness". Child Alive plans to be part of that process as it relates to Chipata and Chadiza Districts.

### Nutrition

An objective for improvement in nutritional status has been added: Decrease the percent of children less than 24 months old who are underweight for age from 31% in Chadiza District to 20% and from 26% to 20% in Chipata South .

CHWs will be trained in general maternal/child nutrition as specified in the MOH Training manual and the maternal Guidelines. Families needing specialized instruction will be referred to Health Center staff who have been trained.

The issue of selling seasonal food for money will be addressed on both the educational as well as the production level. CHWs, TBAs, and communities will be taught the importance of eating vegetables. CHWs and school teachers will encourage vegetable growing and consumption in the Child to Child and SHARE programs. Teachers will be encouraged to implement SHARE which develops students' gardening skills. Collaborating with local agricultural extension workers, farmers will be taught how to grow vegetables year round instead of growing them only with their cash crops.

The problem of anemia will be addressed through good prenatal care. When women come for prenatal care they are given iron supplements as needed. Prenatal visits from the first trimester will be stressed as of great importance. Knowledge levels will be raised through CHW/TBA training and community meetings. CHWs will individually monitor visits of pregnant women in their areas.

#### Maternal Care and Family Planning

The project plans to improve both the recognition of high risk pregnancies as well as their referral. HC staff are trained in both recognition and management, but many TBAs are not. Since less than 30% of all births are attended by a licensed physician or nurse (according to the Project Baseline), the training of TBAs in recognition of high risk pregnancies will be emphasized.

An objective has been added to address early prenatal visits: Increase the percentage of mothers who know a pregnant woman should first see a health professional during the first trimester of pregnancy from 28.0% to 50%.

TBAs are active in the target area and have an important and accepted role in community health. With 55 trained TBAs in Chadiza and 29 in Chipata South, the districts have identified the need for an additional 50 in the catchment area. Each TBA is attached to a health center for regular reporting, renewal of supplies, and upgrading. In 1995, Chadiza TBAs assisted 533 deliveries. Chipata data were not available.

Currently only a few TBAs are trained in modern family planning; Project plans call for upgrading the knowledge level and counseling skills of both old and new TBAs. With the MOH curriculum TBAs have an initial training of six weeks. The Project plans monthly updates with TBAs and Health Center Staff. Refresher courses will be conducted semi-annually.

Modern family planning is very low in the Project area. A portion of Project resources will be used to promote family planning through the Information Education Component. CHWs, TBAs, and community groups will be sensitized regarding its benefits and importance. ADRA has a separate Project for community based distribution of contraceptives (CBD) in south Chipata with plans to expand into Chadiza. At present there are 35 CBDs in south Chipata. The CBD project emphasizes service delivery as well as acceptance .

Following the strategy used in the ADRA/Malawi Child Survival Project, men will also be targeted for family planning education. Trainings will be conducted with local leaders who include Chiefs, Village Health committee members, elders, religious leaders, and traditional healers - a majority of whom are male. CHWs and TBAs will work with both men and women in the family unit.

#### HIV/AIDS Prevention

This intervention has been expanded to equal 20% of Project resources. See section D.4.i.3 in the DIP for the new objectives.

Major strategies for both men and women are: a) educating CHWs/TBAs/CBDs; and b) reaching youth in and out of school through the Child to Child program and anti-AIDS clubs; c) training community thought leaders in key messages. (See section D.4.i.5 in DIP)

#### Coordination

Each CHW is attached to a Health Center where s/he reports monthly. Existing CHWs are already integrated into MOH activities as will be the newly trained CHWs.

#### Health Information System

It was decided that an outside HIS consultant was not needed for two reasons: a) the MOH already had a structure in place; and b) two Project staff have education and experience in HIS design.

The HIS was built around the existing MOH system. Additions were made to the CHW reporting forms in collaboration with district and regional MOH Headquarters staff.

#### Sustainability

Since Project staff will be collaborating with the MOH in all activities, there will be little need for hand-over or phase-out at the end. As ADRA lead staff supervise CHWs, they will be assisted by MOH staff from the district office and/or the local health center. The Project will simply be strengthening what the MOH has already started putting in place.

Village Development Committees are, admittedly, the weak link in the work of community health in the Project catchment area. Even at national levels, MOH and other organization are struggling to implement recently defined roles of the VDC. Project staff will work closely with district level MOH to improve the skills of VDC members and their acceptance by the CHWs and TBAs as supervisors. Ethnographic research should reveal workable strategies.

**CONFINEMENT AND PUERPERIUM**

Date of confinement \_\_\_\_\_  
 date of discharge \_\_\_\_\_  
 Details of Delivery \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**MOTHER**

General condition on discharge \_\_\_\_\_  
 Breasts \_\_\_\_\_ Uterus \_\_\_\_\_  
 BP \_\_\_\_\_ Perineum \_\_\_\_\_  
 Urine \_\_\_\_\_ Other \_\_\_\_\_

**BABY**

Birth weight \_\_\_\_\_ Discharge weight \_\_\_\_\_  
 Method of feeding \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**DATE FOR POST NATAL EXAMINATION** \_\_\_\_\_

**POST NATAL VISIT** Date \_\_\_\_\_

Symptoms \_\_\_\_\_  
 Duration of red lochia \_\_\_\_\_  
 Method of feeding \_\_\_\_\_

**EXAMINATION, General condition** \_\_\_\_\_

BP \_\_\_\_\_ Urine \_\_\_\_\_

Abdomen \_\_\_\_\_

Vaginal examination \_\_\_\_\_

Cervix per speculum \_\_\_\_\_

Treatment or advice \_\_\_\_\_

**NOTE:** TT<sub>1</sub> must be given as early as possible during pregnancy

TT<sub>2</sub> to be given at least 4 weeks after TT<sub>1</sub>

**MINISTRY OF HEALTH MF 19**

**ANTE - NATAL / POST NATAL RECORD**

Health No. 

--	--	--	--	--	--	--	--	--	--

 Clinic No. \_\_\_\_\_

Name \_\_\_\_\_ Age \_\_\_\_\_

Address \_\_\_\_\_ Para. \_\_\_\_\_

Grav. \_\_\_\_\_

Clinic \_\_\_\_\_

**Previous confinements:**

Date	Pregnancy	Delivery	Weight	A, SB, D

Past illnesses \_\_\_\_\_

LMP \_\_\_\_\_ EDD \_\_\_\_\_

General Heart \_\_\_\_\_

Examination: Lungs \_\_\_\_\_

Other \_\_\_\_\_

Date Hb. Antibodies Other

\_\_\_\_\_ Group \_\_\_\_\_

\_\_\_\_\_ Rhesus \_\_\_\_\_

\_\_\_\_\_ WR \_\_\_\_\_

**TETANUS TOXOID (write the date)**

TT<sub>1</sub> \_\_\_\_\_ TT<sub>2</sub> \_\_\_\_\_

TT<sub>3</sub> \_\_\_\_\_ TT<sub>4</sub> \_\_\_\_\_

TT<sub>5</sub> \_\_\_\_\_



# ANNEX II

## PROJECT AND AREA MAPS

# ADRA ZAMBIA

CHILD SURVIVAL

TARGET DISTRICTS

CHIPATA & CHADIZA DISTRICTS

# ZAMBIA

## CHIPATA

Chipata District

Mwami

St. Francis

## CHADIZA

# MALAWI

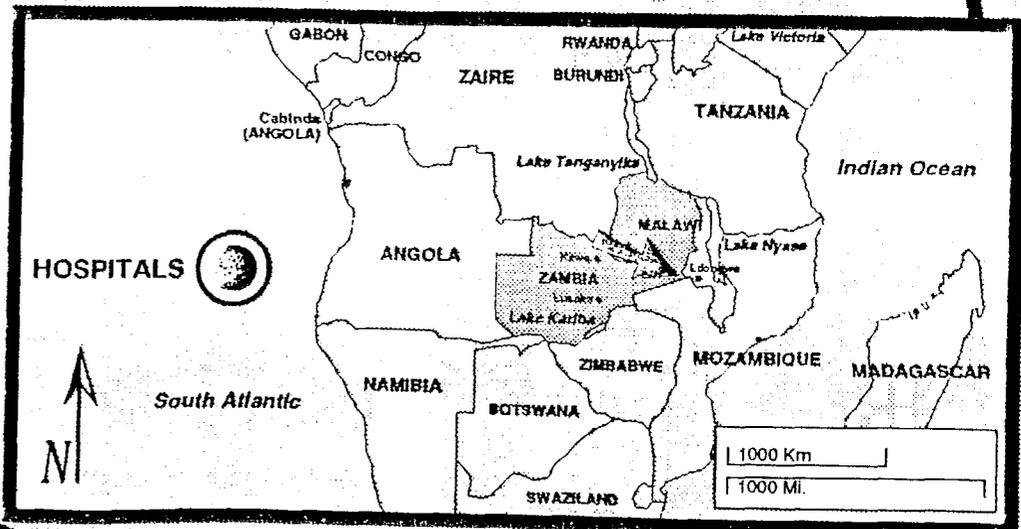
Lake Nyasa

Lilongwe

Lusaka

# MOZAMBIQUE

# ZIMBABWE



# ANNEX III

## COMBINED MULTI- COUNTRY BUDGET SUMMARY

# ADRA INTERNATIONAL CHILD SURVIVAL XI

## Multi-Country Budget Summary

	First Year		Second Year		Third Year		Fourth Year		All Years	
	USAID	ADRA	USAID	ADRA	USAID	ADRA	USAID	ADRA	USAID	ADRA
<b>A. Salaries</b>										
1 Direct Backstopping										
a Grant Manager	9,876	3,291	7,475	3,461	7,838	3,641	8,221	3,830	33,409	14,223
b Health Advisor	11,375	1,916	7,217	2,006	7,573	2,101	7,948	2,200	34,112	8,224
c Financial Compliance	7,126	812	2,436	861	2,582	913	2,737	967	14,881	3,553
Subtotal direct backstopping	28,376	6,020	17,128	6,329	17,993	6,654	18,905	6,998	82,402	26,000
2 Technical support										
a Evaluation	1,550	517	2,850	840	2,699	564	3,976	926	11,075	2,846
b Accounting	2,725	908	2,224	842	2,333	884	2,447	928	9,729	3,562
c Support staff	2,675	892	2,220	826	2,333	868	2,452	914	9,679	3,499
Subtotal technical support	6,950	2,317	7,294	2,507	7,364	2,316	8,875	2,768	30,483	9,908
Subtotal Personnel	35,326	8,336	24,421	8,835	25,357	8,970	27,780	9,766	112,885	35,908
<b>B. Other direct HQ costs</b>										
1 Communication										
a Telephone	1,180	250	1,260	261	1,323	273	1,390	285	5,153	1,070
b Fax	920	223	967	234	1,017	245	1,069	257	3,973	960
c Mail/express	2,041	414	2,159	437	622	462	623	488	5,445	1,801
Subtotal Communication	4,141	887	4,386	932	2,961	980	3,082	1,030	14,570	3,830
2 Report Preparation	1,200	267	1,262	279	1,326	292	1,395	306	5,183	1,144
Subtotal other HQ costs	5,341	1,154	5,648	1,212	4,288	1,272	4,477	1,336	19,753	4,974
Total HQ.	40,667	9,490	30,069	10,047	29,645	10,243	32,257	11,102	132,638	40,883
<b>HQ field costs</b>										
<b>F. Contractual</b>										
1 Health	6,025	1,058	5,166	1,106	5,427	1,156	5,701	1,208	22,319	4,528
2 Management	6,025	1,033	5,166	1,079	5,427	1,128	5,701	1,178	22,319	4,419
3 Financial	4,425	306	3,518	324	3,729	343	3,953	364	15,625	1,336
4 Training										
5 Evaluation			18,500		5,250		26,108		49,858	
6 HIS	2,500		4,150		2,809				9,459	
7 A-133 Auditor	4,400	1,000	4,664	1,030	4,944	1,061	5,240	1,093	19,248	4,184
Subtotal Consultants	23,375	3,397	41,164	3,539	27,585	3,687	46,703	3,843	138,827	14,467

	First Year		Second Year		Third Year		Fourth Year		All Years	
	USAID	ADRA	USAID	ADRA	USAID	ADRA	USAID	ADRA	USAID	ADRA
<b>B International travel/per diem</b>										
1 Health	6,600	333	6,754	343	7,128	354	7,524	364	28,007	1,395
2 Management	8,800	333	6,754	343	7,128	354	7,524	364	30,207	1,395
3 Financial	5,600		5,724		6,067		6,431		23,823	
4 Evaluation			11,792		2,300		15,939		30,031	
5 HIS	2,400		3,544		2,697				8,641	
6 DIP wkshp	6,600	400							6,600	400
7 Baseline	4,800	800		824	1,000	849	1,700	874	7,500	3,347
8 Auditing	5,280	2,767	5,597	2,903	5,933	3,046	6,313	3,197	23,122	11,912
Subtotal travel/perdiems	40,080	4,633	40,165	4,413	32,253	4,602	45,432	4,800	157,930	18,448
Subtotal Consultants + Travel	63,455	8,031	81,329	7,952	59,838	8,289	92,135	8,642	296,757	32,915
<b>C. Equipment</b>										
1 Computers		14,600								14,600
2 Printer	900	1,300							900	1,300
3 Copier	1,300								1,300	
4 UPS	480								480	
5 Fax Machine	1,200								1,200	
6 Radio systems	2,500								2,500	
7 Typewriter	600					200			600	200
Subtotal Procurement	6,980	15,900				200			6,980	16,100
<b>G. Other costs</b>										
a. Baseline surveys	5,000	2,400					600		5,600	2,400
b. DIP orientation	450								450	
Subtotal other costs	5,450	2,400					600		6,050	2,400
<b>Total HQ Field costs</b>	<b>75,885</b>	<b>26,331</b>	<b>81,329</b>	<b>7,952</b>	<b>59,838</b>	<b>8,489</b>	<b>92,735</b>	<b>8,642</b>	<b>309,787</b>	<b>51,415</b>
Country Programs								8,642		
Honduras Country Costs	111,597	35,020	110,428	39,088	113,491	37,957	110,520	28,027	446,036	140,092
Yemen Country Costs	120,459	100,140	163,820	44,257	143,126	22,798	140,521	24,166	567,926	191,361
Zambia Country Costs	143,404	87,360	142,725	49,676	130,989	49,736	118,129	50,450	535,247	237,222
Total Field Costs	375,460	222,520	416,973	133,021	387,606	110,491	369,171	102,643	1,549,209	568,675
<b>TOTAL DIRECT COSTS</b>	<b>492,012</b>	<b>258,341</b>	<b>528,370</b>	<b>151,021</b>	<b>477,089</b>	<b>129,223</b>	<b>494,163</b>	<b>122,388</b>	<b>1,991,634</b>	<b>660,972</b>
21.00 % Indirect Costs	104,299	54,078	110,630	31,773	100,068	27,633	103,335	26,171	418,332	139,655
6.00 % Unrecovered IdC		28,544		32,030		28,746		30,089		119,409
<b>TOTAL PROGRAM</b>	<b>596,311</b>	<b>340,964</b>	<b>639,000</b>	<b>214,824</b>	<b>577,157</b>	<b>185,602</b>	<b>597,498</b>	<b>178,647</b>	<b>2,409,966</b>	<b>920,036</b>
								Match		27.63%

# ANNEX IV

## HIS FORMS

# TEMPERATURE MONITORING CHART



Health Facility \_\_\_\_\_  
 District \_\_\_\_\_  
 Province \_\_\_\_\_

Responsible Officer \_\_\_\_\_

Year \_\_\_\_\_

Refrigerator  
Freezer

Electric

Paraffin

Gas

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
January	a.m.																																
	p.m.																																
February	a.m.																																
	p.m.																																
March	a.m.																																
	p.m.																																
April	a.m.																																
	p.m.																																
May	a.m.																																
	p.m.																																
June	a.m.																																
	p.m.																																
July	a.m.																																
	p.m.																																
August	a.m.																																
	p.m.																																
September	a.m.																																
	p.m.																																
October	a.m.																																
	p.m.																																
November	a.m.																																
	p.m.																																
December	a.m.																																
	p.m.																																



# MINISTRY OF HEALTH/CDD PROGRAMME

## CDD/ORS MONTHLY RETURNS

Health Centre:.....

District:.....

Province:.....

AGE GROUPS	CASES OF DIARRHOEA	CASES WITH BLOOD IN STOOL	NO. TREATED WITH ANTIBIOTIC	NO. TREATED WITH ORS	DEATH
0-11 MTHS					
1-2 YRS					
3-5 YRS					

Balance brought forward:.....Sachets

ORS Received this month:.....Sachets

Total balance:.....Sachets

ORS used this month:.....Sachets

Amount wasted:.....Sachets

Balance in stock:.....Sachets

COMMENTS:.....

.....

.....

Reported by:.....

DESIGNATION:.....DATE OF REPORTING.....

cc: CDD SECRETARIAT.  
MINISTRY OF HEALTH.  
OLD MEDICAL STORES.  
BOX 30205.  
LUSAKA.

cc: THE PROVINCIAL MEDICAL OFFICER.  
cc: DISTRICT MEDICAL OFFICER.  
cc: OWN FILE.

EPI SKILLS OBSERVATIONS

Khum \_\_\_\_\_ Village \_\_\_\_\_ Date \_\_\_/\_\_\_/\_\_\_

# of Vaccinators in Session \_\_\_\_\_ Type of Session: Outreach  
Door to door  
Infirmary

Type of vaccinator \_\_\_\_\_

ORGANIZATION OF SESSION YES NO

- 1. Village informed of session \_\_\_\_\_
- 2. Area clean/shaded/light \_\_\_\_\_
- 3. Session organized \_\_\_\_\_

COLD CHAIN/VACCINE CARE

- 1. Carrier temperature 0 C- 8 C \_\_\_\_\_
- 2. Vaccines within expiration date \_\_\_\_\_
- 3. Vaccines protected from water \_\_\_\_\_
- 4. BCG protected from light \_\_\_\_\_
- 5. DPT/TT protected from freezing \_\_\_\_\_
- 6. Vaccines kept cold during administration \_\_\_\_\_
- 7. Diluent is cool \_\_\_\_\_
- 8. Carrier correctly packed \_\_\_\_\_
- 9. Open/unused vaccines destroyed after session \_\_\_\_\_

STERILIZATION

- 1. Cooks for 5 min high heat/15 min low heat \_\_\_\_\_
- 2. Equipment cool before used \_\_\_\_\_
- 3. Washes hands \_\_\_\_\_
- 4. Uses spirits/cotton \_\_\_\_\_
- 5. Sterile technique maintained \_\_\_\_\_
- 6. 1 needle/syringe per patient \_\_\_\_\_
- 7. Syringe/needle irrigated & soaked in water \_\_\_\_\_
- 8. Checks needles/syringes for damage \_\_\_\_\_
- 9. Disposal garbage \_\_\_\_\_



How much IV fluid would you give a 8 months child weighing 6 Kg with severe rehydration during:

- a) the first hour? ..... ( correct answer is 180 ml)
  - b) the next 5 hours? ..... ( correct answer is 420 ml)
- Were guidelines used to calculate the amount? YES or NO ( )

When do you prescribe an antibiotic for a child with diarrhoea given -DO NOT READ)

- a) Diarrhoea with blood ( )
- b) Suspected cholera ( )
- c) Other answers specify.....

When do you prescribe an antidiarrhoeal for a child with diarrhoea? ( Tick all responses given - DO NOT READ)

- a) Never ( )
- b) Other ( Specify) .....

What are the best ways to prevent diarrhoea? ( Tick all correct responses given - DO NOT READ)

- a) Breast feeding ( )
- b) Improved weaning practices ( )
- c) Plenty of clean water ( )
- d) Hand washing ( )
- e) Use of latrines ( )
- f) Dispose faeces properly ( )
- g) Measles vaccination ( )
- h) Other answers (specify) .....

TREATMENT

Initial treatment selected according to plan: (Tick the treatment selected).

PLAN A

- a) Home with no advice about ORS/home fluid ( )
- b) Home with only advice about ORS/home fluid ( )
- c) Home with ORS ( )
- d) Other answers ( specify) .....

PLAN B

- a) Treat with ORS in the facility ( )
- b) Other answers ( specify) .....

PLAN C

- a) Admit for IV rehydration ( )
- b) Refer for IV rehydration ( )
- c) Treat with ORS in the facility ( )
- d) Other answers (specify) .....

Are antibiotics prescribed/given, YES or NO

If antibiotics are prescribed/given, what is the reason

- a) blood in stool ( )
- b) suspected cholera ( )
- c) Other answers ( specify) .....

Is an antidiarrhoeal drug prescribed/given? YES or NO ( )

Does the health worker monitor the progress of rehydration while in the facility? YES or NO ( )

ADVICE TO CARETAKERS

If ORS is given or recommended to the caretaker, does the health worker:

- a) explain that ORS replaces fluids losses ( )
- b) explain/demonstrate how to prepare ORS ( )
- c) explain/demonstrate how much to give ( )
- d) check to see if instructions are understood ( )

- a) Food to give during and after diarrhoea ( )
- b) When to bring the child to a health worker for care ( )
- c) Using clean water ( )
- d) Proper hygiene (eg. use of latrines) ( )
- e) Breast feeding ( )
- f) Improved weaning practices ( )
- g) Handwashing ( )
- h) Measles vaccination ( )
- i) Other answers (specify) .....

/an,,,

HEALTH WORK INTERVIEW

Facility Name: .....

Name of the health worker: .....

Position, Title: .....

1. Attitudes: answer YES or NO to each of the questions. Are you satisfied with:

- a) ORS Supplies ( )
b) amount of supervision ( )
c) equipment available ( )
d) Clinical setting ( )
e) record keeping duties ( )
f) the way you are perceived by community ( )
g) respect you get from internal supervision ( )
h) time you have to spend with patients ( )
ii) way your knowledge/skills are used for diarrhoea ( )
j) treatment you give to children for diarrhoea ( )

2. Knowledge: If a child has diarrhoea, what question do you ask about the illness? ( check all questionsresponses)

- a) Number of days of diarrhoea ( )
b) Blood in stools ( )
c) Fever ( )
d) Presence of other illness ( )
e) Other answers (specify) .....

To decide if a child is dehydrated, what do you look for when you examine the child? ( Check all responses)

- a) General condition ( )
b) Presence of tears ( )
c) Sunken eyes ( )
d) Dry mouth and Tongue ( )
e) Thirst ( )
f) Skin Pinch ( )
g) Other answers ( Specify ) .....

What treatment and advice do you give the mother when you see a child with diarrhoea but no dehydration?

- a) Advice on ORS ( )
b) Advice on home fluids ( )
c) Advice to give extra food after diarrhoea stops ( )
d) Continue breast feeding ( )
e) Advice on proper weaning practices ( )
f) Advice on when to bring the child back ( )
g) Advice on how to prevent diarrhoea ( )
h) Other answers ( Specify) .....

Prepared by ORS/SSS

AP/an,,,

ASSESSMENT OF SUPPLIES AND FACILITIES

Facility Name: .....

1. Facilities: Answer YES or NO to each of the questions.

- (a) Is there an ORT- corner ( )
- (b) Is there adequate space for ORT treatment ( )
- (c) Is there sufficient furniture for ORT-treatment ( )
- (d) Are there facilities for mothers to wash hands ( )
- (e) Are there latrines for patients ( )

2. Equipment/Supplies: Answer YES or NO to each of the questions

- a) Have you run out of ORS during the last month ( )
- b) Have you run out of cups, spoons, measuring mixing utensils? ( )
- c) Sometimes drugs are used into the treatment of diarrhoea. Have you run out of these drugs? ( )
- d) If facility gives IV. Have you run out of IV fluids and infusion sets during the last month? ( )
- e) Have you run out of supplies for record keeping ( )
- f) Is there a weighting scale that works? ( )
- g) Is there a management chart on the wall of the ORT-corner or where the child is assessed and treated? ( )
- h) Is ORS stored properly? ( )  
( go and look at storage) ( )

3. Staff: answer YES or NO to each of the questions

- a) Is there a sufficient number of staff to handle diarrhoea cases? ( )

AP/an,,,

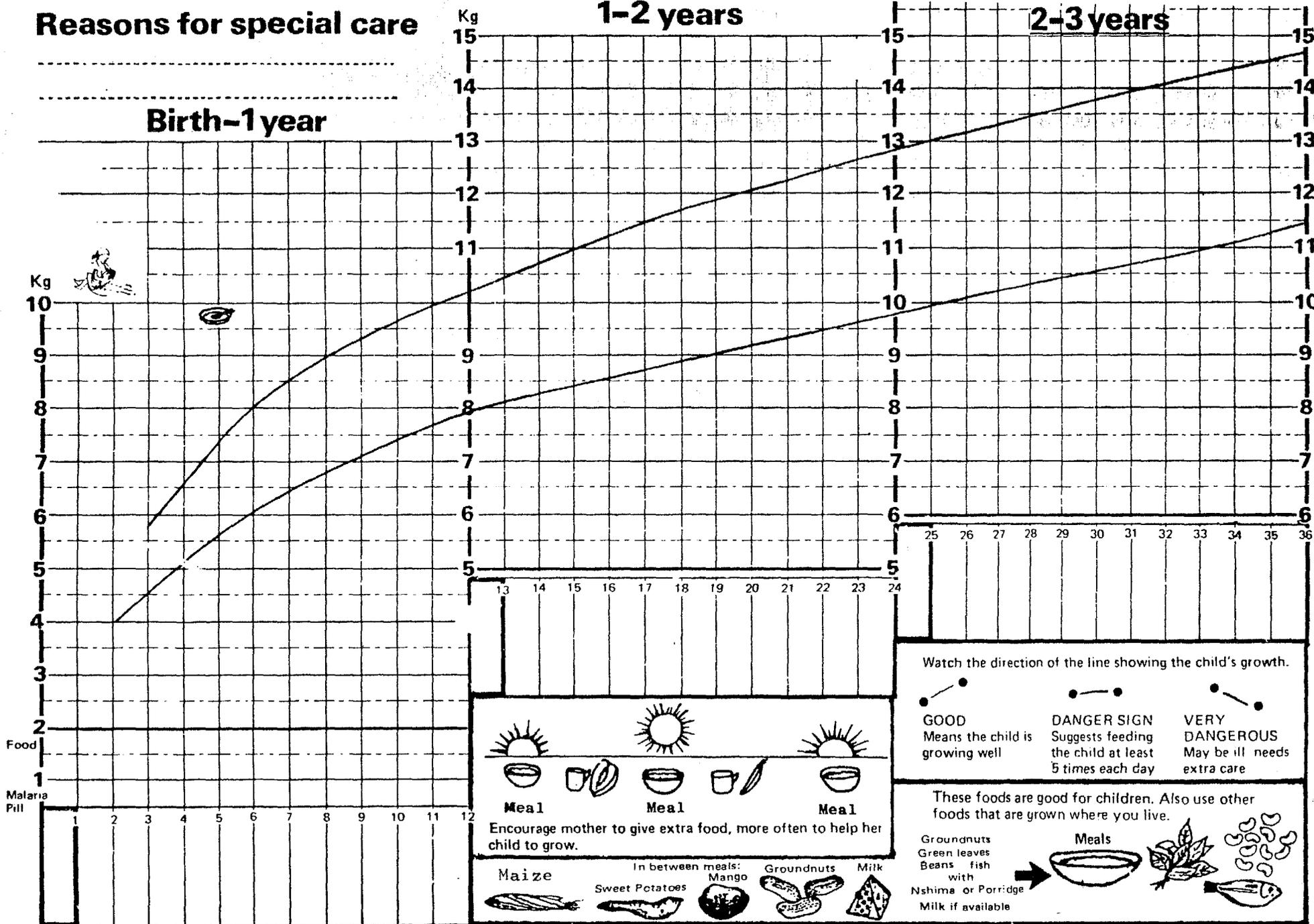
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# Reasons for special care

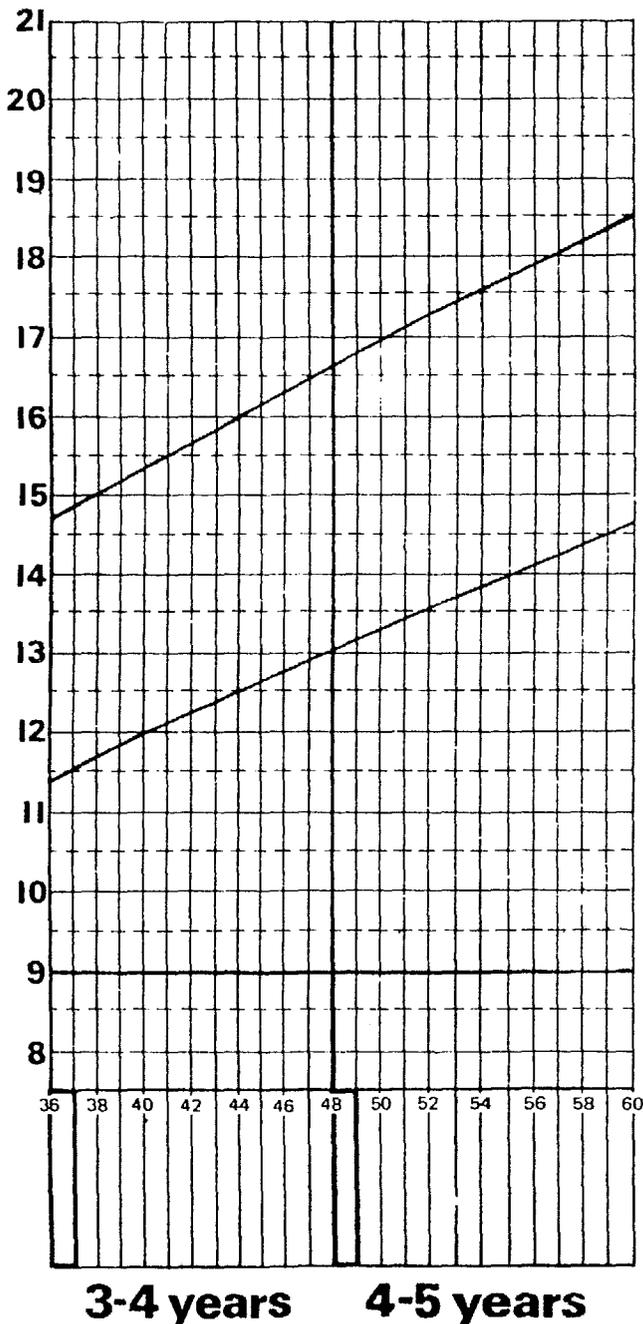
## Birth-1 year

## 1-2 years

## 2-3 years



# Children's Clinic Card



Clinic		Child's no.	
Child's name			
		Boy/Girl	
Mother's name		Registration No.	
Father's name		Registration No.	
Date first seen		Birthday-birthweight	
Where the family live: address			

BROTHERS AND SISTERS		
Year of birth	Boy/Girl	Remarks

IMMUNISATION AGAINST TUBERCULOSIS (TB)	
BCG <i>(at birth)</i>	Date: <input style="width: 80%;" type="text"/>
	Scar <input style="width: 80%;" type="text"/>

IMMUNISATION AGAINST POLIO	
OPV 1 <i>(at 2 months)</i>	Date: <input style="width: 80%;" type="text"/>
OPV 2 <i>(at least 4 weeks after OPV1)</i>	Date: <input style="width: 80%;" type="text"/>
OPV 3 <i>(at least 4 weeks after OPV 2)</i>	Date: <input style="width: 80%;" type="text"/>
OPV Booster <i>(at least 1 year after OPV 3)</i>	Date: <input style="width: 80%;" type="text"/>

IMMUNISATION AGAINST WHOOPING COUGH, TETANUS AND DIPHTHERIA	
DPT 1 <i>(at 2 months)</i>	Date: <input style="width: 80%;" type="text"/>
DPT 2 <i>(at least 4 weeks after DPT 1)</i>	Date: <input style="width: 80%;" type="text"/>
DPT 3 <i>(at least 4 weeks after DPT 2)</i>	Date: <input style="width: 80%;" type="text"/>
DPT Booster <i>(at least 1 year after DPT 3)</i>	Date: <input style="width: 80%;" type="text"/>

IMMUNISATION AGAINST MEASLES	
MEASLES <i>(9 months of age or soon after)</i>	Date: <input style="width: 80%;" type="text"/>

SCHOOL IMMUNISATIONS	
	Date: <input style="width: 80%;" type="text"/>

OTHER IMMUNISATIONS	
	Date: <input style="width: 80%;" type="text"/>

Clinic \_\_\_\_\_

Full Name \_\_\_\_\_

Date of Birth \_\_\_\_\_

WHEN TO GIVE IMMUNIZATION:

TT1: at first contact or as early as possible during pregnancy (even first trimester)

TT2: at least 4 weeks after TT1

TT3: at least 6 months after TT2 or during subsequent pregnancy

TT4: at least 1 year after TT3 or during subsequent pregnancy

TT5: at least 1 year after TT4 or during subsequent pregnancy

Childhood DPT/TT Immunizations

Number of doses      DPT      TT  
                                      

No information     

Dose      Date of Immunization

TT1      \_\_\_\_\_

TT2      \_\_\_\_\_

TT3      \_\_\_\_\_

TT4      \_\_\_\_\_

TT5      \_\_\_\_\_

5 doses give life long protection

There is no maximum interval between doses

3 DPT doses during childhood should be counted as 2 TT injections.

TT dose(s) received in school should be included in the required 5 doses

HOW TO ADMINISTER

0.5 ml of TT intramuscularly in left upper arm

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B.P. .... / .... mmHg

WEIGHT: .....

ANY ABNORMALITY ON PHYSICAL EXAM (see desk list)

.....  
.....  
.....

ANY ABNORMALITY ON PELVIC EXAM? (see desk list)

.....  
.....  
.....

TESTS DONE:

TYPE: ..... DATE: ..... / ..... / ..... RESULTS: .....

TYPE: ..... DATE: ..... / ..... / ..... RESULTS: .....

TYPE: ..... DATE: ..... / ..... / ..... RESULTS: .....

TYPE: ..... DATE: ..... / ..... / ..... RESULTS: .....

TYPE: ..... DATE: ..... / ..... / ..... RESULTS: .....

SUITABILITY OF CONTRACEPTIVES (specify) .....

.....  
.....

CLIENT'S CHOICE OF CONTRACEPTIVES: .....

CONTRACEPTIVE PRESCRIBED: .....

INDICATIONS FOR METHOD PRESCRIBED: .....

.....

OTHER ACTION / COMMENTS: .....

.....  
.....  
.....

EXAMINER'S SIGNATURE: ..... RANK: .....



REPUBLIC OF ZAMBIA

**FAMILY PLANNING CARD**

CLIENT'S NUMBER: ..... NAME OF CLINIC: .....

DATE: ..... / ..... / ..... YEAR OF BIRTH: .....

CLIENT'S FULL NAME: .....

MARITAL STATUS: .....

SPOUSE'S FULL NAME: .....

ADDRESS OR RESIDENCE: .....

REFERRED BY COMMUNITY BASED AGENT YES  NO

CONTRACEPTIVES USED PREVIOUSLY: .....

CLIENT'S COMMENTS ABOUT PREVIOUS USE: .....

.....  
.....

TOTAL NO. OF PREGNANCIES: ..... NO. OF LIVE CHILDREN: .....

DATE OF LAST DELIVERY: ..... / ..... / .....

HAS CLIENT HAD CAESARIAN BIRTH? YES  NO

PRESENTLY BREAST FEEDING YES  NO

HISTORY OF P.I.D. / S.T.D. ....

ANY ABNORMALITY OF MENSTRUAL CYCLE? L.M.P. ....

DATE: .....

**MEDICAL HISTORY** (circle if applies)

- 1. Severe persistent headaches
- 2. Jaundice
- 3. Goitre
- 4. Asthma
- 5. Tuberculosis
- 6. Heart disease
- 7. Renal disease
- 8. Thrombophlebitis
- 9. Diabetes
- 10. Epilepsy

Is the client taking medicine now? (if so specify) .....

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## Training and IEC Reporting Form

<i>PIN</i>	<b>REPORTING PERIOD</b>		
	<i>Quarter</i>	<i>Quarter Begin Date</i>	<i>Quarter End Date</i>
<i>Title</i>	<i>Project Year</i>	<i>Project Begin Date</i>	<i>Project End Date</i>
<i>Grantee</i>	<i>Grantee Number</i>		

TRAINING COURSES													
Topic <i>(see code)</i>	Hours/ Course	Total Person Hours	Total Number of Participants	Participants by Type									
				Phys	Nurses/ Midwives	CBD Workers	TBA	TOT/ Trainers	Adolesc.	Mgrs/ Superv.	Comm. Leaders	Policy Makers	Other
<b>TOTALS</b>													

IEC ACTIVITIES				
<i>IEC For Adults</i>		<i>IEC Through Mass Media</i>		
# Home Visits		# Radio Spots/Talks	Prod.	Dist.
# Persons Visited		# TV Appearances		
# Meetings		# Media Publications		
# Meeting Participants		<i>IEC Material</i>	<i>Prod.</i>	<i>Dist.</i>
<i>IEC For Adolescents</i>		<i>IEC Material</i>		
# Adolescents Informed		# Pamphlets/Brochures		
# Teachers Informed		# Posters/Flyers/Filpcharts		
# Parents Informed		# Audio Tapes		
		# Films/Videos		
		# Commercials (Radio/TV)		
		Other:		

INSTITUTIONAL SUPPORT
<i>Please describe results for this quarter</i>
1
2
3
4
5

TECHNICAL MEETINGS	TECHNICAL PUBLICATIONS
# Meetings Sponsored	# Manuals
# Participants	# Other Technical Publications

<i>Form completed by</i>
<i>Name</i>
<i>Date</i>

**COMMUNITY HEALTH WORKER REPORT**  
 \_\_\_\_\_ DISTRICT/EASTERN PROVINCE

<b>Health Center</b> _____	<b>Villages:</b> _____		
<b>Name of CHW</b> _____	<b>Population: Under 2 years</b> _____		
<b>Report for the month of</b> _____, year _____	<b>2 to 5 years</b> _____		<b>Over 5 years</b> _____
<b>Date of writing report</b> _____	<b>Total Population:</b> _____		

1. **Number of births during the month:**

Male \_\_\_\_\_ Female \_\_\_\_\_ Born dead \_\_\_\_\_ **Total births** \_\_\_\_\_

2. **Number of deaths during the month:**

Under 2 Years \_\_\_\_\_ 2 to 5 years \_\_\_\_\_ Over 5 years \_\_\_\_\_ **Total deaths** \_\_\_\_\_

3. **Number of Patients/Clients seen during month:**

	MALE			FEMALE			Advised	Treated	Referred
	Under 2	2-5	Over 5	Under 2	2-5	Over 5			
Abdominal Pain									
Cough									
Diarrhoea									
Family Planning									
Fever									
Headache									
Injuries									
Malnutrition									
Other									
Pregnancy-related									
Sore eyes									
STD/HIV/AIDS									

4. **Health Education/Health Promotion:**

Total number of health education/promotion events \_\_\_\_\_ Total participants at health education/promotion events \_\_\_\_\_

Date	Venue	Group	Number of people	Topic

76

## PHC service quality checklist Immunization

This checklist is intended for use in the observation of service delivery for immunization. Before using it, the national treatment protocol should be reviewed in order to adapt the tool to the local situation if necessary. It is also recommended that you review the checklist carefully before using it to be sure that you understand the questions and know how to use the form. For observation of service delivery, mark "yes" if the service provider carries out these activities during service delivery. For interview questions, mark "yes" if the respondent answers correctly.

1. \_\_\_\_\_ Health facility
2. \_\_\_\_\_ Service provider
3. \_\_\_\_\_ Observer/supervisor
4. \_\_\_\_\_ Date

### Identification of needed vaccinations

Did the service provider:

5. YES \_\_\_\_\_ NO \_\_\_\_\_ Review health records to determine which immunizations are needed today?
6. YES \_\_\_\_\_ NO \_\_\_\_\_ Review mother's health record or ask mother whether she has received tetanus toxoid immunization?
7. YES \_\_\_\_\_ NO \_\_\_\_\_ Review vaccination status of other children in the family?
8. YES \_\_\_\_\_ NO \_\_\_\_\_ Recommend vaccination even if the child is sick?

### Preparation and care of vaccine

Did the service provider:

9. YES \_\_\_\_\_ NO \_\_\_\_\_ Check the label for the correct vaccine and to be sure the vaccine has not expired?
10. YES \_\_\_\_\_ NO \_\_\_\_\_ Load the syringe without contamination?
11. YES \_\_\_\_\_ NO \_\_\_\_\_ Keep the vaccine on ice and covered during the session?

### Vaccination technique

Did the service provider:

12. YES \_\_\_\_\_ NO \_\_\_\_\_ Prepare the area of injection?
13. YES \_\_\_\_\_ NO \_\_\_\_\_ Use a sterile needle for each injection?
14. YES \_\_\_\_\_ NO \_\_\_\_\_ Use a sterile syringe for each injection?
15. YES \_\_\_\_\_ NO \_\_\_\_\_ Apply the vaccine at the right level? (BCG = dermal layer, measles = subcutaneous layer, DPT/TT = muscle)
16. YES \_\_\_\_\_ NO \_\_\_\_\_ Properly dispose of the needle and syringe?
17. YES \_\_\_\_\_ NO \_\_\_\_\_ Was the child given all vaccinations needed today?
18. YES \_\_\_\_\_ NO \_\_\_\_\_ If the mother required TT, did the service provider vaccinate her or arrange for vaccination?

### Documentation

Did the service provider:

19. YES \_\_\_\_\_ NO \_\_\_\_\_ Record the vaccination on the child's health card?
20. YES \_\_\_\_\_ NO \_\_\_\_\_ Record the vaccination in the appropriate health centre record(s)?



### EPI education

Did the service provider:

21. YES \_\_\_\_\_ NO \_\_\_\_\_ Tell the mother which vaccinations were given during this visit?
22. YES \_\_\_\_\_ NO \_\_\_\_\_ Inform the mother that side effects, such as fever and pain, are possible?
23. YES \_\_\_\_\_ NO \_\_\_\_\_ For BCG vaccination, explain that a scab will form?
24. YES \_\_\_\_\_ NO \_\_\_\_\_ Tell mother where to go if she or the child should have a severe reaction to the vaccination?
25. YES \_\_\_\_\_ NO \_\_\_\_\_ Explain the importance of completing the vaccination series?
26. YES \_\_\_\_\_ NO \_\_\_\_\_ If DPT #3 has been administered, stress the importance of returning for measles vaccination?
27. YES \_\_\_\_\_ NO \_\_\_\_\_ Explain that the child can be immunized even if she/he is ill?
28. YES \_\_\_\_\_ NO \_\_\_\_\_ Tell when to come back for the next immunization for mother or child?
29. YES \_\_\_\_\_ NO \_\_\_\_\_ Ask mother to encourage other women and their children to be vaccinated?
30. YES \_\_\_\_\_ NO \_\_\_\_\_ Verify that mother understands key messages?
31. YES \_\_\_\_\_ NO \_\_\_\_\_ Ask mother if she has any questions?

### Maintenance of cold chain and supplies

Observe the facility or ask health worker to determine the following:

32. YES \_\_\_\_\_ NO \_\_\_\_\_ Is the refrigerator working today?
33. YES \_\_\_\_\_ NO \_\_\_\_\_ Is there a thermometer or cold chain monitor in the refrigerator?
34. YES \_\_\_\_\_ NO \_\_\_\_\_ Is there a temperature log?
35. YES \_\_\_\_\_ NO \_\_\_\_\_ Is temperature recorded regularly according to the local schedule?
36. YES \_\_\_\_\_ NO \_\_\_\_\_ Was the registered temperature between 0 and 8 degrees (C) at all times during the last month?
37. YES \_\_\_\_\_ NO \_\_\_\_\_ Are all vials in storage unopened?
38. YES \_\_\_\_\_ NO \_\_\_\_\_ Were vaccines sufficient during the last month?
39. YES \_\_\_\_\_ NO \_\_\_\_\_ Were needles and syringes sufficient during the last month?
40. YES \_\_\_\_\_ NO \_\_\_\_\_ Were vaccination cards sufficient during the last month?
41. YES \_\_\_\_\_ NO \_\_\_\_\_ For outreach sessions, were vaccines transported in cold boxes with ice packs?

### Exit interview with mother or caretaker

Mark "yes" if the respondent answers correctly:

42. YES \_\_\_\_\_ NO \_\_\_\_\_ What immunization(s) did you or your child receive today?
43. YES \_\_\_\_\_ NO \_\_\_\_\_ When should you return to the health centre for your next immunization?

### Interview with service provider

Mark "yes" if the service provider answers correctly:

44. YES \_\_\_\_\_ NO \_\_\_\_\_ At what age should a child receive BCG vaccine?
45. YES \_\_\_\_\_ NO \_\_\_\_\_ At what age should a child receive DPT vaccine?
46. YES \_\_\_\_\_ NO \_\_\_\_\_ At what age should a child receive Measles vaccine?
47. YES \_\_\_\_\_ NO \_\_\_\_\_ At what age should a child receive OPV vaccine?
48. YES \_\_\_\_\_ NO \_\_\_\_\_ Should you vaccinate a child if she/he is ill?



# ANNEX V

## MOH GUIDELINES/ PROTOCOLS

## IMMUNIZATION

### What is immunity

When you have an infection, your body learns to make antibodies against the microorganism (virus or bacteria) that causes it. Those antibodies kill that organism and prevent it from growing in your body again. You have become immune against that particular infection (although not against others).

For the first months of life the baby is protected against many infections by its mother's antibodies which came to the baby's body from the mother's blood through the placenta. Also in breast milk there are protective antibodies.

When we immunize, we give the child a vaccine, that is, a weakened form of the microorganism which causes the disease. The vaccine makes the child's body produce antibodies, but it does not give him the disease. So the child becomes immune without becoming ill.

For some vaccines it is enough to give one dose (ex. measles) to get protection. For others the child needs three doses (polio and DPT) to get good immunity. For certain vaccines one can give another dose after some years to increase immunity again, so called 'booster-dose' (ex. polio, TT).

Children can be immunized against the following six diseases, also called the 'target diseases': tuberculosis, diphtheria, whooping cough, tetanus, poliomyelitis and measles.

The unborn child can be protected against neonatal tetanus if the mother is immunized with tetanus toxoid.

### Vaccines

Vaccines can be:

- killed microorganisms (pertussis in DPT);

- ~ live but weakened - attenuated - microorganisms (measles, polio, BCG);
- ~ toxoids, i.e. harmless forms of toxins or poisons that the bacteria produce (tetanus toxoid, diphtheria toxoid).

Vaccines have to be potent, that is, in good condition to make a child immune. Vaccines lose their potency after a certain time (expiry date) or if you do not look after them properly. Heat and sunlight can damage them, especially the live ones. Freezing damages the killed ones and the toxoid.

Disinfectants, soap, spirit and antiseptics kill live vaccines. You have to wash instruments thoroughly if they have been in contact with them.

## I. IMMUNIZATION SCHEDULE AND POLICY

### 1. Target groups for immunization

- 0-24 months
- Pregnant women
- Women of childbearing age (15-45 years old)
- School children: grades I and VII

While the policy is that the target group for primary immunization is 0-24 months, priority should be given to children 0-11 months.

### 2. Immunization schedule

#### 2.1 Strategy A - Static units

Immunization should be carried out at each health facility that has a refrigerator and provides MCH services.

Immunization should be given to all target children at every contact with a health facility.

4a.3

Vaccine	Age at first dose	No of doses	Minimum interval between doses
BCG	At birth	1	-
Polio	2 months	3	28 days
DPT	2 months	3	28 days
Measles	9 months	1	-

### 2.2 Strategy B - Mobile units

Strategy B provides health services to the population living outside 12 km radius from a health facility. It is carried out either by vehicle (ex. district MCH-teams) or on foot/by bicycle (ex. by health centre staff). Schedule for outreach sessions should be planned in such a way as to cover the target population within the target age period. The community should be involved in the planning of the outreach programme.

Age of child	Vaccine
Less than 2 months	BCG
Above 2 months	BCG, only if no scar Polio (3 doses) DPT (3 doses)
Above 9 months	Measles

### Boosters

Booster doses of DPT and Polio should be given at 18 months of age or at least one year after DPT 3 and OPV 3.

### 2.3 Strategy C - School health services

Age of child	Boosters
School entry	BCG, if no scar Polio TT

### Grade VII

BCG, if no scar  
TT

### 2.4 Strategy D - TT immunization

Strategy D provides immunization for pregnant women and women of childbearing age (15-45 years). All women of childbearing age (15-45 years old) should be given TT immunization at every contact with a health facility for any reasons:

- at curative services;
- when they bring children for immunization;
- at family planning clinics;
- at school health services.

### TT schedule

- TT 1 At first contact or as early as possible during pregnancy (even during first trimester)
- TT 2 At least 4 weeks after TT 1
- TT 3 At least 6 months after TT 2 or during subsequent pregnancy
- TT 4 At least 1 year after TT 3 or during subsequent pregnancy
- TT 5 At least 1 year after TT 4 or during subsequent pregnancy

- 2.4.1 If a woman has a documented history of 5 TT injections altogether, no matter how long the intervals, she does not need additional TT immunization as 5 doses give lifelong immunity.
- 2.4.2 Each TT dose given should be recorded on the woman's TT immunization card.
- 2.4.3 Dose(s) received during pregnancy are to be registered both on the TT card and on the antenatal card.
- 2.4.4 Dose(s) received prior to actual pregnancy should be

transferred from the woman's TT card to the antenatal card.

2.4.5 If a woman reports having received at least two TT doses during previous pregnancy(es), start counting the doses from TT 3 even if there is no record of the two doses.

2.4.6 Those women who have a documented record of having received 3 doses of DPT during childhood, can be considered as having received 2 TT injections of the required 5.

2.4.7 TT doses received through school health services should be included in the required 5 doses.

### 3. Contraindications to immunization

3.1 Fever, respiratory tract infection, diarrhoea, malnutrition and prematurity should not be considered as contraindications.

3.2 Therefore all children should be immunized unless they warrant hospitalization.

3.3 No restriction on breast-feeding is necessary when oral polio vaccine is administered.

3.4 Multiple vaccines, for instance, BCG, DPT, OPV and measles can be given at the same time.

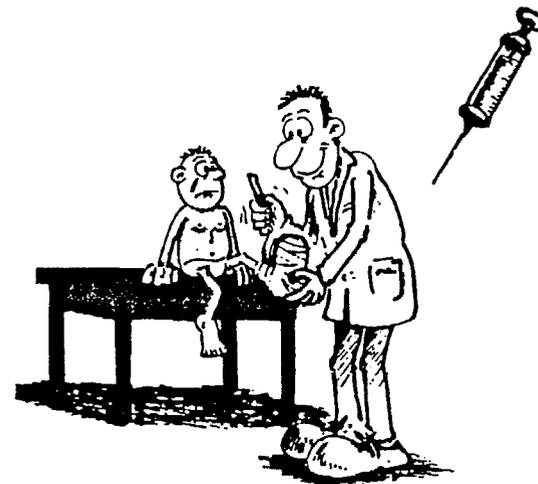
3.5 If the child has symptomatic AIDS he/she should not receive BCG but should receive all the other vaccines.

### 4. General policies

4.1 Immunization card should be issued to every woman and child in the target population.

4.2 Immunization status of both children and women of

childbearing age should be checked at each contact with the health facility after which eligible vaccine(s) should be given.



Think of immunizing a child even when being seen for another problem

4.3 Do not hesitate to open a vial even for a single eligible child or woman.

4.4 Avoid false contraindications.

4.5 Before discharge from a clinic, check immunization status and give eligible vaccine(s).

4.6 Methods should be worked out to identify and follow up drop-outs (those who do not fulfil all doses).

4.7 Interrupted immunizations need not be restarted, i.e. the remaining dose or doses can be given as if the prolonged interval had not occurred.

4.8 There is no maximum interval between doses of

DPT, Polio and TT vaccines, only a minimum interval.

- 4.9 Immunization should be given with a sterile needle and a sterile syringe (one needle and one syringe for each child) in order to avoid abscesses and spreading infections, such as HIV (that causes AIDS) and Hepatitis B.
- 4.10 All open vials should be discarded after each immunization session.
- 4.11 Health education to mothers about immunization should include:
- ~ Which diseases they are being immunized against.
  - ~ Information about why their children are being immunized.
  - ~ Why they have to bring back their children for more injections.
  - ~ What side effects they are to expect after vaccinations.
- 4.12 A fully protected child is one who received all the vaccines at the right age and at the right intervals. Vaccines have to be given according to certain criteria to be effective and to protect the child. Right age means that the vaccine was given not earlier than the recommended age for that particular vaccine (for instance not before 2 months of age for DPT and OPV, and not sooner than 9 months for measles). Right interval means that the minimum interval has been kept between doses (for instance the interval between the 1st, 2nd and 3rd doses of DPT and OPV have not been less than 28 days). The child should complete all the vaccinations before one year of age.

**Remember**

*All vaccines should be given with courteous, friendly service so as not to discourage mothers from returning.*

## II TARGET DISEASES AND CASE DEFINITIONS

### 1. Measles

Measles that is caused by a virus, is one of the most contagious diseases. It is spread from person to person by droplets from nasal and pharyngeal secretions. Cases are infectious 1-3 days before the appearance of a rash and up to 7 days after.

The child has a cold, a cough and some fever. Within 3-4 days a characteristic red blotchy rash begins usually on the face. Then it spreads to the rest of the body lasting 4 to 7 days. Sometimes there is a fine peeling of the skin after the rash goes away. Conjunctivitis (red eyes covered with sticky yellow fluid) and bronchitis are commonly present.

Complications include otitis media (inflammation of the middle ear), pneumonia, diarrhoea, blindness and encephalitis.

Measles is more severe among malnourished children. That is why it is especially important to give immunization to malnourished children.

### 1.2 Case definition of measles

1. History of a generalized blotchy rash lasting 3 or more days.
2. History of fever
3. History of any of the following:
  - ~ cough
  - ~ runny nose (coryza)
  - ~ red eyes (conjunctivitis)

### 1.3 Aspects of measles vaccination and epidemiology

In order for measles vaccine to "take", the attenuated (weakened) vaccine virus must multiply, causing the child to make its own antibodies. When we measure an increase in

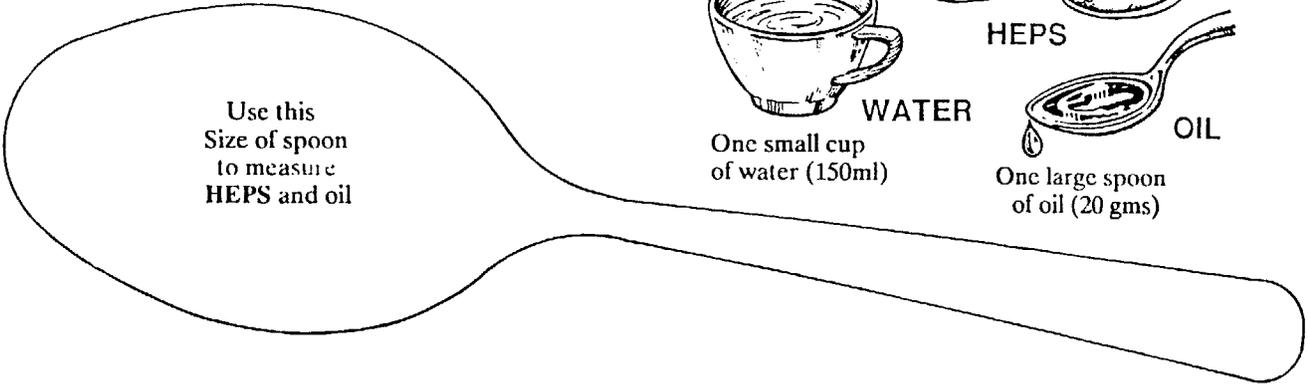
# What a child needs

A child's stomach is no bigger than its own fist. No child can possibly eat enough NSHIMA to get the calories and protein it needs each day. Cassava has even less protein than mealie meal. **EXTRA PROTEIN AND CALORIE FOOD IS ESSENTIAL.**

A child can eat about 150ml four times per day, a total of 600 ml. However 2,000 ml of bulky NSHIMA are needed to give the child enough calories and protein.

Child needs		HEPS provides
A one year old child requires	DAILY	180 gm of HEPS with 60 ml oil
1180 Kcal	ENERGY	1260 Kcal
27 gms	PROTEIN	35 gms
500 mg	CALCIUM	325 mg

What we should give a malnourished child depends upon its condition and age and on the availability of mothers milk. Each child is an individual and it is not possible to lay down one ration to suit every child. However the example in the next section will help to show the sort of quantity needed.

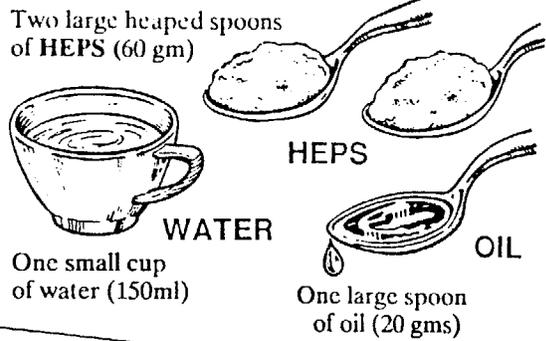


**Caution:** Cups and spoons vary in size so it is essential to do a trial with accurate scales and relate to the implements being used by mothers

# How to cook and feed HEPS

- 1 HEPS should always be fed to the child FIRST. Relish and nshima can be used as a top up if the child is still hungry.
- 2 A malnourished child must be fed at a different time to the mother in hospital. Concentrate first on feeding the child to get it to eat as much as possible.
- 3 Feed child at least three and preferably four or even five times per day.
- 4 It is recommended that a malnourished child approximately one year old, be given 180 gms of HEPS WITH ADDED OIL as a supplementary food each day. If oil is not available more nshima and vegetables will be needed. This is in addition to mothers milk if this is available.

Each feed should be prepared as follows:



Boil water, sprinkle on the HEPS, mix the oil really well into the porridge, when cool, feed direct to child



## Food Donation for Malnourished Infants and Mothers

# HEPS

### High Energy Protein Supplement

The World Food Programme has been providing special food for people with Protein Calorie Malnutrition to Zambia since 1988 and many thousands of children and mothers have already benefited. However there is still room for improvement in the use being made of the donated food.

Read this leaflet carefully as it contains new information and guidance on what is available and how to use it.

World Food Programme, United Nations  
 P O Box 31966, Lusaka  
 Telephone: 221343

## Who should benefit?

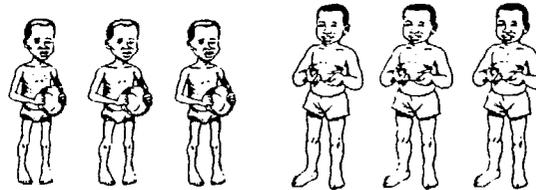
The food supplied by WFP is intended to:

- 1 Feed malnourished children and underweight pregnant or lactating mothers in hospitals.
- 2 Act as an incentive for women to bring children to be weighed and inoculated at MCH Centres.
- 3 Provide a nutritional supplement for outpatient children found to be seriously underweight.
- 4 Support the nutrition education programme being run by the Ministry of Health and the National Food and Nutrition Commission.



## Why is HEPS needed in Zambia?

In Zambia more children die of Protein Calorie Malnutrition than of any other disease. Zambia now has one of the highest rates of STUNTING in the world. We are not *only* concerned with the death rate, STUNTING, caused by malnutrition, affects the growth of the brain as well as of the body. Half of Zambia's children do not develop properly due to malnutrition.



## Evaluation so far

### In patients

Approximately 60,000 malnourished children and mothers in Zambia are receiving the WFP food each month. In one hospital, the number of malnourished infants dying was reduced from 10 per day to less than one per day.

### However

*Some hospitals are showing very poor results by incorrect mixing and badly supervised feeding.*

*Very few mothers are receiving the food.*

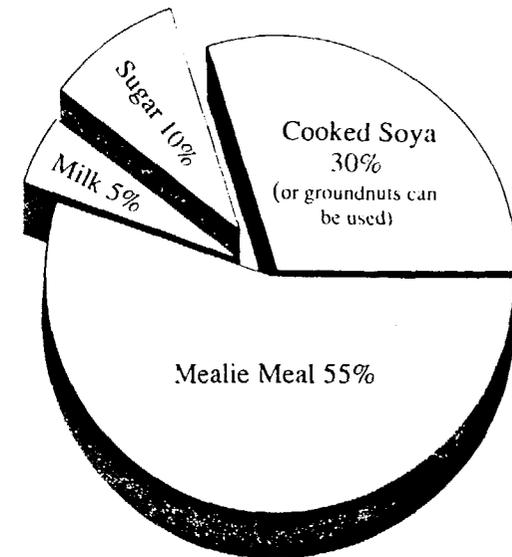
### Out-patients/MCH follow up

Food should be given to encourage mothers to bring children back to MCH centres after discharge. More effort should be put into this, because it is linked to education. Far too many readmissions of previously treated malnourished children are occurring. By careful follow up, one hospital claims less than 5 percent readmissions while other hospitals are still reporting over 50 percent.

## What is HEPS?

HEPS is made in Zambia and can be made at village level. The amazing results achieved by proper feeding with HEPS can be sustained in the long term.

HEPS consists of:



Protein	20 gms per 100 gms
Energy	400 kcal per 100 gms
Prepared with oil	700 kcal per 100 gms

Vegetable oil should be added to HEPS to increase its energy content. This also makes it more palatable and less bulky.

Mothers should be encouraged to make foods similar to HEPS themselves by adding high protein/energy food to nshima

Red palm oil is also a good source of *vitamin A*.

### Vitamin A Capsules

At times it may be difficult to eat enough vitamin A rich foods. If a child is sick with measles, diarrhoea or malnutrition or has nightblindness, they are in special danger of vitamin A deficiency. These children need vitamin A quickly to help them recover. In these cases it is possible to give *vitamin A* in a capsule. These capsules are given to children at the clinic.

Mothers should also receive *vitamin A* capsules at the clinic within two month after delivery to prevent vitamin A deficiency.

### Prevent Vitamin A Deficiency

To help prevent vitamin A deficiency:

- *Breastmilk the first few days after delivery is very rich in*

*vitamin A. Therefore this milk is very important for the baby.*

- *A baby should receive only breastmilk for about the first six months of age. At this time breastmilk is babies' best and only food.*
- *Vitamin A rich foods should be given to a baby when it is about six months old.*
- *All babies should be breastfed for up to two years.*
- *All children should be given plenty of vitamin A rich foods.*
- *Some fat or oil should be added to a child's diet every day. This helps the body use vitamin A.*

## Vitamin A Deficiency



Produced by  
The National Food  
and Nutrition Commission



## Vitamin A for Healthy Eyes and Body

Healthy eyes are bright, moist and shining. We need healthy eyes to see well. The foods we eat contain a substance which keeps eyes healthy. This substance is called *vitamin A*.

Vitamin A is also needed for normal growth and health. *Vitamin A* protects the body against diseases and infections.

### Vitamin A and Nightblindness

If we do not eat enough of the foods that contain vitamin A we get vitamin A deficiency. This means that the body does not have enough *vitamin A*.

The first symptoms of vitamin A deficiency may be infections and inability to see well in dim light. This last condition is known as **night blindness**.

Many children in Zambia suffer from night blindness. It is possible to cure

night blindness. It is possible to cure night blindness if it is spotted early and treated. If night blindness is not treated the eyes can become dull, dry and develop sores. They can become soft and may burst. This can lead to **total blindness** which can not be cured.

### Groups at Risk

Groups which are at special risk of getting vitamin A deficiency include:

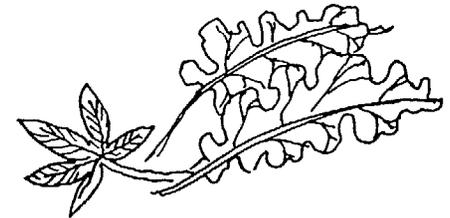
- infants who are not breastfed;
- children from 6 months to 6 years;
- children who are malnourished, have measles, diarrhoea or other serious infections
- pregnant and lactating women;

### Vitamin A-rich Foods

*Vitamin A* is found in green, orange and yellow fruits and vegetables and in some animal foods.

Foods rich in vitamin A are:

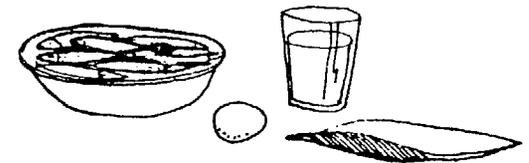
**Green leaves** such as rape, pumpkin leaves, cassava leaves, bean leaves, sweet potato leaves.



**Orange and yellow vegetables and fruits** like sweet potatoes, carrots, pumpkin, mango and pawpaw.



**Animal foods** like liver, kapenta and other small fish eaten whole, eggs and milk. For babies breastmilk is a very good source.



# MWAMI EYE NEWS

PRIVATE BAG 5 CHIPATA ZAMBIA - TELEPHONE (062) 21080  
INTERNATIONAL TELEPHONE 260 (62) 21080

MEMO TO: ALL CLINICAL STAFF AND STUDENTS  
FROM: DR B WIAFE  
DATE: MAY 10, 1993

SUBJECT: VITAMIN A CAPSULES

RECOMMEND:

The following treatment schedule to be adopted:

All children under 12 months of age: 100,000 IU Day 1  
100,000 IU Day 2  
100,000 IU Day 8

---

All children over 12 months of age: 200,000 IU Day 1  
200,000 IU Day 2  
200,000 IU Day 8

Those to receive treatment schedule are those who have Vitamin A deficiency which are manifested clinically by:

XEROPHTHALMIA

NEABLES

P.E. II.

D. & RRHGEA

All other children between 6 months and 6 years to receive prophylactic dose every 6 months, as follows:

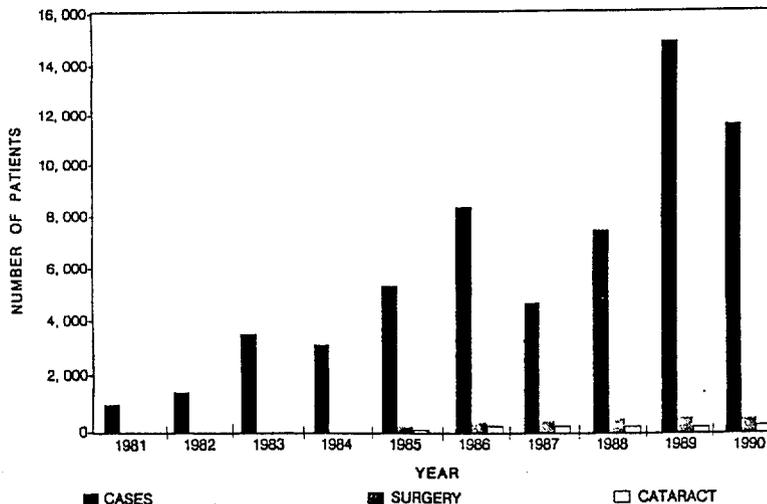
All Children under 12 months of age: 100,000 IU

All children over 12 months of age: 200,000 IU

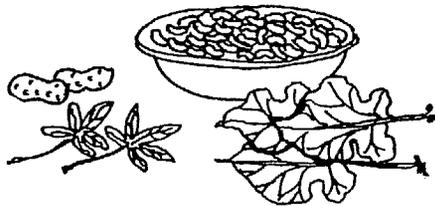
Please remember to note this on their under five cards.

Also lactating mothers who look a bit malnourished to be given dose of 200,000 IU

MWAMI ADVENTIST HOSPITAL CHIPATA  
EYE STATISTICS FOR 1981 - 1990



Plant foods which are rich in iron are cereals, beans, groundnuts, and dark green leaves such as pumpkin leaves, and cassava leaves.



Iron from animal foods is better used by the body than iron from plant foods.

Vitamin C helps the body to use the iron from plant foods. Therefore vitamin C rich foods like fresh fruits and green leaves should be eaten during or just after the meal.

### Iron Tablets

Pregnant women should take iron tablets especially in the second half of the pregnancy in order to prevent anaemia. Iron tablets can be received through antenatal clinic.

### Remember:

- Women should leave a gap of at least two years between the births of their babies to give their bodies time to build up good red blood stores between pregnancies.
  - All women and especially pregnant and breastfeeding women should make sure they eat plenty of iron-rich foods.
  - Pregnant women should receive iron tablets through antenatal clinic.
  - Iron-rich foods should be given to all babies when they are about 6 months old. Before this time exclusive breastfeeding is babies' best food.
- All children need plenty of iron rich foods.
- Everyone should be protected from malaria, hookworms and accidents. Malaria and hookworms should always be treated quickly.

# Iron Deficiency Anaemia



Produced by  
The National Food  
and Nutrition Commission



## Iron is Needed for Healthy Blood

Healthy blood is bright red in colour. We need healthy blood for our bodies to work properly. The foods we eat contain a substance which keeps blood healthy and red. This substance is called iron.

## Iron and Anaemia

When a person's blood looks pale and thin, we say the person has anaemia.

People with anaemia become weak, out of breath and tired very quickly. They often have headache and often cannot think clearly.

## Women Need Iron

Anaemia is very common in Zambia, especially in women.

Pregnancy and breastfeeding use up iron in a women's body, so women who have many babies often suffer from anaemia. A woman needs time to build up stores of good red blood

after the birth of each baby.

During menstruation women lose blood, with this blood they also lose iron.

All women, and in particular, pregnant and breastfeeding women need plenty of iron.

## Children Need Iron

Children can also suffer from anaemia. Children grow very quickly and new blood needs to be made. Iron is needed to make this new blood. All children need plenty of iron to keep healthy and grow strong.

## Other Causes of Anaemia

### *Malaria*

Every time a person has malaria they lose some iron from their blood. If a person suffers from malaria often, then this can lead to anaemia.

### *Hookworms*

Hookworms suck blood from the body. If a person has many worms

then they can lose a lot of blood. This can lead to anaemia.

### *Blood loss*

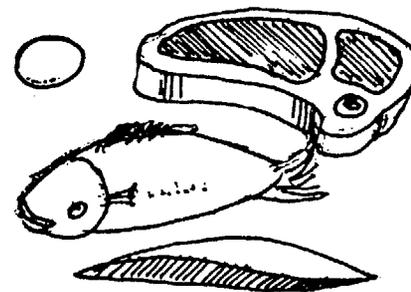
Blood can be lost because of an accident or injury. If a lot of blood is lost, then this can lead to anaemia.

## Iron Rich Foods

Anaemia can be prevented by eating plenty of iron rich foods.

Iron is found in both plant and animal foods.

Animal foods which are rich in iron are liver, red meat, eggs and fish.



# FAMILY PLANNING

## OPERATIONAL ISSUES

In order for family planning to be delivered in an effective and efficient manner, the following operational areas need particular attention.

### 1. INFORMATION, EDUCATION AND COMMUNICATION

Information, education and communication (IEC) includes the sum total of activities that are generated through health services and community to;

- raise the public's awareness and understanding of family planning rights and options
- promote and facilitate informed decision-making and choices
- advise about and promote prevention of high risk behaviour

All health workers, community based workers and volunteer groups shall create awareness of the benefits of family planning at the individual, family and community level and educate users about what to expect. Information should include:

- a) The benefits of family planning on the health of the mother, child and family.
- b) The implications of large families on the economic status of families, needs of individual members of the family and the nutritional status of the family.
- c) The implications of large communities on government in terms of providing adequate and qualitative basic social services.

- d) The advantages and disadvantages of available family planning methods, common side effects and how methods are used.
- e) The rights of clients.
- f) The rights of providers.
- g) The availability of various service delivery points.
- h) Correcting myths and misconceptions of family planning methods.
- i) Prevention and treatment of consequences of high risk behaviour and practices such as those related to STIs and HIV /AIDS.

**Health learning approaches and materials**

- a. Learning approaches and materials shall enhance the availability of information about family planning to a wider audience, and will be targeted at special groups such as the young adults, men and young mothers.
- b. Messages for information, education and communication shall be determined in consultation with target and interest groups through interviews and focus group discussions. This will help ascertain:
  - i) What is already known about family planning
  - ii) Existing misconception
  - iii) Potential ways of filling the gaps on information
  - iv) Best types of IEC methods, approaches and materials to use
- c. Messages shall be pre-tested with target and interest groups before they are released to the public to ensure acceptability and clarity.
- d. District Health Boards shall be responsible for developing prototype of IEC materials to supply to all health institutions (government, military, mines, mission, pharmacies and NGOs).
- e. Health Reforms Implementation Team through the Health Education Unit, shall at national level oversee the quality and appropriateness of materials prepared by DHBs and others.

# ANNEX VI

## CHW TRAINING MANUAL

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# nutrition

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COMMUNITY HEALTH WORKERS  
TRAINING NOTES  
AND ACTIVITIES

These notes are in draft form. We welcome comments, suggestions and criticisms on them so that they can be modified before a final publication is prepared.

Please send your comments to\_ The Communications Unit,  
The National Food and Nutrition Commission  
P.O. Box 32669, LUSAKA, Zambia.

Written by Sheran Bleeker (FAO Nutrition Officer)  
Prepared by The National Food and Nutrition Commission  
Published by The Ministry of Health.

## TABLE OF CONTENTS

1. Introduction to nutrition
2. Family food supply - enough food
3. Family food supply - problems
4. Breast feeding
5. Children - number of meals
6. The Mid-arm circumference strip
7. The Road to Health card
8. Children - volume of food
9. Children - variety of food
10. Children - feeding management
11. Digestion and absorption of food
12. Diarrhoea prevention
13. Rehydration
14. Feeding sick children
15. PEM Identification
16. PEM - rehabilitation
17. Anaemia
18. Vitamin A
19. How to identify a community's problems
20. Collecting information - Surveys
21. Collecting information - Interviewing
22. Working with people - Questions
23. Working with people Individual counselling
24. Working with people - Group discussions

## PREFACE

Educators must teach both technical skills as well as communication skills.

- . The training techniques should use good teaching and communication practices. Health workers will probably use the same techniques in their own communities. If you simply lecture to them they will do the same.
- . The training should be action-orientated. Concentrate on the practical aspects and avoid complicated theory. At the end of the training the participants should know what they are expected to do in the community.
- . Training should include practice in the community and foster a commitment to community action. The participants should feel confident about working in the community.

To help you with the training of community health workers in nutrition the material has been organised as follows. The first page on each new topic suggests ways the topic could be taught. The opposite page gives technical notes that could help you with the teaching. The lesson plan is only a suggestion. You should adapt it to suit your own area and your own experience.

Some of the lessons involve teaching a skill. You should see that all the participants have mastered the skill and provide extra training for those who take longer to grasp it. It is not enough just to teach the lessons. You must be sure that everyone is able to do what is being taught.

For many of these lessons your role is that of a discussion leader. You will be giving people a chance to discuss their own knowledge and understanding of certain topics before helping them to expand on that knowledge or gain new understandings.

## TRAINERS NOTES

Below are some important things to do or think about before you begin the training.

1. It is important that you carefully read through in advance the lessons you plan to use; a few require materials or special planning.
2. The arrangements of the room influence the training. Since many of these activities emphasize discussion and sharing of ideas, arrange to have the group, including trainers, sit in a circle.
3. This training material has been written for a group of about 20 participants. It is difficult to manage a group larger than this.
4. At the beginning of each lesson, always share with the group the aims and objectives so that everyone is clear about what each lesson is designed to do.
5. Use open-ended questions as much as possible instead of ones that require a yes or no answer. Open ended questions lead to better discussion. (see lesson 22)
6. Give the group time to develop confidence in discussing ideas openly. This is a new learning technique for many field workers. When you ask a question, wait until someone answers. Silence doesn't mean that people have nothing to say. It often means participants are thinking and you should give them a chance to respond. If discussion remains slow, divide the group up into smaller groups to discuss together before reporting back to the total group.
7. Help participants discover new information. Don't do all the talking. Go slow; don't rush. A group given enough time can usually find solutions to a problem without the trainer giving the answer. It's the best way to learn. If you are like most trainers you will tend to talk too much.
8. Take a break when the group is tired or becomes distracted. Learning is difficult for the sleepy or disinterested.
9. Don't expect participants to sit still for long periods of time. Let people move around and stretch from time to time. Group singing and simple games between lessons relax and renew participants. This increases the chance that they will learn more from the next activity.
10. If you are not very experienced with this type of training read through the lessons on individual counselling and working with groups at the end of the material. (Lessons 22, 23 & 24) You will find other suggestions to help you.
11. PSBAT at the beginning of each objective means Participants **Should Be Able To**. The objective tells you what each participant should be able to do at the end of the lesson.

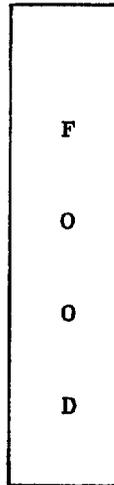
You can use the objective as a guide when testing or evaluating the lesson - can the participants do what is expected of them.

12. Remember, these training materials are guidelines. Change, adapt, create your own activities based on them. Let us know how you use and adapt the lessons. Good luck and good training.

## 1. INTRODUCTION TO NUTRITION

**AIM** To introduce nutrition concepts with emphasis on those that relate to nutrition problems found in Zambia.

**OBJECTIVES** PSBAT discuss what food does for the body.



energy

growth

strong blood

healthy eyes

healthy skin

strong healthy body

warmth

The picture above lists the things food does. Bring up any points that are not mentioned in the discussions. The notes on the next page can help you.

- ENERGY** All foods provide energy to the body. The more active a person is the more food he must eat. Extra food is stored as fat in the body. When a person eats less than he needs he uses up this fat and gets thinner and thinner and is no longer able to work hard. In rural areas this happens during the rainy season. There is a lot of work to be done but food is often scarce.
- GROWTH** Children who do not get enough to eat do not grow well. They remain small and weak. They need extra food for growth. Their stomachs are small. They need to be fed more often than adults. They also need a variety of different foods.
- STRONG BLOOD** In Zambia many people suffer from anaemia. Their blood is not strong enough. They feel weak and tired. Young children and their mothers often suffer from weak blood.
- HEALTHY EYES** Some foods keep our eyes healthy. When people do not eat enough of these foods they can not see very well in the dark. At night they often bump into things. Sometimes mothers notice this in young children. Something should be done about this as eventually the child could go blind.
- HEALTHY SKIN** Food keeps our skin healthy. It helps to keep it smooth and shiny. It also helps cuts and wounds to heal.
- STRONG HEALTHY BODY** Food repairs our body and keeps it healthy. It helps us to fight illness better. When a well fed child gets measles they can recover better. Well fed children also do not get sick as often.
- Food helps children to be active both physically and mentally. It helps children to concentrate better at school.

2. FAMILY FOOD SUPPLY - ENOUGH FOOD

AIM To stress the major family nutrition problem in Zambia

OBJECTIVES PSBAT understand that many nutrition problems in Zambia result from not getting enough food.

For good nutrition we do not only need a variety of food but we also need to eat enough food.

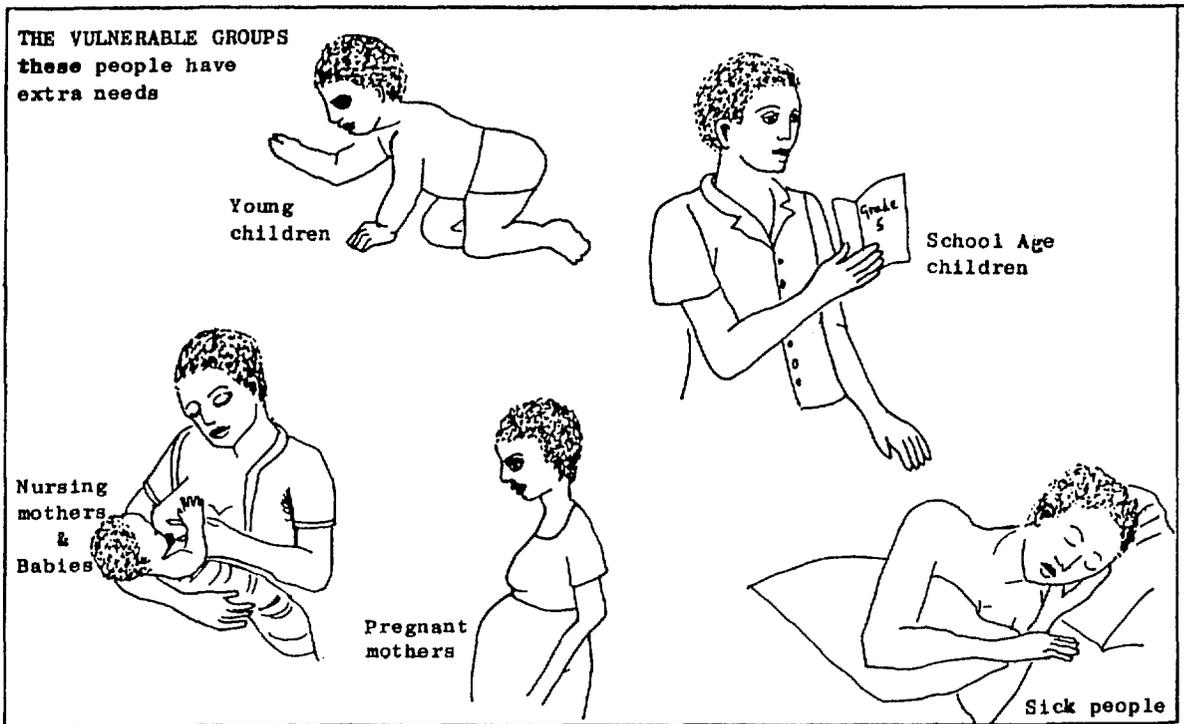
DISCUSSION How many times a person eats a day can often tell you something about how much he eats. How often do most families in your area eat every day? Is there a difference at certain times of the year or at certain times of the month.

It is difficult for most people to get enough food unless they eat at least three meals a day

DISCUSSION Snacks between meals also help people to get enough food. What snacks do people eat at various seasons of the year?

Snacks are important for people with special food needs.

TALK ABOUT the family members that have special food needs.



### ENOUGH FOOD

Everyone of course needs a variety of food. No one food will keep us strong and healthy. But we also need enough food. In many areas in Zambia the major problem is not having enough. Families need more of the foods they eat now. There are a few specific variety of problems e.g. vitamin A and anaemia, that will be discussed later in the course. There are also variety of problems for small children. But for the members of many Zambian families the biggest problem of all is not getting enough food.

### SEASONAL PROBLEMS

In many rural areas food becomes scarce during the rainy season. The time of the year when there is most to do in the fields. Not enough food together with a high incidence of disease and a scarcity of food leaves many people weak and tired towards the end of the season. In towns the food problems are greater towards the end of the month for the lower income groups. At these times families which normally eat only two or possibly three meals a day may be reduced to eating only once a day.

### CASSAVA

Cassava is the main staple in some parts of Zambia. It is an important and necessary food. However because it does not contribute as much to our nutrition as cereals (maize, sorghum, millet) the variety of relish available in these areas is most important. Having a variety and enough relish is more of a problem in cassava areas than in maize areas. In these areas some cereal is also grown. If half their nshima came from cassava and half from cereal this would also help variety problems.

### SPECIAL NEEDS

Some family members have special food needs. They are more likely to suffer from nutrition problems. They are often known as the vulnerable group.

Infants and young children - they are growing very rapidly

School age children - they are also still growing

Sick people - they need extra food to build themselves up again when they start to recover

Pregnant and nursing mothers - they need extra for the baby and for the breast milk. They need about one fourth more food than they normally eat.

These people in particular have great difficulty getting enough food if they only eat twice a day. They need three and sometimes even more meals a day. They also need snacks between meals.

## 3. FAMILY FOOD SUPPLY - PROBLEMS

**AIM** To direct attention to food supply problems

**OBJECTIVES** PSBAT identify specific problems of inadequate food supply in their areas.

Families need enough and a variety of foods.

SEASON	HOT DRY	RAINY	HARVEST AND COOL
NSHIMA			
RELISH			
SNACKS			

\*

**ACTIVITY** Fill in the chart above. Fill in only food that you think most families in the area have at that time of the year.

**DISCUSSION** Look at the chart. Is there enough and a variety of food available during the various seasons.

**DISCUSSION** What are the reasons for the problems?  
Who could help to solve the food supply problems?

\* In town areas instead of looking at the three seasons you could divide the chart into two sections. Look at the beginning and the end of the month. Look at the supply of food for people in the lower income group.

## FOOD VARIETY

NSHIMA is a most important food. A family without nshima is a family without "food". Less highly refined cereals such as roller meal contribute more nutrients than the highly refined breakfast meal.

In cassava areas it is better to also eat some cereal.

RELISHES are made from many different foods. Without enough and a variety of relish it is difficult to eat enough nshima.

Legumes such as beans and groundnuts are particularly valuable especially where animal foods are not available. Vegetables, especially dark green leaves, supply special needed nutrients.

Oily foods such as cooking oil, palm oil, fat and groundnuts supply a lot of energy and make food more tasty.

Animal foods, including fish, eggs, caterpillars, milk and meat, are valuable even in small quantities but they should not be over-emphasised in community nutrition education. They are more important in cassava areas.

SNACKS can be important for good nutrition, especially for the vulnerable group. Highly coloured fruits such as pawpaw and mangoe supply needed nutrients, especially vitamin A.

## ACTIVITY

When filling in the chart list all the foods you think most families have at that time of the year. When looking at the chart look first to see the general variety available and if you think there is enough food for three meals a day. Then check also for the foods mentioned above.

## SOLVING PROBLEMS

Helping to solve problems of food production is mainly the responsibility of agriculture extension workers supported by other workers that deal with things such as loans, supply of inputs, marketing etc. Other people such as community development workers, school teachers and local farmers are also involved, advice and assistance to the community on family food supply problems should be sought from these people. PHC workers can also help in advising on specific foods that should be given to ensure an adequate variety.

In towns the general family food problems are usually related to economics. How much money a family has, what they spend it on and the cost of various foods. The availability of food may also be a problem.

The reasons for food supply problems are many and varied. They range from weather conditions to availability of labour and time to poor agriculture practises and many more. Let the participants discuss the reasons and encourage them to discuss food supply problems with other workers in their area.

## 4. BREAST FEEDING

AIM To emphasize the importance of breast feeding a child during the first two years of its life

OBJECTIVES PSBAT Explain the advantages of breastfeeding and the problems with bottle feeding

Children should be breast fed for one and a half to two years

ASK What is good about breast feeding?

- Costs very little
- safe from germs
- protects against disease
- closeness between mother & baby
- helps mother recover
- helps to space children
- saves time and fuel in preparation

ASK What are the problems of bottle feeding?

- costs a lot of money
- germs can get in the milk
- bottles can carry germs
- babies might not get enough
- takes time and fuel to make
- the milk might not be mixed properly

ACTIVITY Only use this activity in towns where bottle feeding is common. Work out the cost of bottle feeding babies by completing the table below

Age of baby	cost per tin	number of tins	cost per month
2 months			
4 months			
6 months			

To find how much it costs each month first find out the cost of a tin in your area. Fill in the cost in the second column. Now multiply the cost of a tin by the number of tins the baby needs for a month. Put the answer in the last column.

Bottle feeding is dangerous. A mother who can not breast feed must go to the clinic. At the clinic she will be taught to make milk in a clean proper way. She will also be taught how to take care of the bottle. Dirty bottles spread disease.

Do not use a bottle for porridge and other food. Use a cup or a bowl.

### BREAST FEEDING

Breast milk is the best food for young infants. It contains all the food a baby needs for the first few months.

There are things in the milk that help to protect the young infant from infections.

It is cheap. The only cost is for the extra food the mother needs for making the milk. You do not have to buy milk or the fuel to prepare it.

It is always ready when the baby needs it. It does not take any time to make.

It is good for the mother too. When a mother is breast feeding, her body goes back to its normal shape quickly.

Being so close together is a nice feeling for both the mother and the baby. This is very good for the baby.

When a mother is breast feeding it takes longer for her monthly periods to return. She is less likely to become pregnant again during this time. Breast feeding therefore helps a mother to space her children.

### BOTTLE FEEDING

Bottle feeding is expensive. You have to buy milk, bottles and use fuel to prepare the food.

It takes a lot of time to clean bottles and make milk for a baby.

If you do not mix it properly the baby may not get enough food and will not grow well.

If you are not careful when you make the milk and feed the baby it may get germs and become sick.

A child is supposed to be breast fed. Unfortunately this is not always possible. When a baby has to be fed from a bottle the mother should go to the clinic. Here she will learn how to make the milk. She will learn how to make sure it is clean so that it does not make the baby sick.

### BOTTLES

Bottles themselves can be dangerous. If a bottle is not very well cleaned or if flies or dirt get on the teat the baby can become sick. Some women put porridge and other food in bottles. This is not a good idea. It is better to use a cup.

## 5. CHILDREN - NUMBER OF MEALS

AIM To foster an understanding of children's major nutrition problem

OBJECTIVES PSBAT understand the need for children to be fed more frequently than adults

Children need to be fed more often than adults. They need extra food for growth. They need three or four meals a day.

ACTIVITY\* Tell participants to pretend they have just eaten a good meal and feel full. Now someone places another meal in front of them right away.

ASK Would you like to eat again? How would you feel?

EXPLAIN When children are fed only two meals a day you are expecting them to eat more than they feel like at each meal.

A child needs a lot of food for growing.  
His stomach is small.  
Two meals a day are not enough

DISCUSSION How do you know if young children are getting enough to eat?

\* If all participants are eating together you could introduce this topic during a meal. When everyone has almost finished eating and is feeling full bring out another plate of food that you have kept aside. Ask how many people would like to eat it now.

## FEEDING FREQUENCY

One of the biggest nutrition problems for young children is that they do not get enough to eat. A baby gains weight very quickly. By the time he is two years old he should be almost four times as heavy as he was when he was born. This means that compared to their size they need a lot of food. Giving them the right kind of food will not help them to grow unless they also get enough food. Enough food means that they should be fed at least three times a day and also be given snacks between meals.

## HOW TO TELL IF A CHILD IS GETTING ENOUGH TO EAT

# Look at what the child does. Is he happy? Is he interested in things? Is he active? A young child who is hungry may cry a lot at first. Later on he loses interest in things and does not cry very much. You may even think he is just being "good" and is easy to take care of.

# Look at how often he is fed. If a young child is not being fed at least three times a day with food other than breast milk. You can be sure that he is not getting enough to eat. Young children also need snacks between meals as well.

# Look at the child's road to health card. If the child is weighed regularly at the clinic and his weight recorded on the card this can tell you a lot about the child's feeding.

# Measure his arm with an arm circumference strip. This tape can be used to measure around the child's arm if the child is between one and five years old. It is helpful in deciding whether a child is too thin or not.

# Look at his skin and his hair. Nutrition problems can show up in the skin and the hair. A poorly fed child may have dull, light-coloured hair. The hair is often straighter. His skin may be dry or rough or have light flaky patches. Skin and hair problems show up in more severely malnourished children.

## 6. THE MID-ARM CIRCUMFERENCE STRIP

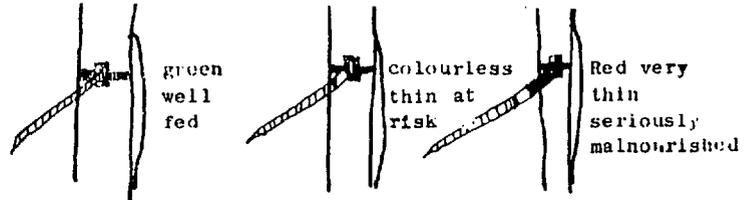
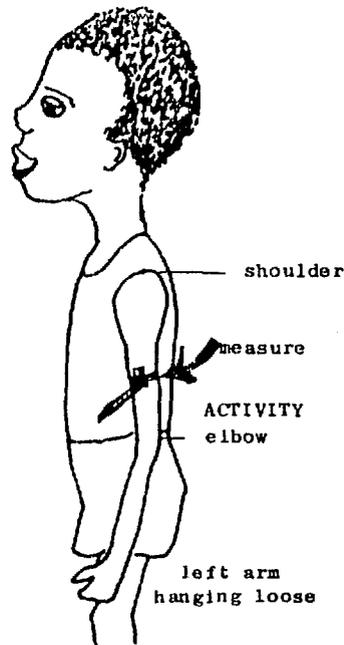
**AIM** To provide a simple method of screening for malnutrition that can be used in the community.

**OBJECTIVES** PSBAT make and use an arm circumference strip to detect malnutrition in children between the ages of 1 and 5 years.

Children who are under fed do not grow well. They are also very thin.

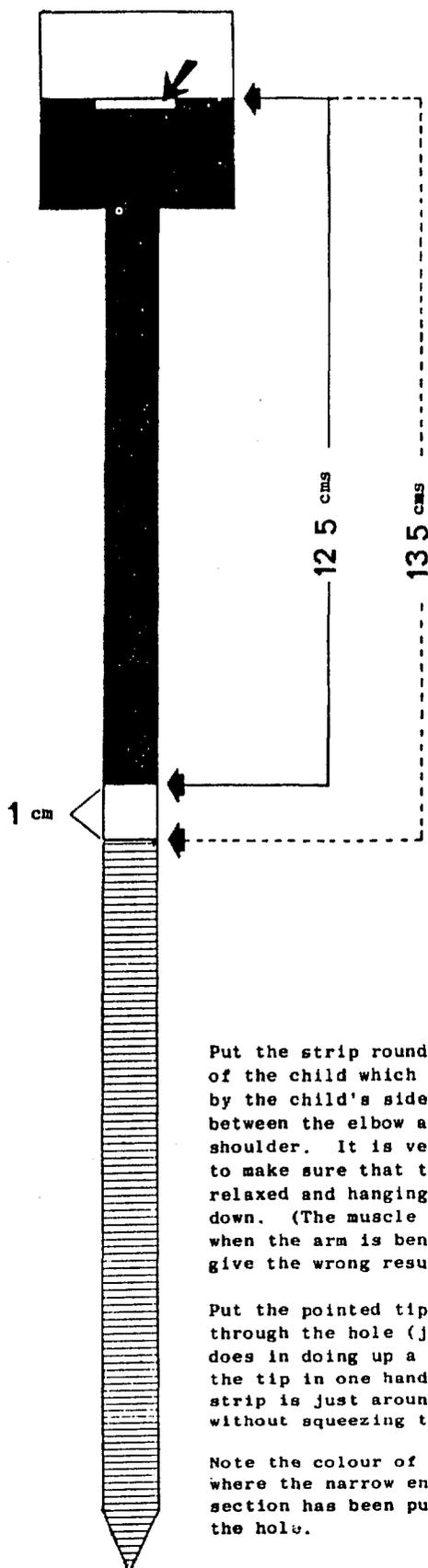
## MEASURING THINNESS

An easy way to tell if a child is too thin is to measure around their arm. The strip you will make can be used on children between the ages of one and five years. Do not use it for children older or younger than this.



1. Make arm circumference strips.
2. Check each participant's strip carefully to see that the measurements are correct.
3. Practice using the strip on children between one and five years of age brought into the classroom.
4. Arrange for the participants to go into the community to measure the arm circumferences of children. This activity could be combined with a more comprehensive survey later in the course. They could collect information on other health and nutrition problems at the same time. Make sure that the results of any community survey are properly recorded.

Discuss the results of the survey.



#### HOW TO MAKE MID ARM CIRCUMFERENCE STRIP

It is vital to measure the strip accurately. Use a ruler and sharp scissors.

Between the age of 1 to 5 years, the width of a child's upper arm does not change greatly. It is around 15 to 17 cms.

When a child is not eating enough food, the arm circumference is less.

Children with MAC of 12.5 to 13.5 cms are at risk of becoming malnourished. Those whose MAC is less than 12.5 cms are definitely malnourished.

This body measurement allows one to see which children are at risk of becoming malnourished; the necessary steps can then be taken to prevent these children from becoming severely malnourished.

#### MATERIALS THAT CAN BE USED TO MAKE THE MEASURING STRIP

Any material that does not stretch can be used. For example: cardboard, flexible plastic sheets, tapes, and if available clear X-ray films.

Put the strip round the left arm of the child which is hanging by the child's side, half way between the elbow and the shoulder. It is very important to make sure that the arm is relaxed and hanging straight down. (The muscle gets thicker when the arm is bent and so would give the wrong result.)

Put the pointed tip of the strip through the hole (just like one does in doing up a belt). Hold the tip in one hand so that the strip is just around the arm without squeezing the arm.

Note the colour of the strip where the narrow end of the section has been pulled through the hole.

1. If tape comes out of the hole in the RED section  
THE CHILD IS IN DANGER.
2. If the tape comes out of the hole in the CLEAR section  
the child is losing weight and if nothing is done; the child will eventually become malnourished.  
SOMETHING HAS TO BE DONE TO STOP THE CHILD BECOMING MALNOURISHED.
3. If the tape comes out of the hole in the BLUE/GREEN section the child is growing normally. Parents should be encouraged to continue feeding their children as they are.

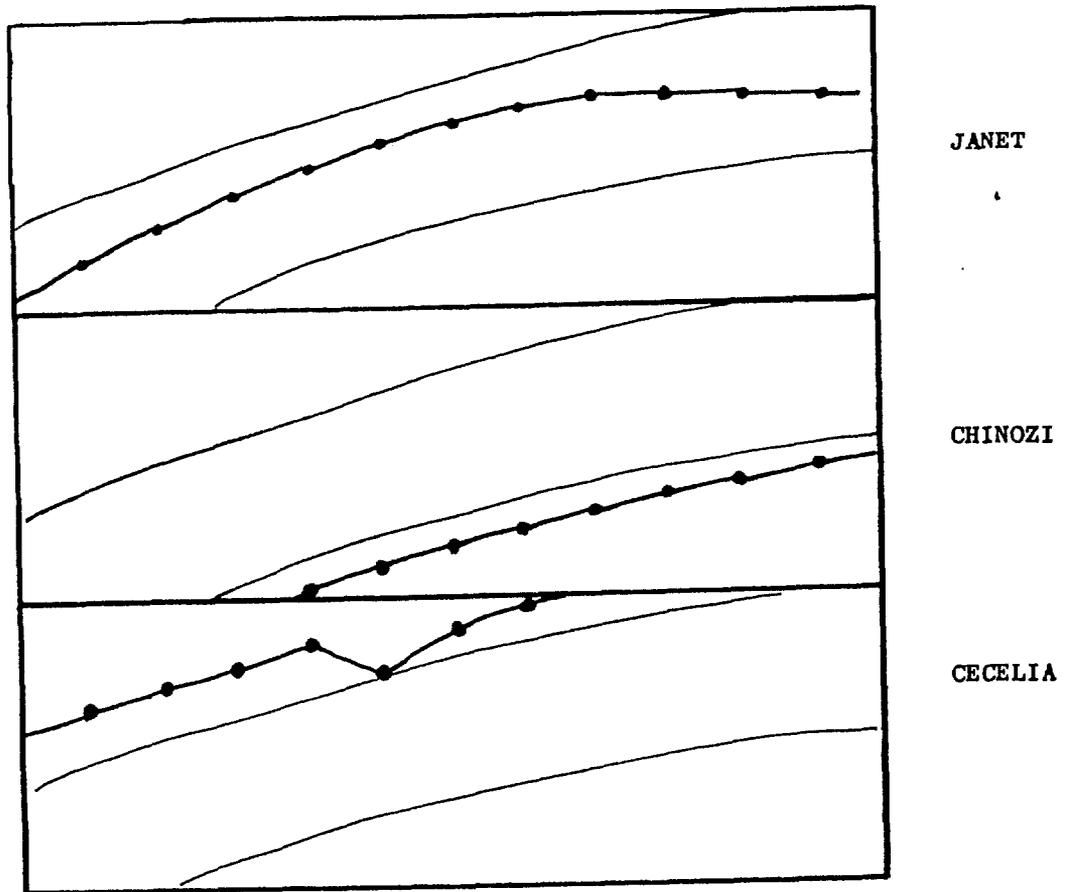
## 7. THE ROAD TO HEALTH CARDS

**AIM** To develop an understanding of the usefulness of weighing children regularly and thus following a child's growth pattern.

**OBJECTIVES** PSBAT interpret a road to health card in order to use the information for family education.

Community health workers should check children's road to health cards. A healthy child gains weight as he grows.

**ACTIVITY** Have the participants look at the road to health cards shown below. What do the cards show about each of the three children. After studying the cards have the participants discuss the questions shown below.



**QUESTIONS** Which child is not growing?  
 Which child has continued to grow well all the time?  
 Which child lost weight during one month? What could be the reason for this?

## GROWTH PATTERNS

When looking at the road to health card it is important to look at the child's growth pattern. Failure to gain weight is a warning sign of ill health. A child's weight should follow the direction of the road to health lines on the under five card.

When a child gains weight from one month to the next the line will slope up the card



A line going across the card shows that a child has not gained any weight during the month.



A line going down the card shows that the child has lost weight.



In the first few months of life the baby gains weight very fast. It should be easy to see by the scales each month whether a child is growing or not. After six months of age growth is not quite as fast. They no longer gain as much weight each month.

## EARLY WARNING SIGNS OF GROWTH FAILURE

Children from birth to 6 months - failure to gain from one month to the next.

Children from 6 months to 2 years - failure to gain weight for two month running

Children of any age - losing weight from one month to the next.

## QUESTION ANSWERS

JANET has a problem and needs attention. She is still on the road to health but for the last three months her growth line has gone straight. But has not gained any weight. If this early sign of growth failure is ignored the child could eventually become seriously malnourished.

CHINOZI is small for his age but he has been gaining weight month by month. His growth pattern is following the road to health line. If there are no signs of health or feeding problems it simply means that he is a small healthy child. Although he is below the line he is following the curve and growing well.

CECELIA is a larger child. She is above the line. This does not mean that she is too fat. There are very few children in Zambia that are too fat. You will notice that one month Cecelia's growth line went down showing that she had lost weight. The next month she had gained weight again. After that she continued to gain weight each month. The weight loss was probably caused by illness.

## 8. CHILDREN - VOLUME OF FOOD

**AIM** To demonstrate the difficulty of feeding children with low density foods

**OBJECTIVES** PSBAT prepare the amount of porridge a six month and one year old child would require to provide enough energy for one day

From about four months of age children need other foods in addition to breast milk

By six months of age they should be fed three times a day with other foods.

**ACTIVITY** Divide the participants into two groups and tell them to do the following:

**GROUP ONE** Take one cup of mealie meal and use it all to make porridge. The porridge should be the right thickness for a six month old baby. Measure how many cups of porridge you have made. Divide the porridge into three bowls. Make sure the group use good hygiene and cook the porridge well enough to destroy germs.

**GROUP TWO** Do the same as group one except they are to use two cups of mealie meal. Group two are making porridge for a one year old child.

**DISCUSSION** Look at the amount of porridge in each plate and discuss whether or not a child could eat this much at one meal. What about if the porridge was divided into two meals instead of three?

**ASK** Why does one cup of mealie meal make about three cups of porridge?

When cereals or cassava flour are cooked they take up a lot of water. The water increases the volume of the food but does not increase the amount of energy the food provides.

**EXPLAIN** Mealie meal is not the only food children need. They will not grow if they are fed only mealie meal. We need to replace some of this porridge with other foods. When you add other food to porridge you do not need to add more water with them. When we take away some of the porridge and replace it with other foods we also reduce the volume

## LOW DENSITY FOOD

Porridge is a low density food because it takes up so much water when it is being cooked. You have to eat a larger amount or volume of porridge than of a high density food such as groundnuts to get the same amount of energy. For a six month old baby to get all the energy it requires it would have to be breast fed and eat about a cup of porridge three times a day. A one year old child would need about two cups at each meal. Very few children could ever manage to eat this much at a meal.

## ACTIVITY PREPARATION

For the activity see that you have ready the following:

- \*2 places to cook (charcoal burners & charcoal or wood for fires)
- \*2 pots
- \*2 wooden spoons for stirring
- \*2 cups (mark each cup at 250 mls.)
- \*Mealie meal (sorghum, millet, or cassava flour can also be used depending on the staple in the area.)
- \*6 plates or bowls
- \*Washing up bowl
- \*Soap
- \*Water

## THICKNESS OF PORRIDGE

If group A get more than  $2\frac{1}{2}$  cups to 3 cups of porridge from their cup of mealie meal the porridge is too thin.  
 If group B get more than 5 to  $5\frac{1}{2}$  cups of porridge from their two cups of mealie meal the porridge is too thin.  
 If the porridge is too thin repeat the activity using less water.

## HYGIENE

Children's porridge often carries germs that cause diarrhoea. It is very important to insist on good hygiene when preparing food and feeding young children. Make sure that dishes and pots are clean. Have participants wash their hands before starting to prepare the porridge. Boil the porridge for at least ten minutes to kill all the germs. Rest the wooden spoon on a clean plate when it is not in the porridge. Do not let flies near the food.

## CASSAVA

One problem with cassava is that if you boil the porridge very long it becomes too stiff and sticky to eat. You can not boil it long enough to kill germs. You should therefore make the porridge with water that has been previously boiled for ten minutes, cooked and stored in a clean covered container. Another way is to boil the water for ten minutes, mix the cassava flour to a paste with a little boiled cooled water and then stir the paste into the boiling water.

Another problem with cassava is that it is not as good for young children as cereals such as maize, sorghum or millet. In cassava areas encourage the mothers to give young children half cassava and half cereals. They can give cassava porridge at some meals and cereal porridge at others. They could also make a porridge that is a mixture of both. Prepare a thin cereal porridge and cook it well. When it is almost ready thicken it with a paste of cassava flour.

## 9. CHILDREN - VARIETY OF FOOD

AIM To demonstrate that adding other food to children's porridge not only provides the variety they need but also reduces the volume they need to eat.

OBJECTIVES PSBAT prepare suitable meals for a one year old child for one day and compare a good meal with that of plain porridge.

For good health and growth children need a variety of food. They also need to eat enough food. Young children need at least three meals a day and snacks between meals.

ACTIVITY Divide the participants into three groups. Each group will make a different meal suitable for a one year old.

For the basic porridge each group should use  
1/3 cup mealie meal  
1½-2 cups water

To increase the energy each group should use one of these  
2 teaspoons sugar  
or 2 teaspoons fat or oil  
or 2 tablespoons pounded groundnuts

For growth and health each group should use one of these  
relish type foods

2 tablespoons powdered milk  
or 2 tablespoons powdered groundnuts  
or 2 tablespoons powdered kapenta  
or 2 tablespoons cooked, skinned, mashed beans  
or 2 large tablespoons chopped or pounded dark green leafy vegetables  
or 1 egg  
or 2 tablespoons finely chopped cooked meat  
or 2 tablespoons finely chopped fish

Make sure that good hygiene practices are followed and that the porridge is well cooked.

Have each group measure how many cups of porridge they have made

DISCUSSION Discuss the amount of food in each bowl of plain porridge found in the previous lesson with that of the mixed porridge each group has just made.

TALK ABOUT the importance of variety in children's diet for  
Increasing energy  
Improving growth and health  
Improving appetite

A multimix porridge with more than one relish is very good.

## VARIETY IS IMPORTANT FOR

### Increasing energy

Oil, fat, sugar and groundnuts boost the energy content of porridge without increasing the volume very much. Oil and groundnuts can be added to the water and cooked with the porridge. Sugar can be added towards the end of cooking. It does not usually carry germs and if added early the porridge is more likely to burn. Other edible nuts such as pumpkin seeds can also be used.

### Improving growth and health

Breastfeeding is important for growth and health. However after six months breast milk and plain porridge alone will not produce a healthy child. The relish type foods listed should be used in porridge. Most of these foods can be either added to the water or added with the mealie meal. The egg however can be mixed up and stirred into the porridge during the last five minutes. Other relish type foods eaten by the family can also be mixed with porridge. However make sure the relishes mentioned are also used frequently. They are better than most other relishes.

### Improving appetite

Adding different foods and not just the same food all the time encourages children to eat. They can eventually get tired of the same food all the time. Then they do not want to eat as much. Adding oil sugar and groundnuts also makes the food more tasty as well as adding energy.

## CASSAVA

Cassava is not as good for young children unless you add more of the relish type foods shown. In cassava areas stress the importance of adding  $1\frac{1}{2}$  to 2 times the amount. Instead of 2 tablespoons of beans use 3 or 4. Also a multimix is a good idea in these areas. A combination of cassava and cereal as was mentioned in the last lesson is also good.

## MULTIMIXES

A combination of relish type foods in the same porridge should be encouraged especially with vegetable foods. A tablespoon of green leaves and a tablespoon of groundnuts is better than two tablespoons of green leaves.

## ACTIVITY PREPARATION

For this lesson you will need three of everything listed for the last lesson. In addition you will need tablespoons and teaspoons for measuring, a small amount of the energy foods and a selection of the relish type foods listed for this activity. Use foods that are available in your area.

## FOOD VOLUME

In the previous lesson the amount of plain porridge for a one year old child came to almost two cups for each meal. The mixed porridge for one meal should measure about a cup. This is a reasonable amount for a child to eat at a meal.

## SNACK

Snacks between meals add variety and help a child to get enough food. Good snacks include pawpaw, banana, sweet potato, pumpkin porridge and for slightly older children green mealies.

## 10. CHILDREN - FEEDING MANAGEMENT

**AIM** To highlight the socio-economic and cultural problems associated with the feeding of young children.

**OBJECTIVES** PSBAT advise mothers on feeding young children of various ages and discuss feeding problems.

		begin with thin porridge then introduce extra energy & vegetable relish	thick porridge extra energy vegetable relish Introduce other relishes	thick porridge all relish extra energy family meals but cut in small pieces
		introduce mashed fruit and juice	mashed fruit & juice other snacks	fruit, juice and other snacks
<b>MEALS</b>				
<b>SNACKS</b>				
<b>Milk</b>	breastmilk	breastmilk	breastmilk	breastmilk
amount of mixed porridge	no additional food	increase to $\frac{1}{2}$ cup at each meal	$\frac{1}{2}$ to $\frac{3}{4}$ cup 3 to 4 times a day	$\frac{3}{4}$ to 1 cup 3 to 4 times a day
months	birth - 3 or 4	4-6	6-9	9-12

**FEEDING GUIDE FOR HEALTHY CHILDREN**

Introduce means start with a small amount and give more when the child is used to the food.

- DISCUSSION**
1. Divide the participants into small groups of 4 to 6 people. Let them discuss the way young children in their area are fed. Then find out what people do which is different from what is shown in the feeding guide above.
  2. Bring the groups back together and let each group summarize their findings.
  3. Discuss the problems noted by the groups and suggest solutions to these problems.

Weaning from the breast usually begins towards the end of the second year. This can be a difficult time for some children. See that they get plenty of relish to replace the breastmilk.

**DISCUSS** Discuss ways to wean children from the breast and any problems with weaning.

## INTRODUCING PORRIDGE

Start a child on porridge when he is about four months of age. Introducing solid food earlier than four months means there could be a risk of infection from the food. If a child younger than four months fails to grow well he may have to be given other foods early. He should also be checked at the clinic.

## ADDING OTHER FOODS

As soon as a child is used to porridge start gradually adding other food to it. They can start first with mashed fruit and juices and with vegetable relishes.

Add only one new food at a time. Use a small amount (about a teaspoon) at first. Once the child is used to a small amount you can add more. Some new foods may upset a child at first. If so stop giving that particular food for a while. If a particular food upsets a child when you stop giving it the upset will also stop. If it continues it is caused by germs in the food and not the food itself.

## FOOD AT DIFFERENT AGES

At six months the child will need half the amount of food needed by a one year old. Use half the mealie meal, half the energy food and half the relish type food used for a one year old in the previous lesson. This will give about half a cup of food at each meal. Some children may even be able to eat more than this. By nine months a baby can eat about  $\frac{3}{4}$  of a cup.

## FAMILY FOOD

The age at which a child shares the family food depends on the child and its mother. Remember that they still need at least three meals a day. When they start on nshima see that they get enough. It should be in small pieces on a separate dish and have plenty of chopped up relish, not just the soup. You could also take some of the family relish, chop it small and add it to the porridge.

## PROBLEMS

The most difficult time of the year for managing the feeding of young children is probably during the rainy season. The mothers spend long hours in the fields. Many families also have less food available during this season. In towns food problems are greatest towards the end of the month.

Families may not have enough of the extra energy foods all the time. Instead they may have to feed young children more than three times a day.

Mothers may feel that many foods are not suitable for children until they have teeth. They do not realise that by six months you can introduce almost all foods as long as they are mashed or finely chopped.

## WEANING FROM THE BREAST

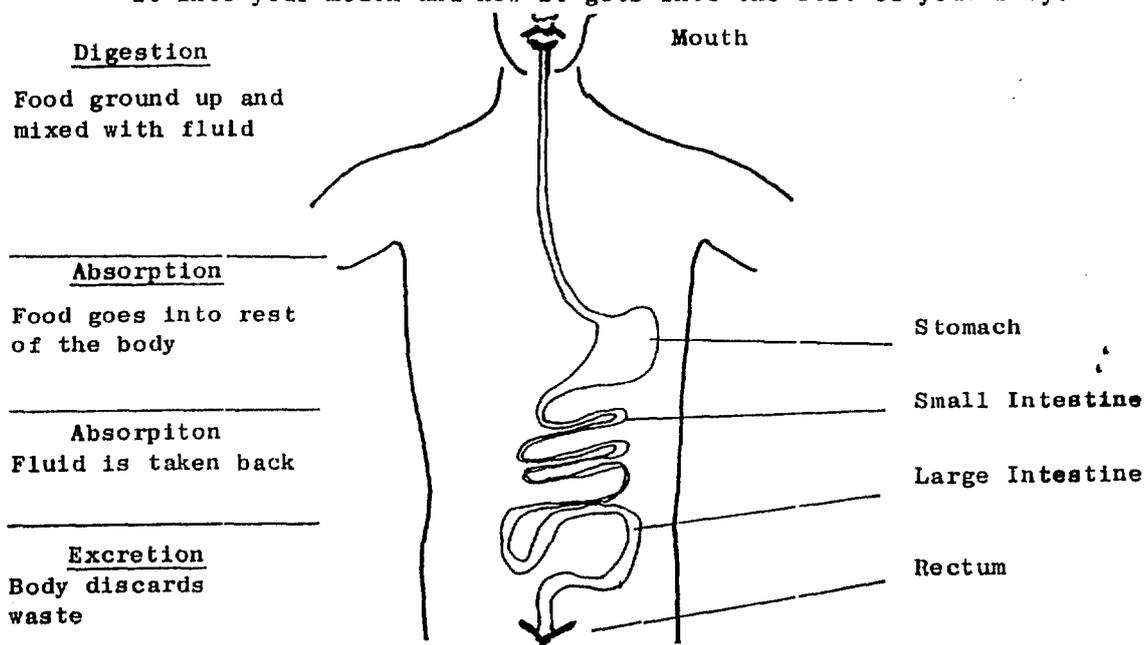
Weaning from the breast should be done gradually even when a mother becomes pregnant again. The milk of a pregnant mother is not poisonous.

## 11. DIGESTION AND ABSORPTION OF FOOD

**AIM** Introduce the topic of digestion and absorption of food as a basis for understanding the changes that take place in diarrhoea.

**OBJECTIVES** PSBAT discuss what happens to food in the gastrointestinal tract under normal conditions and compare this to what happens during diarrhoea.

Digestion and absorption are about what happens to food once you put it into your mouth and how it gets into the rest of your body.



**ACTIVITY** Tell participants to take a pencil or a stick and trace along the tube in the drawing above. Start at the mouth.

**ASK** What do you notice?  
Although the tube twists and turns it starts at the mouth and ends at the anus.

**TALK ABOUT** What happens to the food in this Tube. Point out that water from the body is mixed with the food near the top and is absorbed back into the rest of the body lower down near the end.

**ASK** How long does it take food to pass all the way through the tube until the waste comes out?

**ASK** What is different when a person has diarrhoea?

During diarrhoea food passes quickly through the tube and the water comes out and is lost from the body.

GASTRO INTESTINAL  
TRACT

This is like a long tube going all the way through the body from the mouth to the anus.

DIGESTION

Food is broken down at the top end of the tube. It is mixed with fluid from the body first in the mouth and then in the stomach. This prepares the food for the body to be able to use.

ABSORPTION

In the middle part of the tube the parts of the food that the body can use cross through the wall of the tube. From here it can be taken to the rest of the body.

EXCRETION

At the lower end of the tube the parts of the food that the body can not use pass out in the faeces. Before this happens all the fluid put into the tube during digestion is absorbed back into the rest of the body again.

Most people pass out waste once a day. Some people may take a little longer or a little less time but most people defecate once a day when they are in good health.

DIARRHOEA

Various organisms can get into the tube and irritate it. This causes diarrhoea and or vomiting. (gastroenteritis). During diarrhoea the food passes quickly through the tube. This means that the body does not get time to take everything it needs from the food. It probably only takes about half of what it needs. The rest goes right through the tube and comes out with the waste. It is important to note that at least half of the food is absorbed. This is why it is recommended to feed patients that have diarrhoea even though some of the food is lost. It is better that they eat. Half of the food is better than no food.

The most serious thing about diarrhoea is that the body does not get time to take back the fluid. A lot of water and salt is lost in the faeces. If this is not replaced it quickly leads to dehydration.

## 12. DIARRHOEA PREVENTION

- AIM** To emphasize the need for prevention of diarrhoea
- OBJECTIVES** PSBAT describe steps that can be taken to reduce the incidence of diarrhoea.
- ACTIVITY** Read the following story to the participants.
- Miriam was upset. Daniel who was ten months old had diarrhoea again. It was only one month ago that he had it. He had become very thin then. He was still thinner than he used to be. What would happen to him now. Last time she went to the clinic. She was told to boil his drinking water. She had been doing that and now he had diarrhoea again.
- ASK** What else could Miriam do to try to prevent diarrhoea?
- There is no single answer to the prevention of diarrhoea. An overall improvement in hygiene and sanitation is needed. Answers should include the following.
- FAECES Diarrhoea is spread from the feces of people and animals. All feces, even those of young children should go into a toilet. Hands should be washed after going to the toilet or changing young children.
- Water A plentiful supply of clean water is important. Enough water is needed for personal hygiene and household cleaning. See that water does not become contaminated in the home. Boil children's drinking water.
- Food Food often causes diarrhoea. Wash hands before preparing or eating food. Use clean dishes. Cook food well. Serve food as soon as it is ready. Wash raw fruit. Keep flies off food.
- Feeding Healthy well fed children get diarrhoea less often. When they do get diarrhoea they recover better. Feed young children frequently with a variety of clean food.

Diarrhoea is very common in the rainy season. Children between the ages of six months and two years get diarrhoea often during this season. Diarrhoea causes malnutrition especially in underfed children.

## DIARRHOEA

Diarrhoea affects many people in Zambia. It is very common in the rainy season. It occurs very often in children between the ages of six months to two years. During the rainy season children in this age group may have diarrhoea on an average for one week in every month. Many deaths in this age group are almost certainly linked with malnutrition and gastroenteritis.

It is unlikely that any single input, such as boiling drinking water for young children, can reduce the incidence of diarrhoea. A general improvement in hygiene and sanitation standards is needed. Some of the important points are shown below. Many of these points are discussed in greater detail during other parts of the health workers training. It is important to also discuss them briefly here.

### FAECES

Most germs that cause diarrhoea are passed on the faeco-oral route. In other words small amounts of contaminated faeces from a person or animal are passed on to another person who swallows it, often in water or food. It is therefore important to:

- . Build and use latrines
- . Wash hands after using a latrine or after changing or cleaning a child that has messed
- . Dispose of the faeces of young children carefully. This is very important. They have diarrhoea more frequently than any one else in the family and yet people are more careless with their faeces.

Extra care should always be taken in disposing of the faeces of someone who has diarrhoea.

### WATER

A plentiful supply of clean water is also important. Simply having a supply of good clean drinking water will not control diarrhoea. Enough water is needed to clean hands, clothes, dishes etc. properly. Many germs causing diarrhoea are known as water washed. This means that hygiene is very important. People must use enough water to wash themselves and household things well. It is better to have enough reasonably clean water than a small amount of more pure water.

Reasonably safe water can become infected in the home. Store water in a clean covered container. When you take water from this container use something that is clean and do not put your hands in the water.

The drinking water for young children should be boiled. It should be boiled for ten minutes and stored in a clean container.

### FOOD

Diarrhoea is often passed on in food. Protect food from flies. They carry germs to your food. Wash your hands before preparing or eating food. Use clean dishes. Cook food well. If food such as relish is left over from a meal cook it through again before eating it.

Take special care with the food for young children and see that it is eaten soon after it is prepared. The longer it sits after it is prepared the more germs it will contain.

### FEEDING

Feeding children frequently with a varied diet is also important. Diarrhoea is more frequent and more severe among children with malnutrition. Mildly malnourished children can become seriously malnourished as a result of diarrhoea.

## 13. REHYDRATION FOR DIARRHOEA

**AIM** To encourage the early giving of fluids to prevent dehydration (drying out of the body)

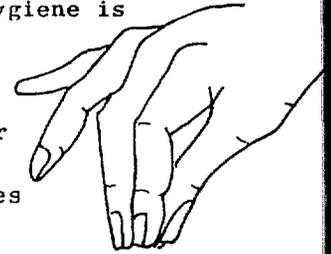
**OBJECTIVES** PSBAT prepare oral rehydration fluid and advise mothers on how to use it at home for early treatment

It is important to add the right amount of sugar and salt to the water.

**ACTIVITY** The participants will first learn how to measure the salt, water and sugar. See that good hygiene is practised.

1. Measuring salt

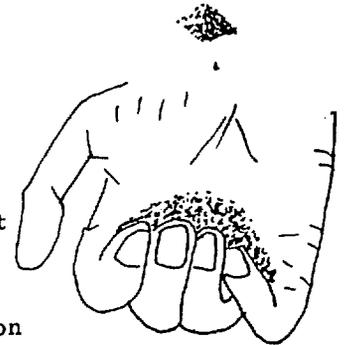
Let each participant take a 2 finger pinch of salt and place it in a teaspoon. Practise until it measures one fourth of a teaspoon.



2. Measuring sugar

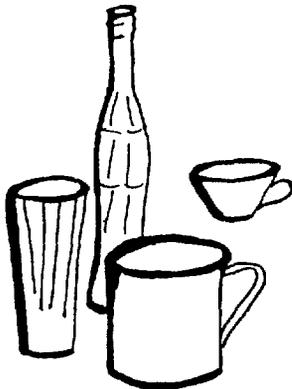
Let each participant measure 2 level teaspoons of sugar into the four finger scoop of their hand.

Now let them try to measure the sugar into their hand without a spoon and then check to see if it fits into two teaspoons.



3. Measuring water

show the participants a collection of cups likely to be found in the area. Measure 250 mls of water into each cup. Let the participants see where the water comes to in each one.



4. Preparation of oral rehydration fluid

Let each participant add a two finger pinch of salt and a four finger scoop of sugar to 250 mls of boiled water

5. Checking the solution

Too much salt is dangerous so check the solution by tasting it. It should taste no saltier than tears.

**TALK ABOUT** how to store and use the oral rehydration fluid. Store it for only 24 hours then make fresh fluid Give it to the child to drink slowly after each diarrhoea stool, continue to breast feed and encourage eating.

## PREPARING ORAL REHYDRATION FLUID

The salt and water are necessary to replace what is lost in the stools and thus prevent dehydration. The sugar is added to help in the absorption of the salt. Too much salt can be dangerous. Extra sugar is also not good. It is not absorbed and instead carries more water with it into the stools. Spend enough time on this exercise so that all participants can make the solution properly.

Good hygiene is important. See that participants wash their hands before beginning. Use clean dishes and spoons and taste carefully. Use boiled water for preparing the solution. This is best. However the unavailability of boiled water should not prevent rehydration when a child is seriously dehydrated. Early replacement of fluid in this situation outweighs the possible risk of using contaminated water.

## MEASURING

Teaspoons like cups vary in size. The teaspoon used here holds five mls of water. If possible check the size of the teaspoon you are using. The cup used here holds 250 mls of water.

## STORING THE FLUID

The fluid should be stored in a clear container. After 24 hours whatever is left should be tipped out and fresh lot made.

## USING THE FLUID

How to diagnose dehydration and how to use the fluid for rehydration therapy will be covered elsewhere in the course. Here the concern is for early intervention and prevention of dehydration.

Greatest emphasis should be given to replacing the fluid lost in diarrhoea as early as possible. These home made solutions are more successful if used early before the appearance of dehydration. As soon as a child has diarrhoea give him the fluid to drink. Let him drink some slowly after every stool is passed. The amount to give is shown. Giving the fluid and proper feeding and breastfeeding helps a child gain weight and get better.

Age	0-3 mths	3-12 mths	1-3 yrs	older children & adults
After every diarrhoea stool give	$\frac{1}{2}$ cup	$\frac{1}{2}$ cup	$\frac{1}{2}$ - $\frac{3}{4}$ cups	1-2 cups

## VOMITTING

Keep giving the fluid in small sips even if the person vomits. Not all the fluid will be vomited. Give one teaspoon full every five minutes. If the child shows signs of dehydration continue with the fluid until the child reaches the health centre.

## POTASSIUM

Potassium losses from the body are high especially in infant diarrhoea. This loss is known to affect appetite, muscles and kidneys. When using this homemade solution you can recommend that the child be given the foods listed below. They are higher in potassium.

bananas, groundnuts, beans, orange juice, dark green vegetables. Potassium is soluble in water. So give the soup as well as the food.

14. FEEDING CHILDREN DURING AND AFTER ILLNESS

. AIM To emphasize the relationship between disease and malnutrition

OBJECTIVES PSBAT advise families on feeding children who are ill and on refeeding during recovery



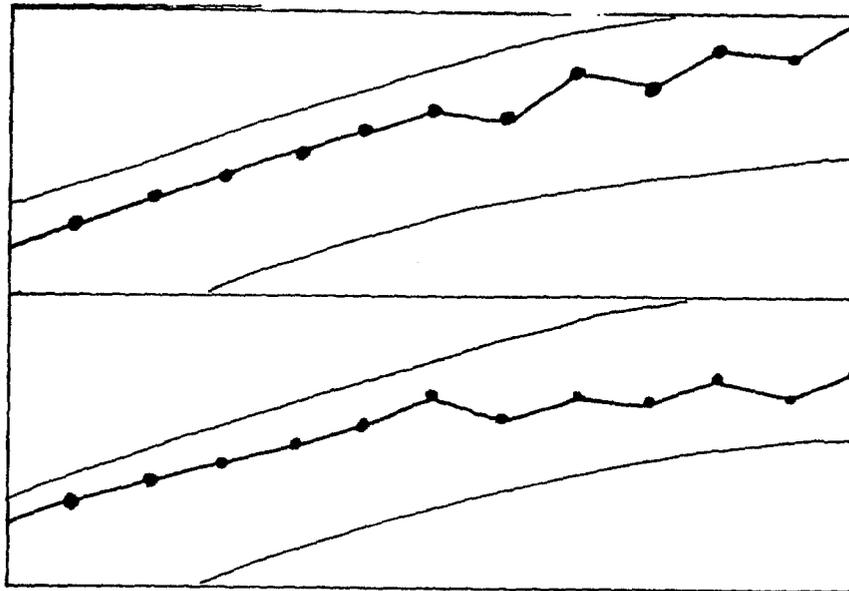
continue breastfeeding  
give plenty of drink  
encourage eating

This applies to children with diarrhoea as well as other illnesses

DISCUSSION Getting a sick child to eat can be very difficult

ASK From your experience what do children like to eat when they are not feeling well.

ACTIVITY Look at the two road to health cards below. What do they tell you about these children?  
Compare their weights at birth and at one year of age.



When children have just recovered from an illness they will often be able to eat more than normal. Give them extra food at this time so that they can gain back any weight they lost.

#### BREAST FEEDING

Breast feeding should always be continued whatever the illness. Diarrhoea is no reason to stop. It can even continue during the rehydration of a seriously dehydrated child.

#### OTHER MILK

Milk other than breast milk may occasionally irritate a child with diarrhoea. In this situation it is often better tolerated if a little is mixed in his food.

Most children - will however tolerate milk and it should only be withheld for seriously dehydrated children during the initial rehydration period (about 6 hours).

#### FLUID

When a child has diarrhoea give the oral rehydration fluid. In addition other fluids should be given in between. When a child has a fever he sweats a lot. Give him plenty to drink. Fruit juices are very good although in measles they may hurt this mouth. Boiled water can be used. Also other sweetened drinks.

#### ENCOURAGE EATING

Sick children usually have a poor appetite. They often like softer foods at this time. Foods such as softer porridge or the soup part of the relish with a little chopped up food in it. They may prefer milder tasting food. Porridge with an egg or groundnuts rather than kapenta. They do not want to eat very much at one time.

#### WHEN APPETITE RETURNS

When a child is starting to recover from an illness her appetite returns. She will be able to make up for the food she could not eat when she was sick. Feed her an extra meal a day until she gains back the weight she lost. Another way to do it is to add extra energy and relish foods to her porridge for a while.

#### ROAD TO HEALTH CARDS

David and Michael were the same weight when they were born. They also had the same weight when they were six months old. By one year however David was bigger than Michael.

Look at the charts of these children between six months and one year of age. They both lost weight three times during this period, probably because of sickness. After each illness David was fed extra food until he caught up again. Michael did not catch up properly before he got sick again. Each time he became smaller for his age. The road to health cards of many children in Zambia look like Michaels. They never fully recover from illness and many slowly become more and more malnourished.

## 15. PROTEIN ENERGY MALNUTRITION (PEM) - IDENTIFICATION

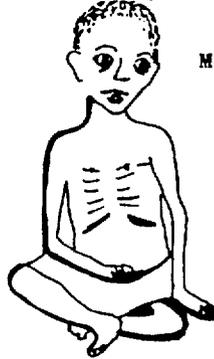
**AIM** To provide an understanding of the different types of PEM placing emphasis on prevention.

**OBJECTIVES** PSBAT identify malnutrition cases requiring hospitalisation and those that can be rehabilitated in the community.



Kwashiorkor

very  
serious



Marasmus



Underweight

serious to  
moderate

**DISCUSSION** While people often believe that underweight is related to feeding they seldom believe that kwashiorkor and marasmus are. What do people in your community believe?

A few children suffer from kwashiorkor and marasmus. Many more children are underweight.

Children with kwashiorkor or marasmus and those in the red zone of arm circumference strip should be treated at a health centre.

In the community better feeding of underweight children can prevent these more serious forms of malnutrition.

**FIELD TRIP** If possible take the participants to visit a malnutrition ward. Let them see seriously malnourished children and those at various stages of recovery.

## PEM

Kwashiorkor and marasmus are often thought to be the main types of malnutrition among children in Zambia. This is not true. They are the most serious types of malnutrition but more children suffer from the less severe forms of malnutrition.

Since children with kwashiorkor and marasmus have infection and other complications they need to be treated at a health centre. Cases of moderate malnutrition, while they should be checked at a clinic, can usually be treated in the community.

## PREVENTION

Concern for only the children with kwashiorkor and marasmus will not prevent more children from becoming seriously malnourished. We need to find and refeed underweight children before their situation becomes serious.

For every one or two children suffering from kwashiorkor and marasmus there are probably 20 or 30 children that are too thin. On the arm circumference strip the serious PEM cases will be in the red zone. Those at risk and needing refeeding to prevent serious PEM are usually in the colourless zone. You can also get a good idea by examining the children. The arm circumference strip does not work on children below one year of age.

## BELIEFS

In many communities people do not believe that kwashiorkor and marasmus are related to poor feeding. They do however usually see thinness and fatness as having to do with food at least in part. Build your teaching on what people know. Firmly held beliefs are hard to change.

## 16. PEM - REHABILITATION

AIM To encourage more rapid rehabilitation of malnourished children

OBJECTIVES PSBAT advise families on how to feed children who are recovering from PEM



At least four meals a day

Twice as much energy foods in their porridge

Extra snacks



Malnourished children need to eat about twice as much as healthy child of the same size

- ACTIVITY
1. Explain that Laura is one year old. She is malnourished. She weighs only 7 kg. This means she is about the weight as a healthy six month old baby
  2. Divide the participants into 4 groups. Let each group work out a suitable recipe for one meal for Laura.

DISCUSSION Have each group report on their recipe and discuss whether it is suitable for their area.

EXPLAIN Suppose Laura's mother says she can not get oil or sugar and her groundnuts are finished.

ASK What would you advise Laura's mother to do?

A malnourished child will gain weight quickly if given enough mixed good food. As they gain weight, they will need more food at each meal.

## REHABILITATION

Malnourished children will gain weight quickly if they are fed enough food. They also have big appetites. They need twice as much food as normal for their size. You could simply feed them twice as often as a healthy child. This is difficult for many mothers. Instead you can add extra energy and relish foods to their porridge and feed one extra meal a day.

If the child has a poor appetite at first then you should coax him to take small amounts of food throughout the day for a day or two. After that you should find his appetite begins to improve. You should soon be able to feed him as is suggested above.

## THIN AND SHORT

If a child has been underweight for some time he will not only be thin he will also be short for his age. The important thing is to overcome the thinness. When he becomes fatter his appetite will return to normal. You can feed him like a normal healthy child again. Shortness takes much longer to overcome. Once they are fatter if you keep feeding them like most children will eventually catch up some of their height again.

It has been shown in hospitals that even the seriously malnourished children can be rehabilitated in about 4-6 weeks if fed enough food. In the community it may take longer but you can still expect to see a fairly rapid recovery if the child is well fed and has no other health complications.

## ACTIVITY

Since Laura is the size of a six month old child first work out a normal meal for that age. Refer to lesson on food variety. For one meal take half the amount of basic porridge in the recipe for a one year old. Since Laura needs twice as much energy and relish food as normal instead of halving the amount shown in lesson leave it as it is. The recipe should look something like this

1/6 cup (about 2 large tablespoons) mealie meal  
 1 cup water  
 2 Tablespoons pounded groundnuts  
 2 large tablespoons dark green leafy vegetables

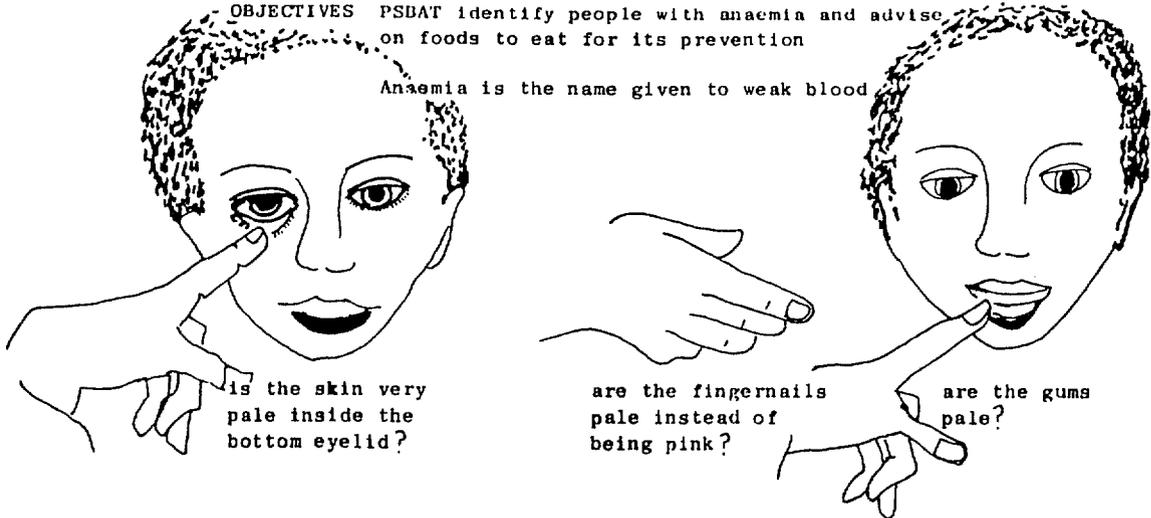
As Laura gains weight you will have to make more porridge at each meal. Where the energy foods suggested are not available and no alternative such as other nuts can be found the only way to provide enough food for rapid rehabilitation is to feed more often. You may have to see if the family can feed the child at least six meals a day.

## 17. ANAEMIA

**AIM** To create concern for identifying and treating anaemia and an understanding of the role of food in prevention

**OBJECTIVES** PSDAT identify people with anaemia and advise on foods to eat for its prevention

Anaemia is the name given to weak blood



**ACTIVITY** Have participants check the eyes, fingernails and gums of each other and then discuss what they find.

If someone is seen to have anaemia they should be sent to the clinic and also advised to eat foods that are rich in iron.

**DISCUSSION** Has anyone had anaemia or known of someone who has? How did they feel when they had anaemia? What treatment were they given?

Some foods contain more iron than others. Everyone needs to eat some of these foods to prevent anaemia. Women of child bearing age and young children need to be careful to eat these foods. They get anaemia more often.

All pregnant women should go to the clinic. It is difficult for them to get enough iron from food. They will usually be given special iron tablets to take.

**ANAEMIA** Food contains something called iron. This is used to make the red colouring in blood. Without enough iron the blood is pale and weak. By looking at the eyelids, fingernails and gums you can see if there is enough of the red colour in the blood. If the blood is weak they will be a pale-whitish colour. Anaemia makes you weak and tired. If it is very serious the face and feet may swell, the heart beat become rapid and the person may be short of breath. Anaemic women run a greater risk of miscarriage and of dangerous bleeding in childbirth.

**TREATING ANAEMIA** If it is very bad you might be given a transfusion where strong blood is put straight into your body.

You might be given more tablets or medicine with iron in it to take. When someone is taking these tablets their stools will be darker than normal.

Pregnant women are usually given tablets with iron in them even when they are not really anaemic. They need a lot of iron for the baby and it is difficult for them to get enough from the food they eat.

**PREVENT ANAEMIA** Everyone needs iron but these people have special needs.

- young children need iron because they are growing
- pregnant and lactating women need iron for the baby
- all menstruating women need iron to replace what they lose each month.

#### THESE FOODS CONTAIN A LOT OF IRON

legumes (beans/peas)  
 dark green leaves both fresh and dried  
 eggs  
 liver  
 kapenta and other fish that are eaten whole  
 but not fish that are eaten without their  
 livers  
 red meat

Some worms use up blood as they live inside you. If the worms stay there too long they can cause anaemia. Someone with worms should go to the clinic for treatment.

## 18. VITAMIN A IN FOODS

**AIM** To encourage preventative action against vitamin A deficiency

**OBJECTIVES** PSBAT identify foods rich in vitamin A or Carotene and evaluate the adequacy of the supply in their area.

Vitamin A is found only in some foods. A deficiency of these foods can cause blindness. Not eating enough vitamin A foods is a problem in some parts of Zambia.

	Rain season	Harvesting season	Cold season	Hot season
Vit. A foods in most homes				
is there enough?				
What could be done				

- ACTIVITY**
- The foods shown have a lot of vitamin A. In the top part of the chart above list the foods that are found in most homes at that time of the year.
 

VITAMIN A FOODS  
mango  
pawpaw  
pumpkin  
\*dark green fresh leaves  
e.g. cassava leaves  
pumpkin leaves  
rape  
spinach  
black jack  
sweet potato leaves  
carrots  
liver  
eggs  
\*\*Kapenta and other fish eaten with the liver.  
palm oil
  - Answer the question is there a problem? and fill in the answer. If there is enough for families to eat a vitamin A food 2 or three times a week the answer is yes. Otherwise put no.
  - For any season where you have answered no ask yourself what could be done? Choose foods from the vitamin A food list and fill in your solution at the bottom of the chart.

**TALK ABOUT** The signs of vitamin A deficiency

When you see signs of vitamin A deficiency send the person to the clinic.

\* The leaves must be fresh to be counted as a vitamin A food  
Leaves dried in the sun give us iron but not vitamin A.

\*\* Fish that are eaten without the liver do not supply vitamin A.  
Kapenta is a vitamin A food but bream is not.

## VITAMIN A DEFICIENCY

Vitamin A deficiency is very prevalent in certain areas of the country, e.g. Northern Province, North-Western Province, Luapula, parts of Central Province and in Ndola Rural.

Vitamin A deficiency is seen more in young preschool children between the ages of about two years and five years. It is often found in children that are also either moderately or severely underweight.

Vitamin A deficiency is of great concern. If it is not treated in time it causes blindness. Once someone is blinded by vitamin A deficiency they are blind for the rest of their life. It is very tragic if a young child goes blind when it could have been prevented.

Vitamin A is found in some foods in large amounts. In other foods there is practically no vitamin A. The type of vitamin A found in fruit and vegetables is known as carotene. Fruits and vegetables with the most carotene are either dark green or orange. Light green vegetables such as cabbage do not contain much carotene. When vegetables are dried in the sunlight almost all of the carotene is lost. Although fresh leaves are high in carotene dried leaves are not. In fish and animals vitamin A is stored in the liver. That is why fish such as kapenta is a vitamin A rich food. It is eaten together with the liver. Fish such as breams that have to be gutted before they are eaten do not contain such vitamin A.

People also can store vitamin A in their livers. At some seasons of the year people eat more vitamin A foods in Zambia - wild spinach during the rainy seasons, mangoes in January. Some of this vitamin A they will be able to store. It will last them for a while but it will not last all year.

Encourage people to eat a vitamin A food at least twice but preferably even three or four times a week throughout the year. When a child is underweight or malnourished pay attention to the vitamin A foods in its diet and examine the child for any signs of deficiency.

### SIGNS OF VITAMIN A DEFICIENCY

- . At first the child may have NIGHT BLINDNESS. He can not see as well as other people in the dark.
- . Later he develops DRY EYE. The white of the eye loses its shine and begins to wrinkle.
- . Patches of little grey bubbles may form in the eye.
- . As the disease gets worse the cornea also becomes dry and dull and may develop little pits.
- . Then the cornea may quickly grow soft, bulge and even burst. Usually there is no pain. At this point the child can quickly become blind.

### EXAMINE THE EYES OF ALL SICK AND UNDERWEIGHT CHILDREN

Vitamin A deficiency is often found in underweight children. Vitamin A deficiency often gets worse when a child is sick with another illness like diarrhoea, measles or whooping cough.

## 19. IDENTIFYING PROBLEMS - INDICATORS

**AIM** To summarise and review course content and prepare participants for community programming.

**OBJECTIVE:** PSBAT list things can show community problems (indicators) & describe ways the information can be collected

**ACTIVITY** Ask participants to suggest information they could collect to tell them about problems in the community.

Throughout the previous lessons you have talked about many things you can find out about that will tell you about nutrition. We call such things indicators.

**DISCUSSION** Tell the participants to think about when they return to their area. What are some of the things they could find out about that can tell them about

- Food supply and the family food
- Malnutrition
- Infant feeding
- Health problems related to nutrition.

The first step in planning out your programme is to find out about the problems.

**DISCUSSION** How could you gather information about the nutrition problems in your area?

It is very important to collect information about the problems. Even if you think you know the problems you still need information. You need to show whether the problems affect many people or only a few. Whether the problems are more common in one area than another. Information can also be used to tell you whether your efforts are helping to solve the problems - you can then try to change your programme if it is not helping much. After you have been working for a while you can collect more information to see if the situation has changed. Below is a list of some of the information you could look for.

#### Food Supply a Family Food

number of meals eaten	seasonal food problems
snack foods available	feeding of school children
vitamin A foods available	

#### Malnutrition

Arm circumference	Road to Health cards
signs of anaemia	night blindness
observe children's behaviour	

#### Infant Feeding

number of meals eaten	Snacks eaten
thickness of porridge	foods added to porridge
length of breast feeding	use of feed-ng bottles
Feeding of sick children	use of ORT

#### Related Health Problems

Latrines and their use	water supply
personal hygiene and hand washing	cases of diarrhoea
death of children under two	

#### Sources of information

- . From written material such as reports and records. Even the records the PHC worker keeps can provide useful information e.g. cases of diarrhoea each month, where they come from and ages of patients.
- . From local leaders and other field staff e.g. the agriculture worker on the food supply situation; teachers on feeding of school children; health inspectors and community development workers on the environment; local leaders and Party officials.
- . By conducting a community survey. A survey can help to show the extent of a problem. This not only helps you to develop programmes but also to evaluate them.
- . From families. When working with a family you need to identify and discuss their specific problems with them. You can not just assume you know all about their problems.
- . Group meetings. Group meetings are a good place to discuss information you have collected to see if people in the area agree, also to gather more information on a problem.

## 20. IDENTIFYING PROBLEMS - SURVEYS

- AIM** To improve community programmes by building them on clearly defined community problems.
- OBJECTIVES** PSBAT prepare a simple survey form that will help to identify nutrition and nutrition related problems.
- CASE STUDY** Mrs. Mwale was a very dedicated PHC worker. She had been to a training course where they had learnt how to identify nutrition problems. When she returned home she designed a survey to collect information on all the indicators they had discussed at the course. The survey form was 20 pages long. She began interviewing families whenever her schedule gave her time. After six months she had interviewed all the families in the area. She had filled in 500 questionnaires. She spent the next six months analyzing the data she had collected. She found that several questions often gave the same information. She also found that some questions did not seem to give correct information. She realized that for a year she had spent most of her time on the survey and had spent very little time on her improvement programmes.
- DISCUSSION** Read out the case study to participants and then ask -  
What would you do different to Mrs. Mwale.
- Do not make a questionnaire too long.
- Choose a sample of households to visit.
- Do not ask leading questions that suggest an answer
- Test the questionnaire on a few households first.
- Too much information is as bad as too little. It costs time and money to collect and analyze information.
- ACTIVITY** Divide the participants into groups. Let each group design a questionnaire no more than two or three pages long. They should first decide on the purpose of the survey e.g. Are they going to assess the general family situation or the problems for young children etc. Remind them to include some general information such as the name of the village, the ages and sex of people in the household etc.
- When they have finished their questionnaire let them test it on people from one of the other groups.

### LENGTH OF QUESTIONNAIRE

Too much time spent on collecting information means too little time spent on programmes. Also people may be unwilling to answer too many questions.

Two or three questions telling the same thing can be useful. They can be used to check if a family gives a similar answer each time. However you should not do this for every topic in the survey. If you think carefully about the purpose of the survey this will help you to select only the indicators you are interested in.

### SAMPLING

Sampling can help to reduce the number of families you have to visit. The chart below gives a rough idea of how many families to include in a sample.

<u>Population size</u>	<u>Sample size</u>	<u>Percentage</u>
1,000 households	100 households	10
500 "	50 "	10
200 "	30 "	15
100 "	20 "	20

In Mrs. Mwale's case to tell about an area with 500 families she only needed to visit about 10% of them. That is she only needed to visit 50 families.

When you are choosing a sample you have to be careful about selecting the families to visit. They have to be representative of the area. Don't just choose people you know or families of better farmers. In Mrs. Mwale's case she could have visited every 10th household in every village. Another way is to choose a certain number of villages and visit every house in these villages. To choose the villages you could put the names of all the villages on pieces of paper. Shake them up in a box and then draw out the names blindly.

### LEADING QUESTIONS

Be careful not to use leading questions. These are questions that suggest an answer. They can give you the answer people think you want and not the true answer. Instead of asking "Do you feed your family three meals a day?" it is better to ask "How many meals a day does your family eat?"

### TESTING THE QUESTIONNAIRE

It is well worth taking time to test a survey form on a few families first. This can tell you whether families are willing to answer a question or if it should be asked in a different way. You can also find out if the questions are understood and give useful information.

## 21. COLLECTING INFORMATION - INTERVIEWING

- AIM** To demonstrate some of the mistakes an interviewer can make when trying to obtain information.
- OBJECTIVES** PSBAT identify interviewing problems that could affect the information being collected.
- ACTIVITY** Select one participant to be Mrs. Keri and one to be Mrs. Mulenga. Have them read out the interview below to the group. Now have them read it out again. This time stop at the lines and let the group discuss the problems they notice before continuing.

Mrs. Mulenga: Good morning, the government needs information about how you people feed your children, so I would like to ask you some questions.

Mrs. Keri: I'll try to help you but as you can see I am rather busy and I have to get ready to go off to the market in a few minutes.

Mrs. Mulenga: Well we'll have to do as well as we can. I am afraid I must have this information today and I cannot call back later.

Mrs. Keri: What can I tell you, I'm only a humble person but I'll do what I can.

Mrs. Mulenga: Well, that's good of you. We really know what is going on, but the government has to ensure that its information is confirmed from time to time so I should like to ask you a few questions

Mrs. Mulenga: Now I suppose you feed your children mainly on maize porridge without anything added don't you?

Mrs. Keri: Well, we do what we can, but at this time of the year there is hardly anything of any kind to be had around here

Mrs. Mulenga: I am sure there are some green things to be had somewhere. But wait a minute while I write that down

Mrs. Keri: Of course.

Mrs. Mulenga: I'm afraid I have very little time. Perhaps you could tell me what food you eat which has a high protein content.

Mrs. Keri: I 'm sorry, I don't understand what you mean.

Mrs. Mulenga: Well never mind. How much money does your husband earn every month?

**ACTIVITY** Let the participants read and discuss the example of a better interview shown on the next page.

## INTERVIEWING PROBLEMS

The following are some of the mistakes that Mrs. Mulenga made.

- . No personal introduction was made and there was no attempt to become acquainted.
- . She emphasized that the Government wanted the information. This scares people
- . She was unwilling to adapt her time to suit the mother.
- . She was unwilling to admit that she needed help and information. She knew it all.
- . She asked a leading question which led Mrs. Keri to answer as she expected.
- . She showed no interest in Mrs. Keri's problems and seemed to criticize Mrs. Keri for not trying hard enough.
- . She embarrassed Mrs. Keri by writing things down in her presence rather than asking permission or waiting until later.
- . She was in too much of a hurry and used technical language which Mrs. Keri could not understand.
- . She asked very abruptly about confidential matters concerning her husband's salary.

## A BETTER INTERVIEW

Let the participants read out the following interview.

- Mrs. Mulenga: Good morning Mrs. Keri. I wonder if you could help me. I'm asking all the mothers in the village about the food they use for feeding young children. Might I ask you too?
- Mrs. Keri: I'll try to help but as you can see I'm rather busy I have to go off to the market in a few minutes.
- Mrs. Mulenga: I appreciate that you are busy Mrs. Keri with so many fine children to care for. I'd gladly come back at a more convenient time. Unfortunately I've got to get this information today. The questions won't take a minute.
- Mrs. Keri: What can I tell you, I'm only a humble person.
- Mrs. Mulenga: Well can I start by asking you what is the main food you feed the young children.
- Mrs. Keri: Maize Porridge.
- Mrs. Mulenga: Thank you. And do you ever add anything to it?
- Mrs. Keri: Well I do my best, but at this time of year there is hardly anything to be found around here.
- Mrs. Mulenga: I know it is a problem isn't? I've got two children myself. Can you tell me if there are any other foods that you regularly give to your young children?
- Mrs. Keri: Yes. Red beans and pumpkin.
- Mrs. Mulenga: Thank you very much indeed. That information was all most useful. I'm very grateful. Oh, one final question. Could you please tell me what job your husband does?  
 ....Excellent. Thank you again Mrs. Keri, I'll say say goodbye now. Goodbye.

## 22. WORKING WITH PEOPLE - QUESTIONS

- AIM** To demonstrate how questions can be used to stimulate learner interest and participation
- OBJECTIVES** PSBAT give examples of closed questions, open questions and redirected questions.
- TALK ABOUT** the different types of questions that can be used to stimulate discussion.
- ACTIVITY** Read out each of the questions shown below. Ask the group to say whether they are closed, open or redirected questions.
1. What do people in your area do when a child has diarrhoea?
  2. How can you manage to see that young children take food to school?
  3. How do you make oral rehydration fluid?
  4. What is wrong with someone who has very pale fingernails?
  5. I see Mrs. Banda. You don't know how you can manage to cook three meals a day for the baby. Does anyone have any suggestions that could help
  6. Do families in your area have enough food for their families?
  7. What are the food problems in your area?
  8. Your young child does not like dark green leaves. Mrs. Phiri do you have any suggestions that could help Mrs. Banda with this problem?
- ACTIVITY** Ask members of the group to give you their own examples of the different types of questions.

## USING QUESTIONS

There are several ways to get people in a group or during individual counselling sessions to participate. e.g. pictures, games, problem dramas, case studies can help. However almost all these depend on the effective use of questions to get people involved.

The questions a field worker asks after showing a poster are very important. They help people think about important points and talk about their ideas.

A mix of different types of questions will usually stimulate a good discussion.

## CLOSED QUESTIONS

"At what age should a mother start feeding her baby porridge?" This is an example of a closed question. It asks for a brief and exact reply. Closed questions can help to focus discussions on a specific point. They can help to check that people understand or agree with a point. Closed questions can however limit discussion. They do not encourage people to express their attitudes and beliefs.

## OPEN QUESTIONS

"What do you find children like to eat when they are sick?" This is an example of an open question. It allows for several different answers, most of them long. It helps people to think and makes them want to talk and give their opinions.

When working with people who are not used to discussing freely in a group it may be better to use other ways to get people interested before you start asking open questions. (e.g. role play, games posters, closed questions)

## REDIRECTED QUESTIONS (Used with groups)

"Mrs. Phiri says she is afraid of adding relish to the baby's porridge. Her mother never used relish until a child was a year old so why should she? That is a good question. Will someone else answer it?"

When someone asks the field worker a question or makes a comment she can ask other participants to answer. This allows the group to think through problems rather than relying on the field worker for all the answers. It also gets more people involved in the discussion.

## ACTIVITY

The following are the answers to the activity questions.

Closed	questions	3,4 and 6
Open	questions	1,2 and 7
Redirected	questions	5 and 8

## 23. WORKING WITH PEOPLE - INDIVIDUAL COUNSELLING

- AIM** To help PHC workers to be more effective in their work with individuals and families.
- OBJECTIVES** PSBAT conduct effective counselling sessions that encourage people to change their behaviour.
- TALK ABOUT** counselling and the counselling steps and review the points about counselling techniques.
- ACTIVITY** In this activity the participants will do role plays of individual counselling sessions.

Divide the participants into groups of about six people.

Let the groups choose one person to be the PHC worker and one person to be the mother. The other group members are observers.

Describe the various roles. Suggested roles are given below. Adjust or change these to suit your area.

Explain to the groups that the PHC worker is to discuss about Mailasi with her mother and the observers are to watch out for the points they have been given.

Let each group do their role play. The trainer should move around and help each group get started.

After 15 minutes or so stop the groups and let them discuss what happened noting the points the observers were given to watch. Also let the "mother" describe how she felt towards the "PHC worker" and the PHC worker how she felt towards the "mother".

Let the groups change roles and try the exercise again. You can make up new roles if you like.

If there is time you can try a longer role play or arrange for the participants to try counselling mothers at a nearby clinic.

**PHC WORKER ROLE**

Mailasi is twelve months old. When you look at her road to health card you see that for the first 6 months she grew well. For the last six months she has hardly grown at all. Mailasi is small and thin for her age.

**MOTHER (rural)**

You live in a small village. You grow your own food. The family eat two meals a day. You cook porridge for Mailasi when you are preparing meals for the family. Mailasi also sometimes eats a little with the family. She is still being breast fed.

**MOTHER (urban)**

You live in a compound and your husband works as a messenger in town. You spend most of the day selling at the local market and take Mailasi with you. She is still being breast fed. You give her porridge in the morning before you leave home and she shares whatever snacks you get during the day. She eats nshima and relsih with the family at night although sometimes she is sleepy and doesn't eat much.

**OBSERVERS**

Two observers are to pay attention to the counselling steps to see if they are followed. Two observers are to watch the counselling techniques.

## WHAT IS COUNSELLING

Counselling means helping a person to understand a problem and find their own solutions to it. It does not mean giving a lecture and telling someone what to do.

In nutrition and health education we want people to change their behaviour - to do something, not just to know what to do.

Lecturing is a good way to give out information. To help people to know about something. Counselling is a good way to encourage people to change their behaviour. To do something about their problems.

## THE COUNSELLING STEPS

There are several steps in counselling. You have to go through all the steps. Sometimes it takes many sessions or visits to help a person solve a problem and sometimes only one or two. You should not move on to the reasons or causes of the problem until the problem itself is understood etc.

In counselling the client should

1. get to know the counsellor and trust her
2. be able to understand the problem
3. be able to discuss the reasons for the problem
4. be able to discuss possible solutions
5. be able to select the best solution that they are able to try and actually say what they are going to do.

## COUNSELLING TECHNIQUES

In addition to working through the counselling process you have to keep in mind the points that were discussed in the previous two lessons.

Don't just talk listen. Through the use of questions get the person to talk about their problems and what they intend to do. Take an interest in what is being said.

Be pleasant and friendly. People seldom change their behaviour when they are treated sternly and criticised. Take time to get acquainted.

Treat the person as an equal. Don't talk down to them or use language they do not understand. Respect their feelings.

Do not try to cover too much. Keep the discussion focussed on one or two points. e.g. don't try to cover number of meals, food preparation, hygiene etc at one session.

## THE ROLE PLAYS

This type of activity should not be treated in a personal way. No one is expected to do it well the first time. During the discussions remind the group that criticism is directed at the way the role was played and not at the person playing the role. It is a learning situation. It is to help the whole group learn. No one should feel hurt by what is said. You can not learn counselling by just talking about it. You have to do it. Doing it in a role play is one way of learning.

The trainer should move around and help each group. For the evaluation discussions you could stop one group and help them get started before moving on and stopping the next group.



## GROUP DISCUSSIONS

Leading a group discussion is similar to discussing with an individual. However it can be more difficult to lead a good discussion. There are extra things to remember. Anyone can sit in the middle of a group as its leader but you have to be well prepared to lead a good discussion.

The discussion leader plays a quiet but very important role in a discussion. He needs to know the subject well but should not force his opinion on the group. Instead he encourages the group members to talk and listens carefully.

He must guide the discussion and keep it going. Use questions to do this. He needs to keep the discussion focussed on the topic. He should help the group through the steps that were discussed in the last lesson. The steps are

- understand the problem
- discuss the reasons for the problem
- discuss possible solutions
- select the best solutions
- consider together ways to bring about the solution

## WHEN PROBLEMS ARISE

If two or more members have an argument, the leader can redirect the question to other members. The leader should however recognise that there are different views. He can introduce information that helps to clarify the situation.

When sensitive issues arise the leader should observe the general feelings of the group. If he feels it upsets the group he can always suggest that he can discuss it with anyone who wants after the meeting.

When one person does all the talking, the leader should move his eyes around the audience and encourage others to talk as well.

When quiet people don't participate you should try to encourage them to talk. You could redirect a question to them or ask them what they think about a point that has been made.

SAFE DRINKING WATER SUPPLY AND SANITATION

The common sources of drinking water in rural areas are:-

1. Ponds.
2. Wells.
3. Rivers - Streams
4. Lakes.

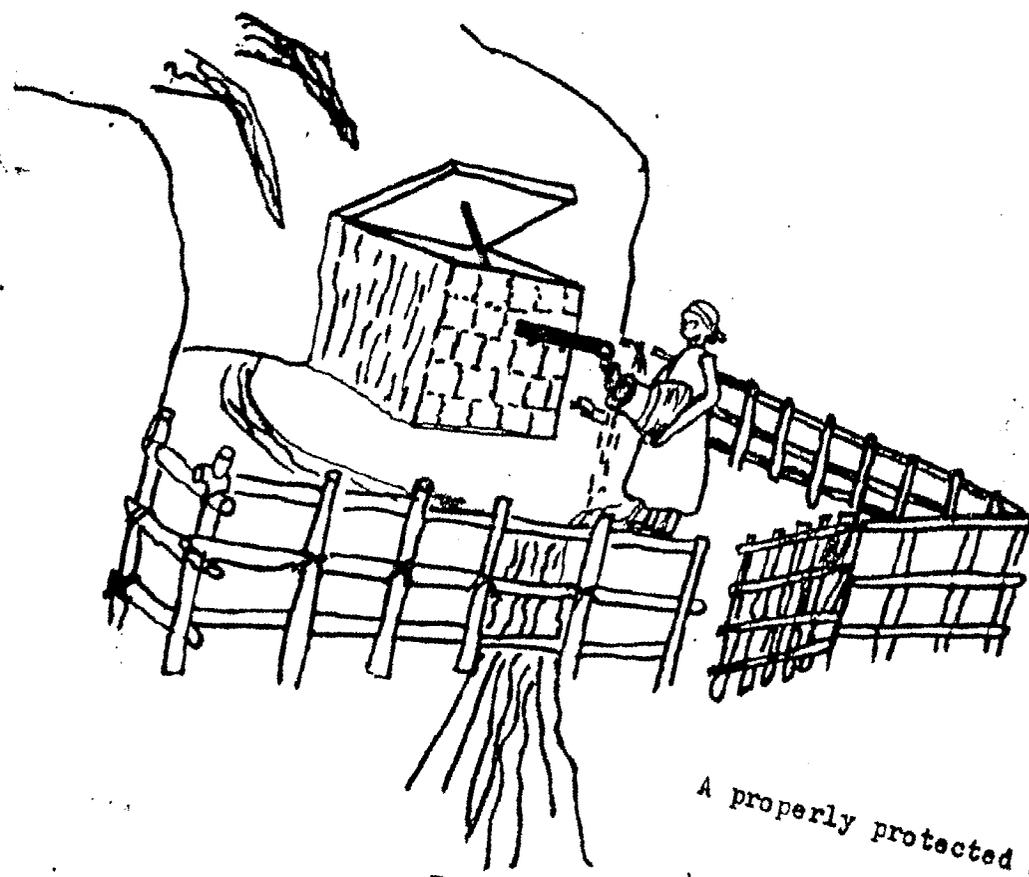
The above sources of water can be polluted in the following ways:-

1. By people defaecating near or in the source.
2. By people bathing in the water
3. By people washing clothes and house hold utensils in or near the water.
4. By washing the animals in or near water.
5. By building toilets or letting used water very near the source of drinking water.
6. By using un-clean containers to draw the water.

The drinking water may also be polluted by storing it in unclean or uncovered containers. Water polluted by human excreta can cause several diseases such as cholera, typhoid, dysentery etc.

The best way of making the drinking water safe from a pond, river and or stream is by boiling it before drinking. People should not use pond water if other sources are available.

Water from a River



A properly protected Spring

FIG - 16

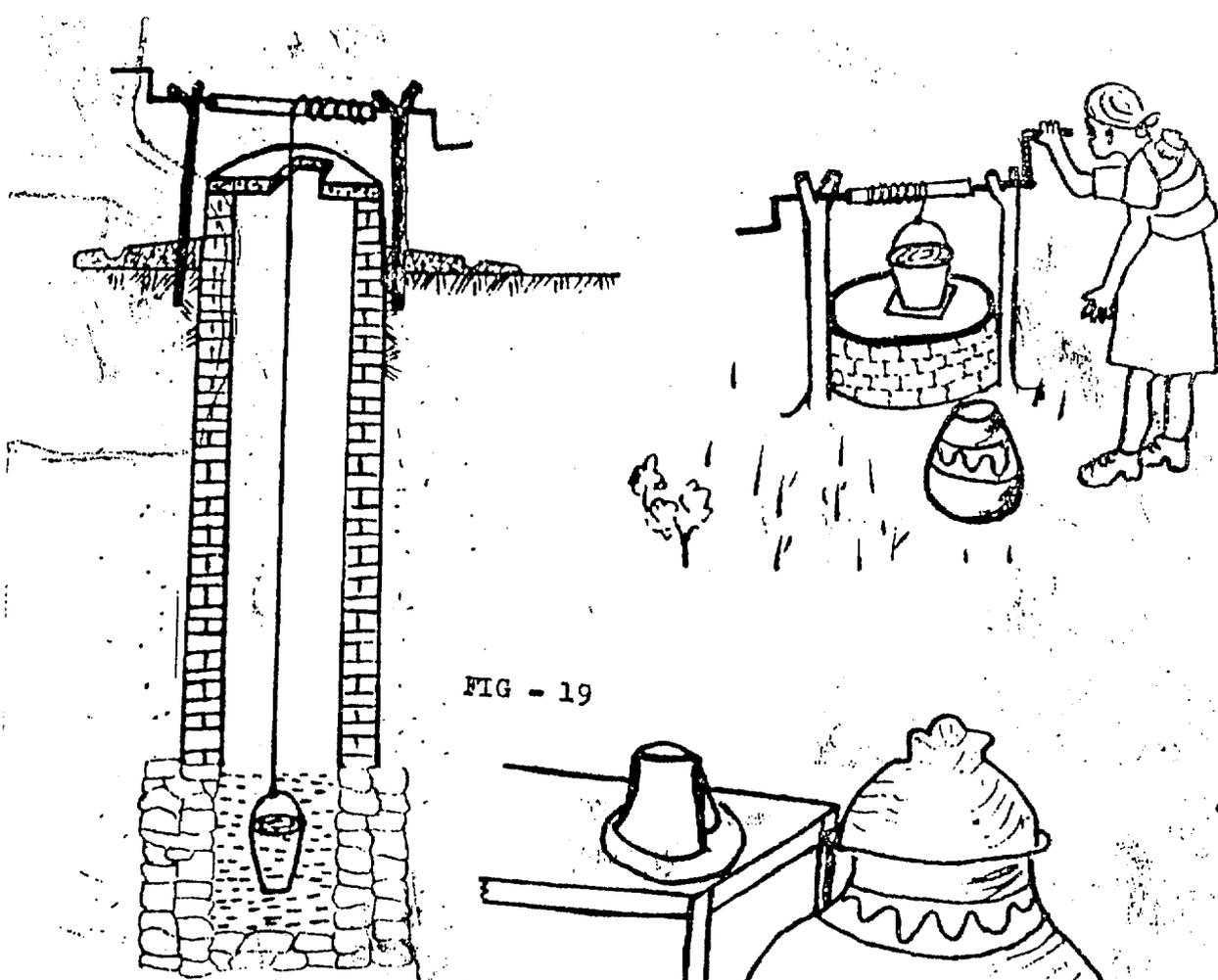
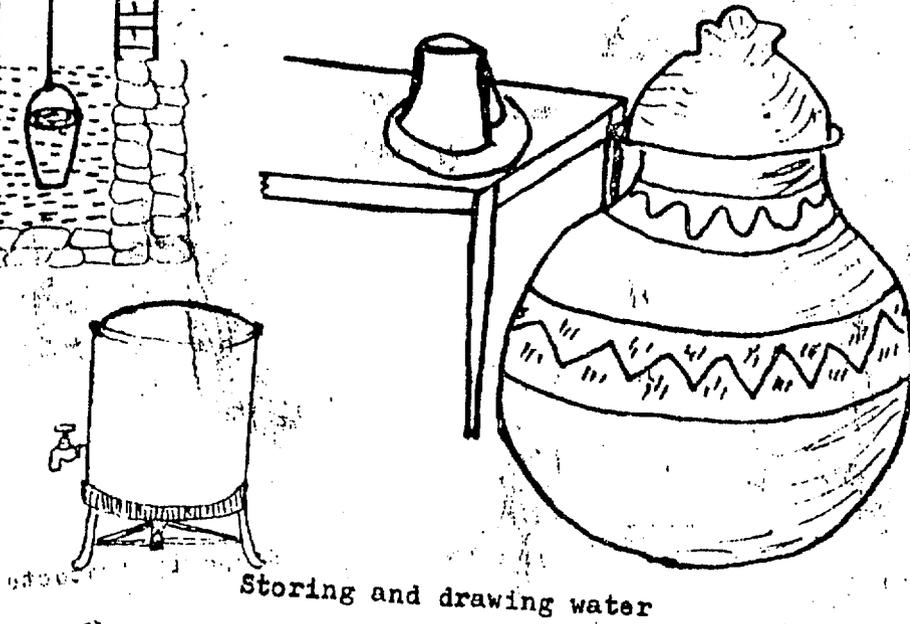
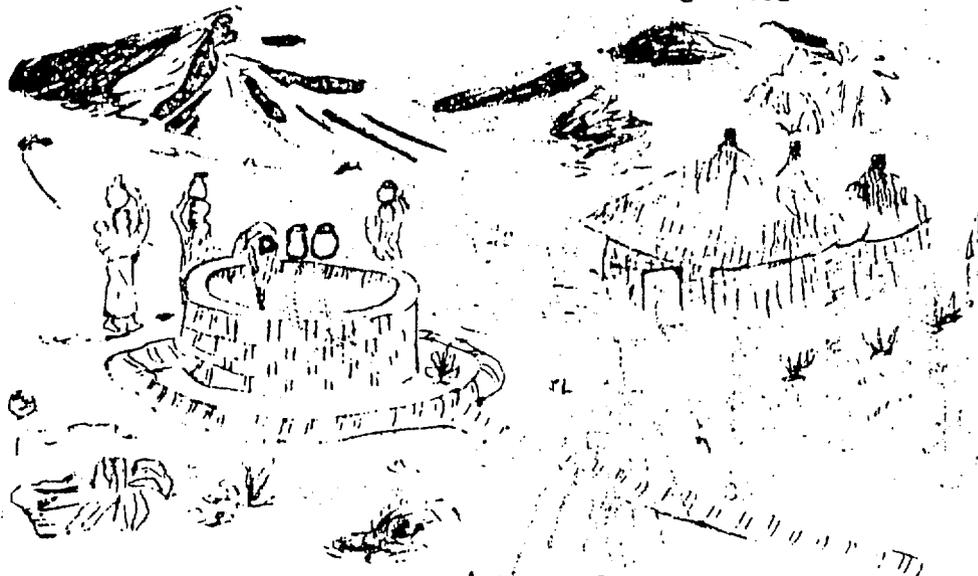


FIG - 19



Storing and drawing water



A properly protected WELL

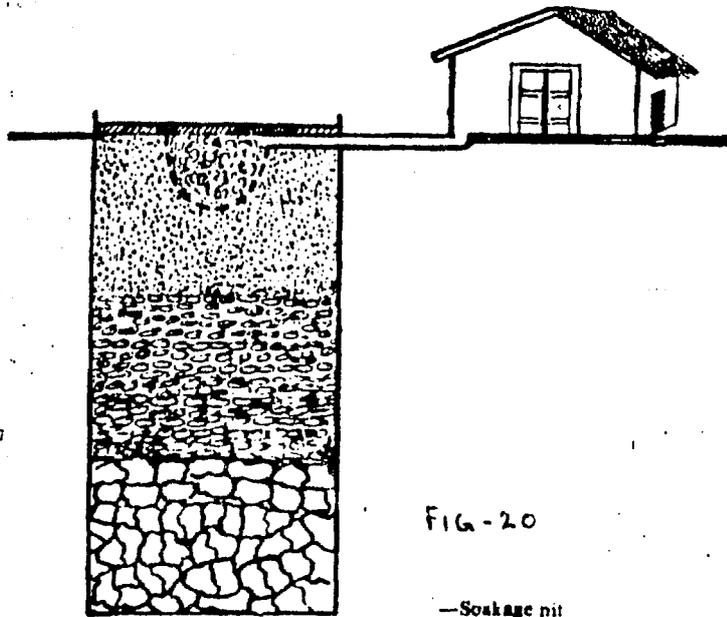


FIG-20

-Soakage pit

BEST AVAILABLE COPY

If the source of drinking water supply is from a river, the people should collect water from it, before it reaches the village and bathe in the river, only where it leaves the village, and the animals be allowed to drink the water only further down the river (Fig.16)

If the the source of drinking water supply is from a spring, it should be protected by properly (Fig.16)

- (1) Constructing a fence all the way round it about 20 meters away from the spring, and the gate of the fence should be kept closed when not in use.
- (2) Forming a ditch round the spring to let the rain water drain away.
- (3) Constructing a 50cm high cemented stone wall round the spring and by arranging a pipe in the wall through which water could be collected.

If the source is from a well the following precautions are to be taken to make it safe. (Fig.19).

- (1) There should not be any toilet or rubbish heap within 20 metres of the well.
- (2) It should be lined inside with stones, jointed with mortar.
- (3) It should be surrounded by a stone wall, which is about 50cms high.
- (4) There should be a plat form all round it with a ditch for the rain water and splashed water to drain away.
- (5) People should use a clean bucket on a pulley for drawing water.
- (6) People should not let dirt get into the well and should not wash in the well. Water in an open well could be made safe by Chlorination with addition of bleaching powder.

#### DISPOSAL WASTE WATER

The used water in the houses can be safely disposed by letting it in to a soakage pit or into a kitchen garden.

SOAKAGE PIT (Fig.20) This is a pit 2 metres deep and 1.5 metres square or 1.5 metres

BEST AVAILABLE COPY

diameter. The lowest  $\frac{1}{3}$  portion is filled with stones, preferably over burnt bricks of  $\frac{3}{4}$  size. The middle  $\frac{1}{3}$  portion is filled with bricks of  $\frac{1}{2}$  size and the upper most portion with bricks of  $\frac{1}{4}$  size. This is covered by a layer of earth. The opening is protected by a parapet of 10cms height, to prevent rain water from entering the pit. The house drain should join the soakage pit through a pipe opening into the middle of the pit after passing through a basket filled with straw, or leaves, which serves as a filter. After a certain period the soakage pit will start over flowing. Then the pit has to be emptied and the bricks washed and dried and replaced. Soakage pits cannot be used in water logged areas and during rainy season. The water in the pit gradually seeps into the ground and this reduces the danger of polluting wells and also prevents small surface collections of water where mosquitoes might breed.

If the household is small, the amount of water is limited and can be easily disposed off by leading it into a kitchen garden, where vegetables and fruits can be grown, which could be used by the family to improve their nutrition.

#### DISPOSAL OF SOLID WASTE (RUBBISH)

If waste is thrown everywhere it will lead to fly breeding, attract dogs and rats, become unsightly and cause unpleasant smells. Hence people should throw the wastes in places where neither they nor children nor animals nor flies can touch it. Refuse should not be dumped into the drains to avoid blockage of drains and mosquito breeding.

Solid household waste and animals manure can be disposed safely by composting: which results in the formation of compost that could be used as fertilizer. A compost pit can be constructed in the following way:

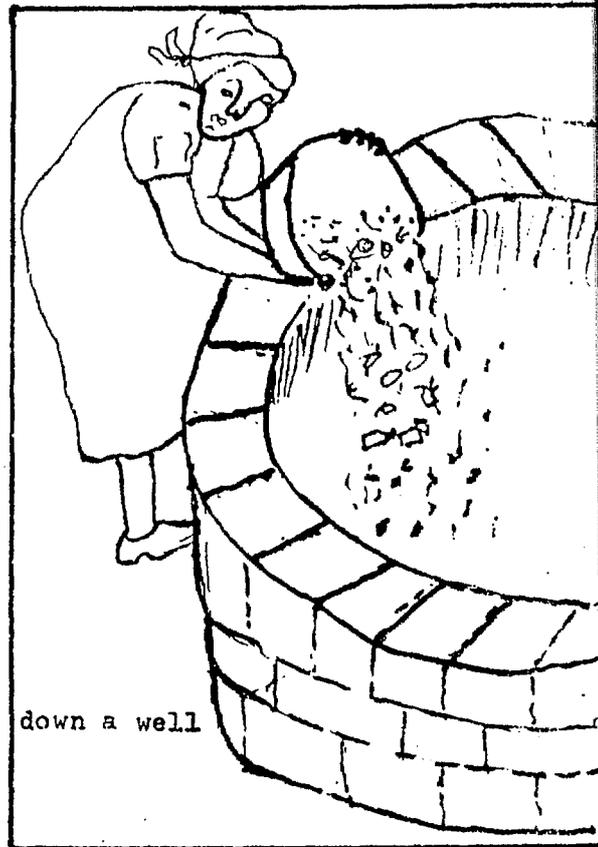
- (1) The pit should be near the house but away from the drinking water sources.
- (2) Dig a pit 4 metres x 3 metres x 1.5 metres or 3 metres x 2 metres x 1 metre.
- (3) The pit should be filled with layers of rubbish and animal manure in the ratio of 3:1 by volume until the whole content of the pit reaches 30cms above ground level.

WHAT YOU SHOULD NOT DO

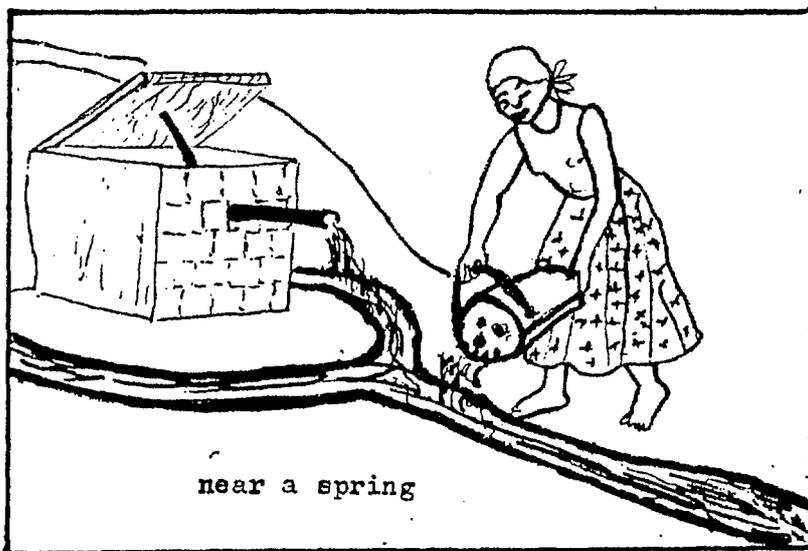


Do not throw waste

In the River



down a well



near a spring



just anywhere

FIG-17

- (4) The pit should be covered with a layer of earth of 2-3cms thickness.
- (5) It should be surrounded by a fence made of branches.
- (6) Leave the filled pit for six months after which the compost (contents) can be used as fertilizer.
- (7) When the pit is full, dig another pit.

~~The waste~~ rubbish can also be disposed without animal manure by burying or burning. The waste should not be dumped within 20 metres from a house, a river, a spring or a well. (Fig-21)(and(Fig. 17)

All the villagers together may use a common pit for dumping rubbish, in which case it should be 100 metres away from a house or source of water supply.

#### DISPOSAL OF HUMAN EXCRETA

People should not defaecate just anywhere, because faeces carry diseases. Improper disposal of human excreta leads to disease transmission through:- (Fig-18)

- (1) Flies settling on food.
- (2) Drinking polluted water.
- (3) Eating contaminated raw vegetables.
- (4) Walking bare foot.

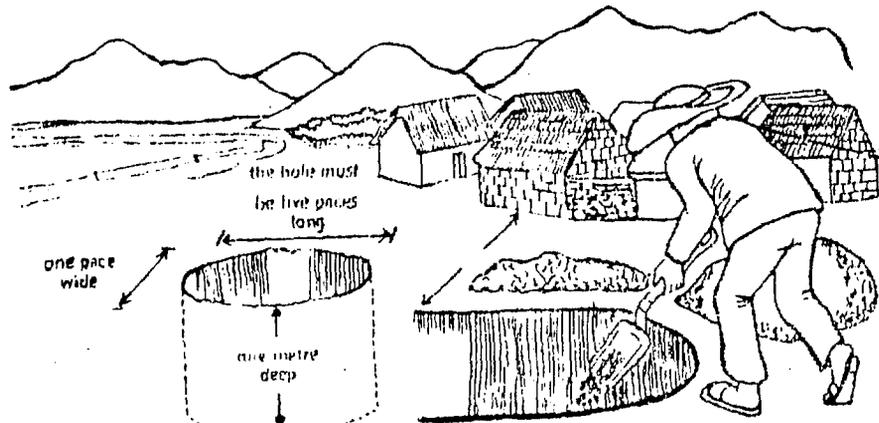
The human excreta can be properly disposed by use of a sanitary latrine.

A sanitary latrine is one where the excreta is not exposed to flies and other insects, and is not accessible to animals, free of any offensive odour and is not unsightly. Pit latrines should be constructed and used for disposal of human excreta.

#### PIT LATRINE (Fig-22)

- (1) Should be located at least 20 metres away from a house, and a source of water supply.
- (2) A pit with 5-6 metres deep and 1 metre across should be dug.
- (3) Cover the pit with a slab made of wood or concrete which has a hole in the middle.

WHAT YOU CAN DO WITH WASTE



throw the waste in the pit and cover it with earth or

bury it in a hole covered in earth



burn it

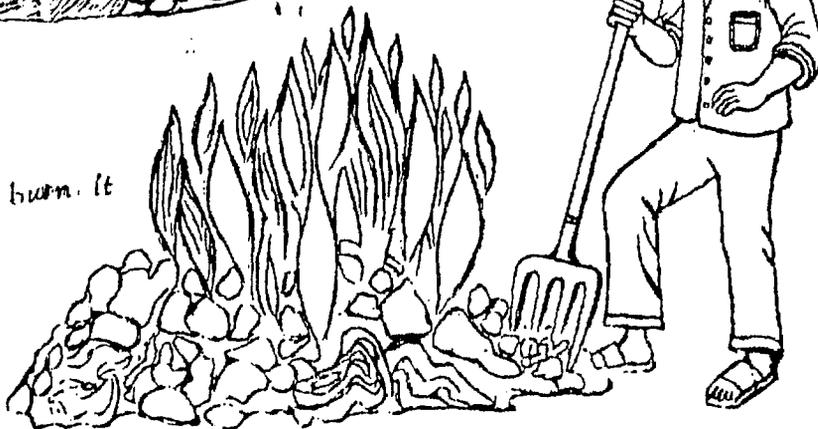
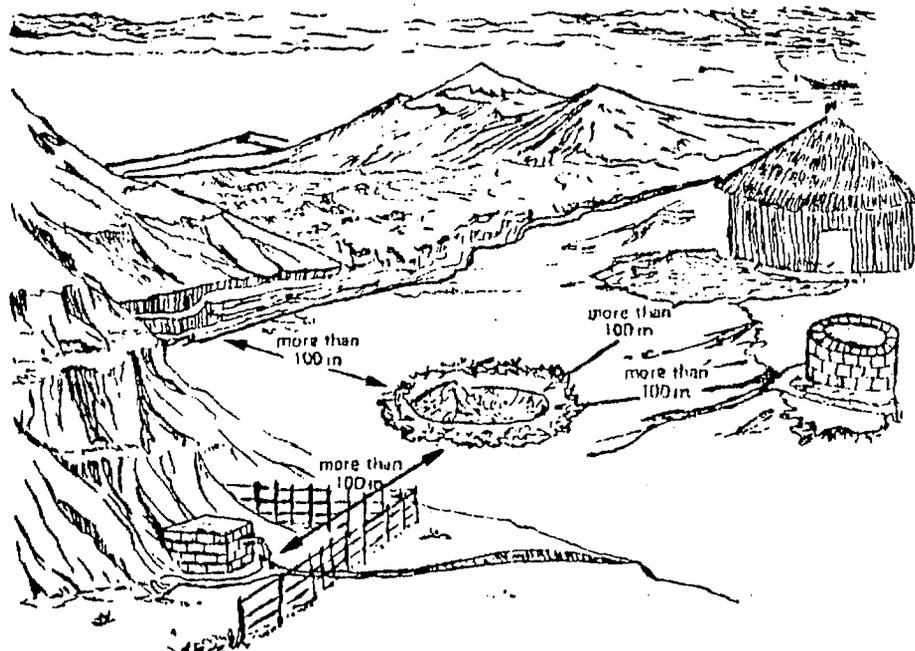
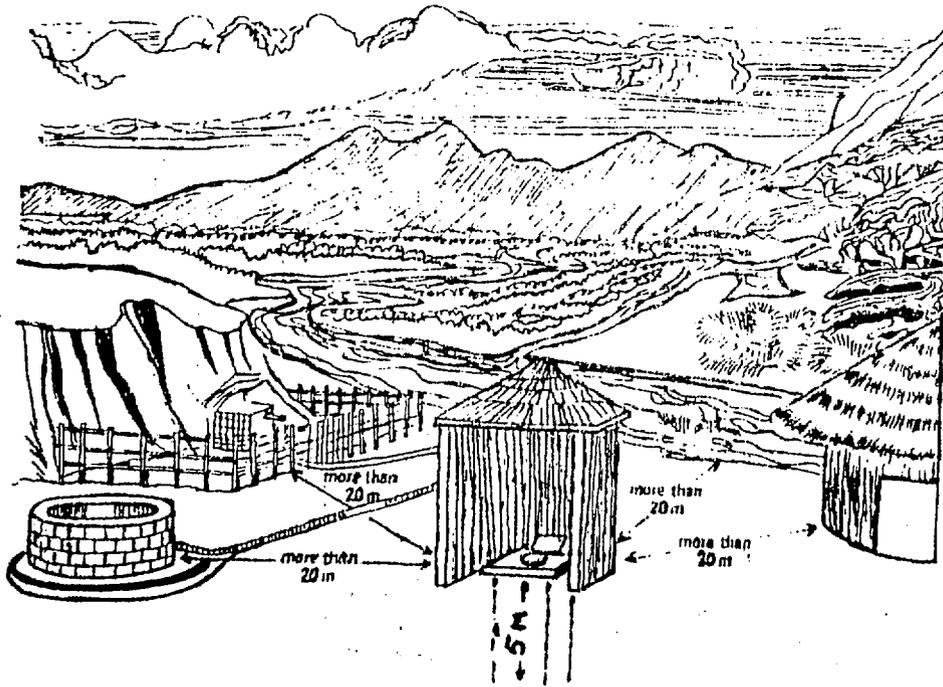


FIG - 21



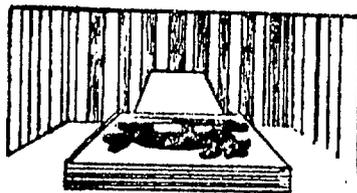
A WELL-SITUATED COMMON PIT

152



A PROPERLY BUILT LATRINE

the slab over the latrine  
must be kept clean



**DANGER**

clean with water  
frequently

FIG - 22

WHAT YOU SHOULD NOT DO:



**DANGER**

too near the house

Why ?



**DANGER**

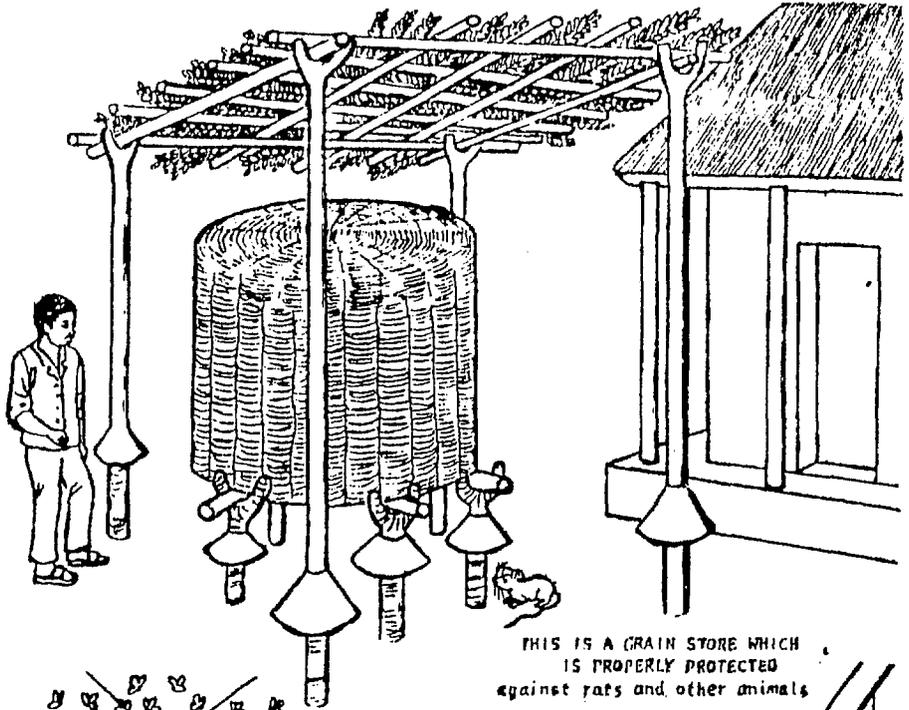
too near the path



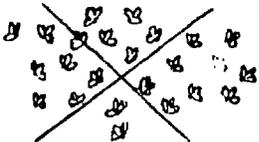
**DANGER**

too near the river

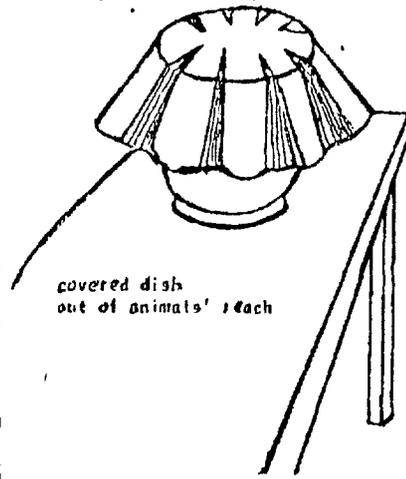
FIG - 18



THIS IS A GRAIN STORE WHICH IS PROPERLY PROTECTED against rats and other animals



food stored in a protected place



covered dish out of animals' reach

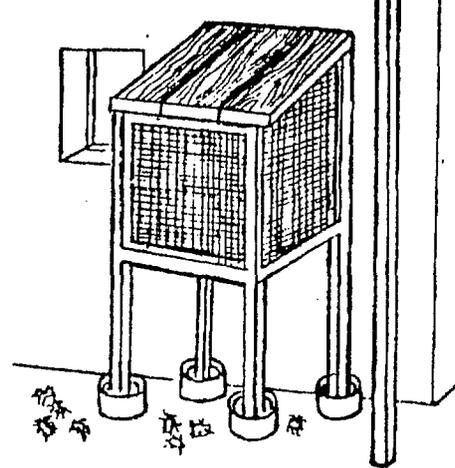


FIG-25

125

TO REAR ANIMALS  
ONE MUST LOOK AFTER THEM!

Feed them  
Give them something to drink  
Give them shelter

TO HAVE THIS

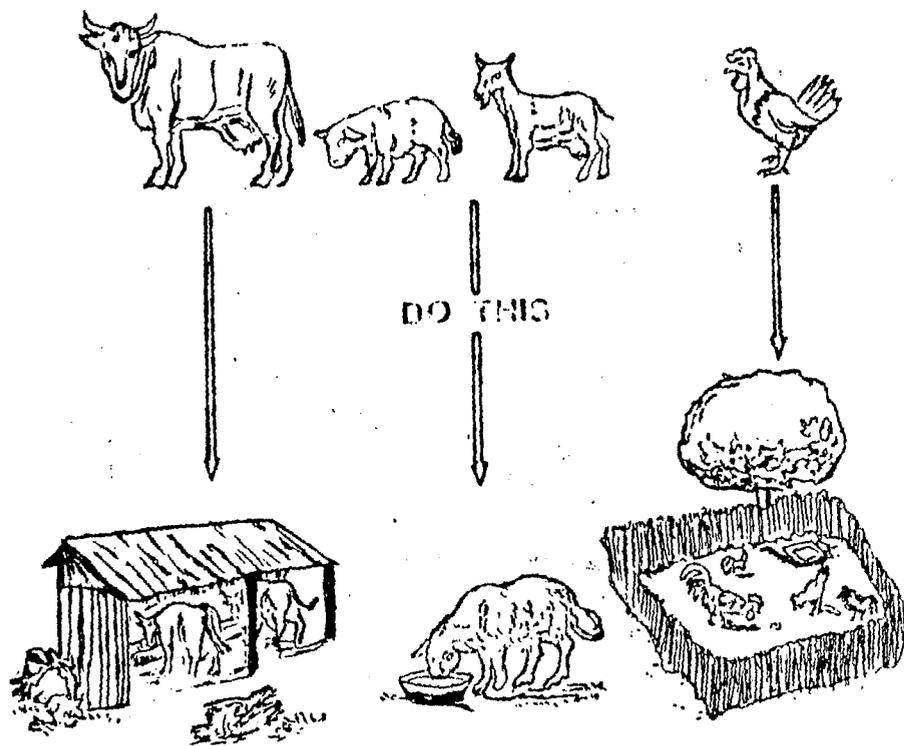


FIG - 24

- (4) The hole in the middle of the slab should be covered with a lid when not used.
- (5) A pit should be covered by a roof and surrounded by a wall made of branches for privacy and shelter from the sun, wind and rain.

When the latrine pit is full, it should be covered with earth and left for six months, after which the contents can be used as fertilizer. A second pit can be dug a bit away from the first one and the same slab can be used over the second pit.

#### CONTROL OF INSECTS, RODENTS AND STRAY DOGS

1. Some insects are responsible for causing certain diseases. Some of these are as follows:-

- (1) Mosquitoes - Malaria, filariasis.
- (2) Flies - Cholera, typhoid, dysentery, diarrhoea.
- (3) Fleas - plague

It is necessary to prevent breeding of these insects in the following ways.

MOSQUITOES - by removing all stagnant water collections, by using spraying of chemicals and larvicidal measures.

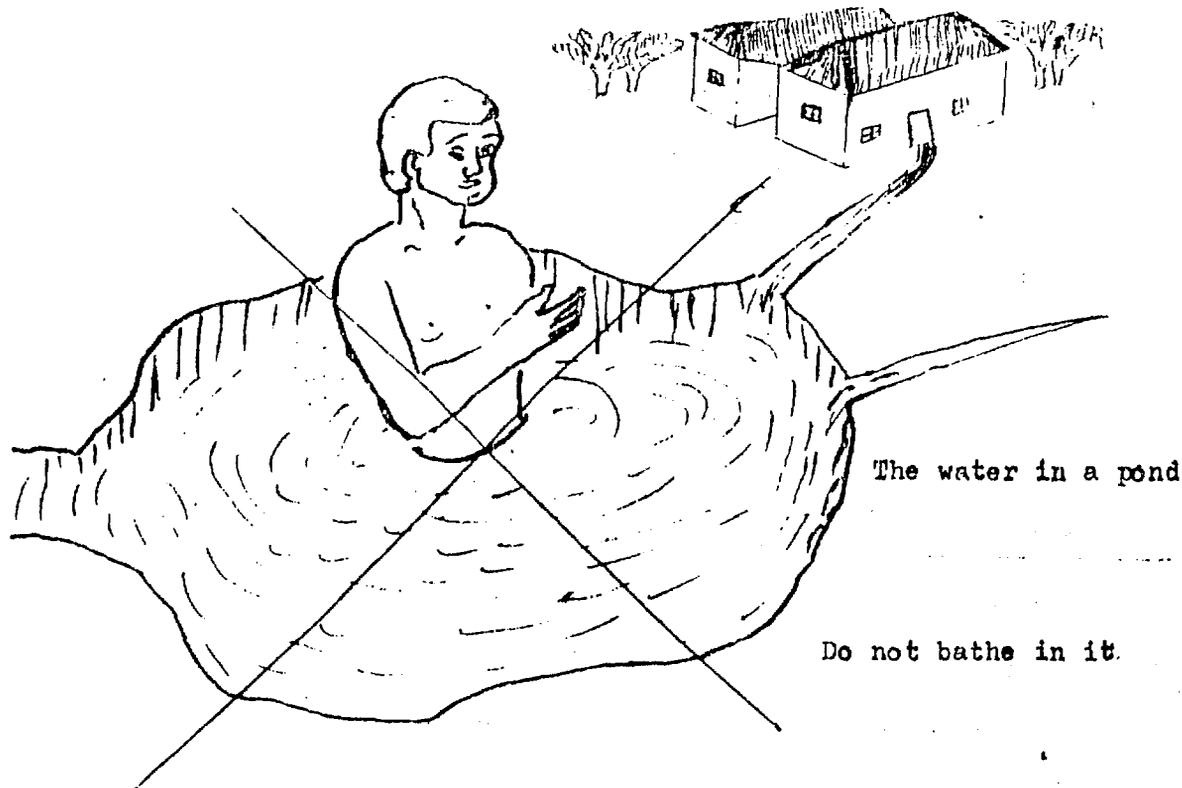
FLIES - by disposing of rubbish properly, by using sanitary latrines, by constructing compost pits and by using insecticides.

FLEAS - by exposing bedding to sun light, keeping domestic animals and poultry clean, preventing rats from coming near human dwellings and by using insecticides.

11. Rodents - Besides consuming and spoiling food, rats, carry serious diseases such as plague, Rats breed very rapidly. It is therefore necessary to control the rat population by the following ways:-

- (1) Proper disposal of rubbish.
- (2) Store food and grain in rat proof containers.
- (3) Poisoning, trapping or killing the rats.

111 Stray dogs - Are a hazard because they bite and they can carry rabies. There is no cure for rabies and therefore it is essential that stray dogs are destroyed. Domestic animals should be prevented from coming into contact with stray dogs.

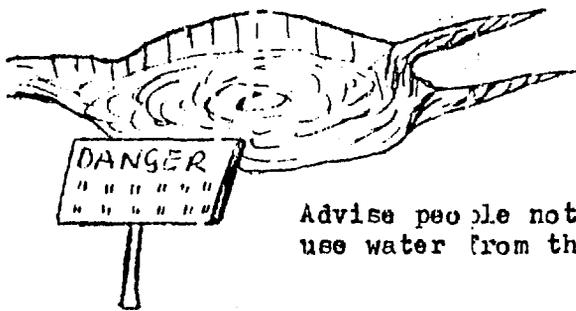


The water in a pond

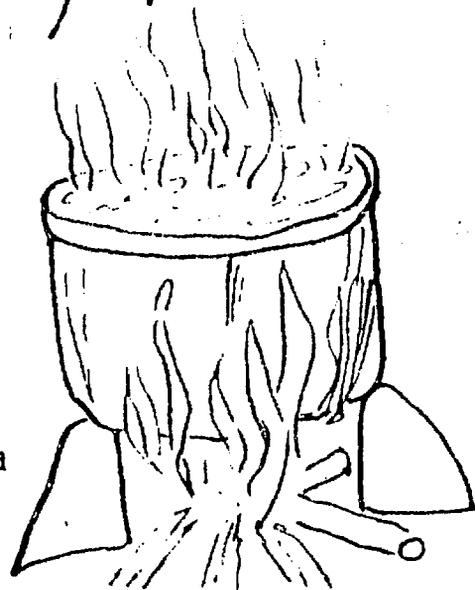
Do not bathe in it.



Look for another place to get water with the village chief.



Advise people not to use water from the pond



Always boil the water before you drink it.

1. Pet dogs should be got immunized against rabies.

EDUCATE THE COMMUNITY ABOUT THE FOLLOWING:- (Fig-23)

(1) Safe drinking water

- A. If water from unprotected sources is consumed, it can lead to diarrhoea diseases, typhoid, cholera.
- B. Water collected from ponds, streams and rivers should be boiled before drinking, especially during rainy season.
- C. Wells should be protected from contamination as already described.
- D. Water should be stored in clean containers, and drawn in a hygienic way.
- E. It is the responsibility of the whole community to see that the sources of the drinking water are kept clean.

2. Disposal of liquid wastes

- A. Water collections around the houses will lead to mosquito breeding.
- B. Collection of waste water gives rise to unpleasant smell.
- C. Liquid waste can be safely disposed by constructing soakage pit or by letting into kitchen garden.

3. Disposal of solid wastes

- A. Indiscriminate collections of rubbish will lead to fly breeding, attract dogs and rats and a nuisance to sight and smell.
- B. Rubbish should not be dumped in drains.
- C. Rubbish should be properly disposed by sweeping, burying or burning.
- D. By composting we can get good fertilizer also.

4. HOME SANITATION

A clean home leads to good health and absence of diseases.

The characteristics of a healthy home are as follows:

- A. It is well built with a proper roof.
- B. The floors and walls are smooth and can be easily cleaned.
- C. The house is well ventilated.
- D. There is sufficient natural light and sunshine
- E. It has a sanitary latrine.
- F. The waste water leads to a soakage pit or kitchen garden.

- (g) There are hygienic arrangements for water storage.
- (h) There is a compost pit or a place for burying or burning rubbish.
- (i) Poultry and animals are kept in a separate place, away from where the people live. (Fig-24)
- (j) The kitchen is free from smoke.
- (k) Food and grain are stored properly, so that insects and vermin cannot reach them.
- (l) There is no over crowding.

The house should be cleaned regularly and white washed periodically.

(5) KITCHEN GARDENS

They provide fruits and vegetables to improve nutrition of the family and is cheap to construct besides being useful for proper disposal of waste water from the house.

(6) SANITARY LATRINES

- (a) Indiscriminate disposal of human excreta leads to disease and fly breeding.
- (b) A sanitary - latrine is safe and clean way of disposing of human excreta.
- (c) Sanitary latrine should be maintained in good condition by cleaning regularly and by using sufficient water and by not throwing rubbish in to it.
- (d) The filled pit is left for six months after which it is to be emptied and the contents used as manure.

(7) FOOD SANITATION (Fig-25)

- (a) Food in Rural Areas is in short supply. Its proper storage is important to protect it from being eaten by rats and from being contaminated by flies and other insects.
- (b) Food should be stored in a well ventilated place.
- (c) Food, should be kept covered or in a food safe.
- (d) Food, which is to be eaten raw, such as fruits and vegetables should be washed well with clean water, before eating.
- (e) Cooked food should not be stored for too long, as it breeds disease germs, and can cause diarrhoea and vomiting.

MATERNAL AND CHILD HEALTH SERVICES AND FAMILY SPACING.

LEARNING OBJECTIVES:

After completion of this topic the community health worker should be able to:-

1. Tell the need for maternity and child health services.
2. Advise about the precautions to be taken by pregnant women during pregnancy, delivery and after delivery.
3. To tell the signs and symptoms when pregnant women and children should be referred to health centre
4. Tell milestones of development in children
5. Educate the community about how to keep mothers and children healthy.
6. Educate the community on the importance of family spacing.

SCHEDULE OF TEACHING

1½ days - class-room

1½ days - practical

3 days

MATERNAL AND CHILD HEALTH SERVICES  
INCLUDING FAMILY SPACING

NEED FOR M.C.H. SERVICES:

- (a) HUMAN RESOURCES - If children are to be born strong and healthy, mothers will need to receive good care during pregnancy and delivery. After they are born they need specially designed health services, so that their survival and healthy growth are ensured through proper nutrition, protection against communicable diseases and healthy environmental conditions.
- (b) NUMBERS AFFECTED - 70% of the total population consists of women of child bearing age and children under 15 years age. 20% of this group are children under 5 years of age. This means that M.C.H. Services would reach almost  $\frac{2}{3}$  of the population.
- (c) SPECIAL HEALTH NEEDS - Women and children have the highest health risks in terms of number of illnesses and deaths
- (d) INVESTMENT IN HEALTH - The early identification of health problems and prompt treatment of diseases among mothers and children can yield life long benefits for the individuals, their families and the community in which they live.

Some of the aspects which relates to the health care of mothers and children have been described elsewhere under the heading Nutrition and Immunization.

ADVISE TO PREGNANT WOMEN - During the home visits when ever a pregnant woman is found, emphasis is to be made on the following points about the need for special care during pregnancy, delivery and after delivery:-

- (1) Regular care during pregnancy by health centre staff or trained Traditional Birth Attendant is important - for the health of both the mother and her unborn baby.
- (2) Care during pregnancy ensures the following:-
  - (a) Health problems of the woman are treated or she is referred as early as possible.

- (a) Tetanus Toxoid is given well before the expected date of delivery
  - (b) Iron and Folic Acid Tablets are given to those who are anaemic.
  - (c) The woman receives the necessary information about how to look after herself and how to prepare for delivery.
3. Proper care during delivery ensures the following:-
- (a) Prevention of infection
  - (b) Prevention of complications caused by improper handling during delivery.
  - (c) Early referral when complication arises.
4. During the first week after delivery the mother and baby should be seen by health centre staff or trained Traditional Birth Attendant and subsequently both mother and child should attend regularly the M.C.H. Clinic at the Health Centre.
5. Regular post-natal care ensures the following:-
- (a) Health problems in the mother can be identified and treated early.
  - (b) Health Problem in the baby can be identified and treated early.
  - (c) If necessary the mother or baby can be referred in good time
  - (d) Iron and Folic Acid can be given if necessary.
  - (e) The baby can be given the necessary immunization
  - (f) The mother can be given family spacing advise.
  - (f) The mother can be advised about infant care and proper feeding.
- 11 ADVISE PREGNANT WOMEN TO GET IMMUNIZED AGAINST TETANUS:
- Tetanus germs are commonly found in Rural Areas because of the close association between animal manure and human dwellings. The use of unclean instruments during home delivery and the improper care of the card stump after it has been cut, can cause tetanus in the new born. This usually causes death. The disease can be avoided by the following measures:-
- (a) Immunization of pregnant women with Tetanus Toxoid given between 5, - 8 months of pregnancy in two doses at an interval of 4 to 6 weeks.

- (b) If, for some reason, Tetanus Toxoid has not been given during pregnancy, it is very important that special precautions should be taken to use sterile instruments and dressings in cutting and medicating the baby's cord.

III Educate the community about the availability of maternal and child care services at the Health Centre and by the Trained Traditional Birth attendants. Encourage the community members to make use of these facilities, so as to promote maternal and child health.

IV Educate the community about how to keep mothers and children healthy. Some of the Topics which you should talk to people are as follows:-

- (1) The value of pregnant women attending M.C.H. Clinics regularly and the need for examination after delivery of the mothers and her baby.
- (2) The need for delivery to be conducted by the Health Centre Staff or a trained Traditional Birth Attendant and for
- (3) The importance of having children examined and weighed at regular intervals to check that they are developing and growing normally.
- (4) The importance of good nutrition for the mother and the baby.
- (5) The need to protect pregnant women and children against communicable diseases, by immunization.
- (6) The importance of personal hygiene and of hand washing before handling the baby and before preparing food for the baby.
- (7) The need to make the environment in and around the home clean and safe, so as to prevent children from getting diarrhoeal diseases, worms and sore eyes.
- (8) The need for every child to be a wanted child and to receive love and affection.
- (9) The need to seek early treatment if either the mother or the child is ill.

If any of the following signs and symptoms are present the mother or child should be taken or referred to the health centre.

(a) IN PREGNANT WOMEN.

- (1) Swelling of feet, fingers, face or genital organs.
- (2) Blurring of vision
- (3) Pallor
- (4) General feeling of weakness.

5. Yellow eyes and highly coloured urine
6. Swelling and pain in legs
7. Vaginal bleeding or discharge.
8. Fever
9. Cough

B. IN NEW BORN INFANTS:

(Within one week of Birth)

1. Inability to suck milk
2. Difficulty in passing uring.
3. Stools not passed
4. Jaundice
5. Diarrhoea and vomiting.
6. Fever
7. Discharge from cord stump.

C. INFANTS: (up to one year)

1. Inability to suck or refusal of feeds
2. High fever
3. Severe or persistant diarrhoea
4. Vomiting
5. Excessive crying or irritability and drawing up legs on abdomen
6. Convulsions
7. Listlessness or drowsness
8. Difficulty in breathing
9. Skin rash
10. White Patches on tongue.
11. Discharge from eyes or ears.

D. IN CHILDREN (1 - 5 years)

1. High fever
2. Severe or persistant diarrhoea
3. Vomiting
4. Passing worms in the stools
5. Skin rash.

165

6. Convulsions.
7. Paralysis or weakness of muscles.
8. Stiffness of neck.
9. Pallor
10. Dryness of eyes.
11. Shiny dry and scaly skin or wrinkled skin.
12. Not gaining weight and not developing for his/her age.
13. Poor appetite.
14. Bowing of legs.
15. Discharge from eyes or ears.

WATCH FOR THE FOLLOWING MILE STONES OF DEVELOPMENT IN CHILDREN.

1. WEIGHT - The - baby doubles his birth weight by the end of 6 months and trebles by the end of one year.
2. NIGHT - The mid point of the body is  $\frac{1}{2}$  inch above the umbilicus at birth. At two years of age the mid point of the body is slightly below umbilicus.
3. The soft portion on the head closes by 16 - 18 months age.
4. At 2 months baby smiles to himself and utters cooing sounds.
5. At 3 months baby gains head control and recognises mother.
6. At 4 months gains hand control and grasps objects.
7. At 5 months baby can roll over on abdomen and back.
8. At 6 months Baby sits up or tries to sit up and teeth starts appearing.
9. At 10 month baby crawls. Starts to utter few words
10. At one year - walks with little support
11. At 14 - 16 months most children learn to walk
12. At 16 - 18 months can speak a few definite words
13. At 3 years he feeds him self and does not wet bed.
14. At 4 years he repeats digits - 1, 2, 3
15. At 5 years he repeats sentences

If the above mile stones of development are not noticed in the children during home - visits in the community, they should be referred to the Health Centre.

FAMILY SPACING.

Family spacing is having the number of children you want and when you want them. Many mothers and fathers have come to realise that to have large family may bring serious problems. e.g. (1) with many children it is harder to feed, cloth and educate them all well. (2) When a mother has child after child without much space between, she often becomes weak. Her breasts produces less milk. Her babies are more likely to die. Also, after many pregnancies the danger is greater that she will die in child birth, leaving many motherless children.

There are methods which allow a couple to have a child only when they wish to or to have no more children. These methods can be used either by husband or by wife with out may harm to the Health. Couples in the community should be encouraged to adopt family spacing methods by referring them to Rural Health Centres and Hospitals.

IMMUNISATION

LEARNING OBJECTIVES:

After completion of this topic, the community health worker should be able to:-

1. Define immunisation
2. Know the diseases against which immunisation is carried out commonly.
3. Tell how to assist the health centre staff before, during and after immunisation programmes.
4. Educate the community on the importance of immunisation.

TEACHING SCHEDULE:

$\frac{1}{2}$  day - class room

1 day - practical

$1\frac{1}{2}$  days

IMMUNIZATION

IMMUNIZATION: is a special procedure, which protects a person against specific diseases. When germs attack the body or a vaccine, which is made from the germs is introduced in to the body by immunization, antibodies (Protective substances) will be formed; which gives protection against a specific disease or germ. To prevent some of the diseases caused by germs, Healthy people are given vaccines by infection or mouth and this is called immunization.

The most commonly used immunizations are those against the following diseases:-

- (1) Diphtheria (2) Whooping Cough (3) Tetanus (4) Poliomyelitis
- (5) Tuberculosis (6) Measles (7) Typhoid (8) Cholera (9) Meningitis

Usually these immunizations are given to selected groups i.e. pregnant women, new borns and children. However during epidemics everyone in the community is immunized for cholera and typhoid Meningitis.

Community Health Worker will assist the Health Centre Staff in arranging for immunization in his community in the following ways:-

1. Find out a suitable date for immunization from the leaders of the villages and inform the health centre staff.
2. Suggest to the Health Centre Staff a central shadey place for holding immunization clinic, so that it is easily accessible to all.
3. Get the community to provide the following:
  - (a) A table for equipment (b) Mats for seating
  - (c) Adequate supply of drinking water. (d) Hand washing facilities.
4. Prepare a list of persons to be immunized according to instructions given by the Health Centre Staff.
5. Visit the homes on the day before the scheduled date for immunization to remind families where and when to assemble.
6. Greet those who come for immunization and see that they are taken for immunization according to their turn.

7. Keep aside those who are sick or who have a skin disease; so that the health centre staff can examine them.
8. Clean the immunization site for each individual; as instructed by the health centre staff.
9. Follow up the persons immunized according to the instructions given by the Health Centre Staff.

People generally refuse immunization because of the reactions, which may occur and which make them feel ill. The community Health Worker should talk to the people, that this reaction occurs because the body is developing resistance to the disease. The following points are to be emphasized while talking to the community.

1. All children (0 to 5 years) should be protected against diphtheria, Whooping cough and tetanus by giving them three doses of D.P.T. vaccine by injection.
2. After 5 years of age or on entry to school, children should be given another booster dose for Tetanus.
3. All pregnant women should receive two doses of Tetanus Toxoid, so as to protect them and their babies from Tetanus.
4. B.C.G. vaccination should be given to all children as soon after birth as possible and again at the age of 12 years to protect them against Tuberculosis.
5. All infants should be given three doses of polio vaccine at 4 to 6 weeks interval between the age of 3 and 6 months in the form of drops placed in the mouth.
6. Manure (animal dung) carries Tetanus germs and therefore anyone in the village who injures himself, should have an injection against Tetanus.
7. After D.P.T. Vaccination, there is usually slight fever and headache for one or two days, which is relieved by panadol tablets.

PERSONAL CLEANLINESS

LEARNING OBJECTIVES:

After completion of this topic, the community health worker should be able to:-

1. Educate the community on personal cleanliness and its importance.

TEACHING SCHEDULE:

$\frac{1}{2}$  day - clean - room

PERSONAL CLEANLINESS (HYGIENE)

Educate the community about the importance of personal cleanliness.  
(Fig.15)

1. In order to remain healthy one must develop clean personal habits.
2. Always wash your hands with soap when you get up in the morning, after having a bowel movement and before eating or preparing food. Do not use mud or clay to wash hands. This will prevent worm infestation and diarrhoea.
3. Bath often - everyday when the weather is hot. Bath after working hard or sweating. Frequent bathing helps prevent skin infections, dandruff, pimples, itching and rashes. Sick persons including babies should be bathed daily.
4. Use foot wear to prevent hook worm infection.
5. Brush your teeth everyday and after each time you eat sweets. If you do not have tooth brush and tooth-paste, rub your teeth with a powder made with equal parts of salt and bicarbonate of soda. If there is not bicarbonate of soda use only plain salt.
6. The hair should be combed once or twice everyday and must be washed at least once a week in order to keep it clean and free from lice.
7. Lice can be removed in the following way:-
  - (a) Cut the hair if possible
  - (b) Wash the hair with soap and hot water.
  - (c) Apply to the scalp kerocin full strength or vinegar full strength or benzyl benzoate emulsion.
  - (d) Cover the whole head with a cap or scarf overnight
  - (e) Next morning comb the hair with fine toothed comb.
  - (f) Repeat the process if the lice are not cleaned.
8. Clothes should be washed frequently and dried in the hot sun.
9. Nails should be kept short and clean. This will prevent worm infestation and diarrhoea.
10. Eye infections can be prevented by
  - (a) Avoiding common towels and handkerchiefs
  - (b) Not exposing the eyes to dust and flies.

## BASIC GUIDELINES OF CLEANLINESS

### PERSONAL CLEANLINESS (HYGIENE):

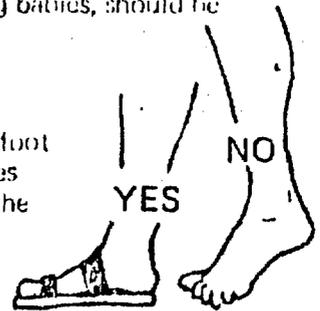


1. Always wash your hands with soap when you get up in the morning, after having a bowel movement, and before eating or preparing food. Do not use mud or clay to wash hands.

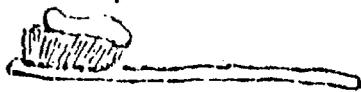


2. Bathe often every day when the weather is hot. Bathe after working hard or sweating. Frequent bathing helps prevent skin infections, dandruff, pimples, itching, and rashes. Sick persons, including babies, should be bathed daily.

3. In areas where hookworm is common, do not go barefoot or allow children to do so. Hookworm infection causes severe anemia. These worms enter the body through the soles of the feet (see p 195).

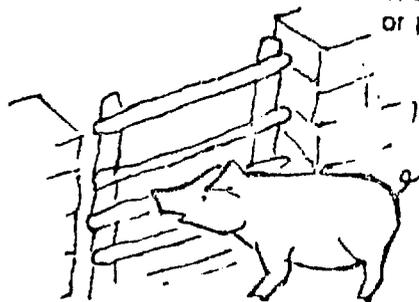


4. Brush your teeth every day and after each time you eat sweets. If you do not have a toothbrush and toothpaste, rub your teeth with salt and baking soda (see p 274).



### CLEANLINESS IN THE HOME:

1. Do not let pigs come into the house or places where children play.



2. Do not let dogs lick children or climb up on beds. Dogs, too, can spread disease.



FIG. 15

(e) Not allowing the flies to settle on the face and eyes.

11. Spitting indiscriminately and coughing or sneezing without covering the nose and mouth are not only dirty habits but are dangerous because they can cause the spread of tuberculosis. They should, therefore, not be done.
12. It is dangerous to poke sticks into the ears to remove wax. This can cause injury or infection of the ear. This habit should be avoided.

REGISTRATION OF VITAL EVENTS

LEARNING OBJECTIVES:

After completion of this topic, the Community Health Worker should be able to:-

1. Tell the importance of registering vital events and what are vital events.
2. Tell in what form, birth and death should be registered.
3. Educate the community on the importance of registering vital events.

SCHEDULE OF TEACHING:

$\frac{1}{2}$  day - class-room

$\frac{1}{2}$  day - practical

1 day

VITAL EVENTS

Vital events refer to events which affect life such as births and deaths.

Reporting of births and deaths in villages is done by village leaders. All births and deaths in the area are to be recorded by making enquiries during the visits to homes. Then births and deaths are to be reported to the rural health centre for necessary further action.

Births may be recorded in the following form:

Date of Birth	Name of Child	Sex M/F	Name and place of residence of parents with full address	Name and person assisting birth	Child born alive	
					Yes	No

Deaths may be recorded in the following form:

Date of death	Name of person dead with address	Sex M/F	Age	Suspected cause of death	Name of person reporting death	Place of death

Educate the community about the importance of registering all births and deaths

It is important to report and record all births and deaths because:-

- (1) Information about births occurring in a village helps the health staff to plan for the provision of services to the new born babies and their mothers both at home and at health centre, such as immunizations, under-five clinics, ante-natal and post-natal
- (2) Information on deaths is necessary because it can help to find out whether any deaths have been due to communicable diseases so that necessary measures can be taken to prevent further deaths.

3. Recording of deaths will also help to identify and investigate those deaths occurring during pregnancy and within 40 days of delivery as well as deaths occurring in the new born i.e., within 28 days after birth. This information can be used to plan improvements in maternal and child health services.
  
4. Recording of births and deaths is also necessary in order to assess the birth rate, the death rate, the growth of population and the age distribution of population (how many old, children, adults etc.) This information helps in planning for the needs of the population in terms of education, health care, food, housing, employment and social welfare.

# ANNEX VII

## TBA TRAINING MANUAL

INTRODUCTION

An attempt has been made in the immediate past to train Traditional Birth attendants (TBAs) in Zambia. The exercise had to be suspended in 1976 because the results were generally unsatisfactory. This pilot exercise was undertaken by UNICEF project SHS 001 at the request of the Ministry of health with the following terms of reference:

1. To study the feasibility of training the traditional birth attendants (TBAs) as part of the rural health team;
2. To plan an appropriate training programme for adoption in the various provinces;
3. To make recommendations on their deployment and roles training within the national health service.

The collaborative effort to assemble the candidates selected on the basis of community acceptability in the performance of Midwifery, Maturity, educability and leadership was made by the Department of Community Development, Ministry of Labour and Social Services and the Public Health Nursing staff of the Provincial Medical Officer's Unit, Kabwe, Central Province.

A Preliminary programme conducted in the Demonstration Zone in 1975 had indicated that:

1. The TBAs had considered family and community commitments which prevented them from staying for too long at a stretch from their villages. There was thus a need to break up the programmed course into 'packages' of not more than a week at a time.
2. The participants were appreciative of the programmes but would like some formal recognition;
3. They were willing to be associated with and indeed integrated into the community health system once they have the recognition;
4. Lengthy and didactic lectures confused them. Their primary aim was to improve their practice of midwifery. In 1988 training workshop has been made to re-organise the programme and will be evaluated at the end of this year.

Specific Objectives of the Workshop.

1. The aim is to improve the training of the TBAs.
2. The other objectives are:-
  - (a) Formulation of syllabus or curriculum for training.
  - (b) Formulation of a pretraining questionnaire.
  - (c) Outline the functions of the TBA.
  - (d) Agree on the selection and training period.
  - (e) Design assessment and evaluation forms for TBAs supervisors.
  - (f) Discuss possibilities of having a local TBA Kit and suggest the contents of the Kit including simple drugs which could be used by TBA.
  - (g) Work out implementation strategies.
  - (h) Design a reporting system.

General Objectives of TBA Training Programme.

At the end of the programme the participants will be able to:

1. Provide care and advice to mothers during the ante-natal period.
2. Skillfully provided care to a woman during labour.
3. To provide care to a woman after delivery.
4. To provide care to a newborn baby immediately following delivery.
5. To provide appropriate care to a mother during the puerperium.
6. To Provide assistance and advice to a family on the care of the pre-school child,
7. To identify common childhood ailments and provide practical advice to the family.
8. To provide advise on the importance of family planning.
9. Creat awareness among the community on the dangers and prevention of HIV/AIDS.

In 1982 an evaluation of the programme was done by the Traditional Medicine and during the 1984 EPI/MCH/PHC evaluation the TBA activities were looked into. In both evaluation reports it was found out that there was need to strengthen the programme in a number of areas, it was also found out that that about 60% of all total deliveries still take place in homes.

Up to date there has been no figures to show the impact of the TBAs on the Maternal and Child Health Services. The present figures show that there is a high percentage of mothers attending ante natal clinics in health institutions but only about 40% of these deliver in health institutions.

3/.....

180

The other problem which was observed during EPI/MCH/PHC evaluation was that the staff who actually supervise the TBA are not trained in training and supervision of the TBAs hence the need to review the programme.

### SELECTION

#### 1. 1. Criteria for Selection.

The trainees should be selected on the basis of:

1. Community acceptability in the performance of midwifery.
  2. Maturity - preferably between 30 - 45 years of age and above.
  3. Parity of 3 or more
  4. Educability
  5. Leadership
  6. Should be a practicing TBA.
1. 2. The trainee should be selected in collaboration with community organizations like the village productivity committee, health centres staff, community development, department and the Ministry of Labour and Social Services.

### TRAINING PERIOD

#### Duration

6 weeks theory training which can be broken into modules or can be continuous until the TBA qualifies. In between the training the trainer should observe the TBA conducting at least one delivery.

### FUNCTIONS OF A.T.B.A.

#### 3. 1. Ante-natal Care.

1. Health education on the importance of early antenatal care.
2. History taking
3. Identification of high mothers and making appropriate referral.
4. Advice on nutrition during pregnancy.
5. Examination of antenatal mothers.
6. Advise and prepare mothers for delivery.

3. 2. Intra - partum Care - Natal

- 1. Monitoring and conducting normal delivery.
- 2. Preparation of equipment before delivery and maintenance of TBA Kit.
- 3. Identification and referral of high risk mothers.

3. 3. Post-natal Care.

- 1. Conduct post-natal examination of mothers and infant.
- 2. Health education.
- 3. Advise on nutrition after delivery and during breast feeding.
- 4. To identify and refer complicated post-natal cases.

3. 4. Child Care.

- 1. Health education on importance of immunization.
- 2. Health education on child nutrition.
- 3. Health education on the control of diarrhoeal diseases.
- 4. Teach and demonstrate how to manage a diarrhoea case at home, using home made ORS.
- 5. Health education on the six preventable childhood diseases and other communicable diseases.

3. 5. Hygiene.

- 1. Advise on:
  - Personal hygiene.
  - Environment Health.

3. 6. Family Planning.

- 1. Motivating and case finding.
- 2. Advise mothers on available methods of family planning.

5:..... HIV/AIDS PREVENTION

1/ To give advise on to mothers on the prevent of HIV infection and AIDS control

a/ Health education on cause, transmissic of AIDS.

PROPOSED T.B.A. TRAINING SYLLABUS

5. Ante-Partum Period.

General Objective: To enable the TBA to Provide safe and effective care to the pregnant mother.

SPECIFIC OBJECTIVES	SUB-OBJECTIVES	CONTENT	METHOD	LEARNING EXPERIENCE	VISUAL AIDS
The TBA will be able to: 1. To briefly describe the anatomy and physiology of the female reproductive system.	1. 1. The TBA will be able to: Name the parts of the female reproductive system.	- External genitalia - internal genitalia - Vagine - Cervix - Uterus - Fallopian tubes - Pelvis	Lecture discussion demonstration	Demonstration on a pelvis	Pelvis Board:Chall Flip Charts
2. Explain the importance of early antenatal care to the mother.	2. 1. Give reasons why it is important to start early antenatal care(3-4 months)	-Importance of antenatal Clinic.	Lecture discussion role play.	explain verbally.	
3. Perform a general physical examination of a mother and select mothers for referral to antenatal clinics Palpate and recognize the lie of	The TBA will be able to: 3.1. describe the signs of normal	-Enlargement of the Abdomen amenorrhoea Breast changes morning sickness	demonstration role play Discussion	Demonstration on a pregnant woman	Pregnant woman Foetal scope.

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Antepartur Period continued

General Objective: To enable the TBA to provide safe and effective care to the pregnant mother

SPECIFIC OBJECTIVE	SUB-OBJECTIVES	CONTENT	METHOD	LEARNING EXPERIENCE	VISUAL AIDS
	The TBA will be able to 3.2. Assess height and the danger of short stature (below 5 feet).	-Will measure mothers against a wall mark of 5 feet	Lecture and demonstration	Demonstration and practice of measuring by each TBA	5 feet string or stick.
	3.3. Recognise an anaemic mother from a non-anaemic and refer to the health centre.	-Pallor of face and conjunctive -shortness of breath -irregularities -general weakness -oedema	Lecture and Demonstration	Show anaemic and non-anaemic mother at H.C.	2 Pregnant Mothers
	3.4. Recognise an abnormal gait by observing the general walking pattern.	Limping and rickets.	Lecture Role play Discussion.	Explain Verbally and Demonstration.	
	3.5. Differentiate between a well nourished and a poorly nourished mother.	- Instructions of good eating habits. - A varied diet -Alternative Cheap sources of proteins -General signs of poor nutrition.		Demonstration of limping mother. Identification of on posters, flannel graphs and real foods.	Flannel graphs posters of foods and real food.

Ante-partur Period.

SPECIFIC OBJECTIVE	SUB-OBJECTIVE	CONTENT	METHOD	LEARNING EXPERIENCE	VISU AIDS
<p>The TBA will be able to</p> <p>Identify "at risk" mothers and explain the importance of early referral.</p>	<p>The TBA will be able to:</p> <p>3.6. Advise on general care of breasts.</p> <p>3,7. Recognise flat and inverted nipples and advise methods to improve condition of nipples.</p> <p>3.8. Examine the abdomen and determine the progress of pregnancy of need for referral.</p> <p>4. 1. select those mothers with short status and deformities.</p> <p>4.2. Identify at risk mothers bad and obstetrical history.</p> <p>Identification of deformities.</p>	<ul style="list-style-type: none"> <li>-Checking of breasts</li> <li>-Cleanliness of breasts (daily bath)</li> <li>-Determine if abdomen is increasing in size.</li> <li>-Palpitation to determine lie, presentation and fundal height.</li> <li>-Significance of scars.</li> <li>-Dangers of oedema.</li> <li>- examination of oedematous legs to show pitting oedema</li> <li>Identification of deformities               <ul style="list-style-type: none"> <li>- Grand multipara</li> <li>- Prolonged labour</li> <li>- Postpartum haem.</li> <li>- Operative delivery</li> <li>- Neonatal death</li> <li>-stillbirth</li> <li>-abortion</li> <li>-preclampsia</li> <li>-Primigravida</li> </ul> </li> </ul>	<p>Lecture and demonstrations. Discussion.</p> <p>Lecture and demonstration</p> <p>Lecture and demonstration</p> <p>Lecture and demonstration</p> <p>Lecture demonstration Role Play.</p> <p>Lecture Discussion</p>	<p>Demonstration on pregnant mothers</p> <p>Demonstration of rolling and pulling of nipple.</p> <p>Demonstration and practice</p> <p>Demonstration and practice on mother with oedema.</p> <p>Explain verbally</p> <p>Explain verbally.</p>	<p>Pregnant mother</p> <p>Pregnant mother</p> <p>Pregnant mother Foetal Scope</p> <p>Pregnant mother.</p>

Ante-partum Period

SPECIFIC OBJECTIVE	SUB-OBJECTIVE	CONTENT	METHOD	LEARNING EXPERIENCE	VISUAL AIDS
7. Create an awareness of the danger of traditional medicine given in labour	Review the type of traditional medicine in use. 7.1. Discourage the use of traditional medicine during labour	Danger of traditional medicine with specific examples	Role Play	Explanation	Actual Medicine (Traditional) if available
<u>Post partum Period</u>					
8. The TBA will be able to understand the importance of balanced diet	The TBA will be able to advise the mother on the importance of balanced diet	<ul style="list-style-type: none"> <li>- body building foods</li> <li>- energy giving foods</li> <li>- Protective foods</li> <li>- Plenty of fluids</li> </ul>	Discussions Lecture	<ul style="list-style-type: none"> <li>- Verbal explanations</li> <li>- Cooking demonstration</li> <li>- Emphasize on varied diet</li> </ul>	Real foods
<u>Family Spacing:</u> The TBA should be able to: 1. Explain the importance of child spacing	TBA should be able to give advice on child spacing.  1.1. The TBA should be able to explain the advantages of child spacing	<ul style="list-style-type: none"> <li>- Prolonged breast feeding</li> <li>- Prevention of unplanned pregnancies</li> <li>- Promotion of Family Health, RHCs, Hospital Traditional, Artificial, Natural methods</li> </ul>	Discussions	Demonstration visit to a Family Planning Clinic	Pills, Condoms, IUD.

Intra-Partam Period

General Objectives: The TBA should be able to conduct a safe and clean delivery of a live infant and healthy mother.

SPECIFIC OBJECTIVES	SUB-OBJECTIVE	CONTENT	METHOD	LEARNING EXPERIENCE	VISUAL AIDS
The TBA will be able to : 1. Prepare instruments and materials for delivery	1.1. Identify instruments she will use during delivery and be able to use them.	boiling instruments bowls, scissors, etc. cord ties gloves	Lecture Discussion Demonstration	Naming and explaining of the use of instruments	Actual instruments
	1.2. Wash instruments and sterilise them by boiling method	sterilising by boiling method	Lecture Demonstration	Sterilising by boiling using traditional fire for 30 minutes	Actual Instrument fire
2. Deliver her patients in a clean, dry, well ventilated and well lit room.	2.1. Explain the importance of prevention of infection	- advantages of clean room with windows - sweeping -dusting	Discussion Ideal home visit TBA, Demonstration	Practise in daily sweeping and dusting of room where TBA training takes place	broom, duster water for sprinkling on the floor etc.
3. Keep herself clean when in attendance to the mother and baby.	3.1. Always be presentable	TBA daily baths - wash clothes - emphasis on hand washing - Look for anaemia colour of conjunctive oedema, pressure on ankles for pitting	Lecture and Demonstration on hand washing  Demonstration Discussions, observation (ANC ward)?	Wash hands  Examine and differentiate between normal and abnormal -take history and interprets	Soap, bowl of water clean hand cloth
4. Take a labour history on mothers who come in labour and identify the "at risk" mothers for referral	4.1. Examine the mother for anaemia and oedema 4.2. Re-organise early signs of external bleeding	signs symptoms and observations of bleeding	Observation and Lecture	TBA explains verbally to the group	

Intra Partum Period

SPECIFIC OBJECTIVES	SUB-OBJECTIVES	CONTENT	METHOD	LEARNING EXPERIENCE	VISUAL AIDS
	4.3. Recognise early signs of obstructed labour	Signs of obstruction -importance of severe abdominal pain not related to labour contractions	Discussion Lecture  Lecture	TBA Explain verbally to the group	Doll with big head Pelvis
5. Distinguish between true and false labour	5.1. Recognise signs and symptoms of true labour	- signs of true labour by feeling strength and frequency of contractions. - Show or rupture of membranes	Lecture questions and answers Discussions	State signs and symptoms of true labour	Mother in labour
6. Demonstrate understanding of cleanliness during delivery	6.1. Encourage the mother to have a bath before delivery and shave	-encourage bath of patient -provide water	Discussion Observation	Provide water and bathroom Explanation	Soap, water razor blade
7. Management of normal labour	7.1. Understand the care of bladder 7.2. Recognise the progress of normal labour by strength of contractions and descent.	- reason for frequent emptying of bladder -descent of head by abdominal palpitation.	Lecture Discussion  Discussion Observation Demonstration	Practising feeling for constriction and descent of head	Pregnant Mother in labour

Intra Partum Period

SPECIFIC OBJECTIVES	SUBJECTIVES	CONTENT	METHOD	LEARNING EXPERIENCE	VISUAL AIDS
	<p>7.3. Recognise the stages of labour and normal duration of each stage</p> <p>7.4. Instruct the mother not to push before full dilation and be able reassure the mother throughout labour</p> <p>7.5. Provide and encourage the mother to take porridge and fluids during first stage of labour</p>	<p>-First stage not to let sun set twice</p> <p>-second stage not more than one hour</p> <p>-third stage- not more than 30 minutes or time TBA takes to receive and wrap baby</p> <p>-4th stage observe mother and baby for one hour</p> <p>- dangers of pushing before full dilatation of cervix (second stage)</p>	<p>Discussion Lecture</p> <p>Lecture Discussion Role play Discussion</p>	<p>Explanation of different stages of labour and when to refer</p> <p>Watch a delivery</p>	<p>Mother in 2nd stage</p>
<p>8. Recognise Obstructed labour</p>	<p>8.1. Recognise complications and refer the mother to hospital early Need to review the stages of labour</p>	<p>-encourage light diet e.g. porridge and any sweet drink during first stage of labour</p> <p>-explain verbally reasons for giving porridge</p>			

181

**Para-Partum Period**

<b>SPECIFIC OBJECTIVES</b>	<b>SUB-OBJECTIVE</b>	<b>CONTENT</b>	<b>METHOD</b>	<b>LEARNING EXPERIENCE</b>	<b>VISUAL AIDS</b>
	12.5. Refer retained placenta if not delivered after 30 minutes	<ul style="list-style-type: none"><li>- signs of retained placenta</li> <li>- dangers of retained placenta or membranes.</li> <li>- importance of referral</li></ul>	Discussion Questions and Answers	Explaining verbally	

LEARNING OBJECTIVES	SUB-OBJECTIVE	CONTENT	METHOD	LEARNING EXPERIENCE	VISUAL AIDS
The TBA will be able to:	The TBA will be able to:	- normal colour of conjunctiva and tongue.	Lecture and Demonstration	Lecture and Demonstration	
1. Identify anaemia in the post-partum period.	1.1. recognise normal colour of conjunctiva and tongue	- abnormal colour of conjunctiva and tongue		- Classroom	
2. Detect breast engorgement.	2.1. Recognise breast engorgement.	- oedema - breast examination. - signs and symptoms of breast engorgement	Lecture Discussion and Demonstration.	Demonstration and Practice (postnatal ward)	
	2.2. Recognise cracked nipples	- cleaning nipples - treatment of cracked nipples			
3. Differentiate a well contracted uterus from uncontracted uterus	3.1. Recognise well contracted uterus by palpating on abdomen	- advice on when to refer for treatment.	Discussion and lecture		water soap, clean cloth mother.
	4.1. TBA should recognise and advise mother on normal colour amount and odour of lochia and duration.	- uncontracted uterus - contracted uterus.  normal colour, amount odour of lochia.			
4. Acquire understanding of involution of the uterus.	4.2. TBA should recognise and advise mother on abnormal lochia.	- abnormal lochia need for referral	Lecture and discussion	Demonstration patient with a septic postnatal ward.	mother if available
	4.3. TBA should recognise change in size of uterus.	change in size of involuting uterus.			

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SPECIFIC OBJECTIVES	SUB-OBJECTIVE	CONTENT	METHOD	LEARNING EXPERIENCE	VISUAL AIDS
10.5 Instruct the mother to push with a contraction	reasons for instructing mother to wash with soap contraction and and encouragement to relax in between contractions.	Discussion Demonstration Role play	Practice		
	10.6 Support the pad during crowning of head cover the sums	dangers of unassisted delivery	Discussion Demonstration	Practice	
	10.7 Receive the baby on a clean cloth and clean the airway	dangers of asphyxiation and infection	Discussion Demonstration	Practice	doll + clean cloth
	10.8 Ties the cord with two sterile ligatures and but the cord between ligatures with sterile scissors or razor blade.	cuts the cord with sterile scissors or razor blade after application of sterile ligatures or sisal, bark, cotton thread or material	Discussion Demonstration Role Play	Practice	All items mentioned
	10.9 Keep the baby warm immediately after delivery encourage skin to skin contact	How to keep the baby warm	Lecture Discussion Demonstration	Practice	doll, small blanket
11. Determine placenta separation	11.1 Recognise the signs of placental separation	signs of separation of placenta by feeling the firmness of the uterus, lengthening of the-	Lecture Discussion Questions and Answers, Observation	Verbal explanation	warm clothing

197

SPECIFIC OBJECTIVES	SUB-OBJECTIVE	CONTENT	METHOD	LEARNING EXPERIENCE	VISUAL AIDS
<p>12. Manage the blood stage of normal labour</p>	<p>12.1 Deliver the placenta and membranes by maternal effort and examine for completeness</p>	<p>cord and trickling of blood</p> <ul style="list-style-type: none"> <li>- delivery of the placenta and membranes by maternal effort and examination of the placenta for completeness</li> </ul>	<p>Lecture Discussion Demonstration</p>	<p>Practice</p>	<p>Placenta</p>
	<p>12.2. Assess the amount of blood loss</p>	<ul style="list-style-type: none"> <li>- Assess the amount of blood loss by estimation of amount in cups and condition of the patient</li> </ul>	<p>Discussion Demonstration</p>	<p>Practice estimation by using goniometer from delivery kit</p>	<p>Receiver</p>
	<p>12.3 Control P.P.H.</p>	<ul style="list-style-type: none"> <li>- have patient void</li> <li>- control of PPH by rubbing up the uterus for a contraction and immediate referral</li> <li>- Put baby to breast</li> </ul>	<p>Discussion Demonstration</p>	<p>Practice</p>	
	<p>12.4 Inspect the perineum for tears and refer the extensive ones</p>	<ul style="list-style-type: none"> <li>- description of tears for referral</li> <li>- danger of unrepai... tears</li> </ul>	<p>Lecture Lecture Discussion Observation</p>	<p>Practice on a sponge</p>	

POST PARTUM PERIOD

SPECIFIC OBJECTIVES	SUB-OBJECTIVES	CONTENT	METHOD	LEARNING EXPERIENCE	VISUAL AIDS
5. Provide appropriate cord care during post-natal period.	5.1. Appreciate danger of applying medicines on the cord.	Cord care: - dangers of applying local medicines.	Discussion lecture and Demonstration	Practice cleaning cord-post metal Ward	Soap, water clean wool spirit salt baby.
6. Having adequate knowledge of care of premature baby	6.1. Keep the baby warm by wrapping in dry linen.	- Characteristics of a premature baby.	Discussion lecture and Demonstration.	Demonstration of premature baby.	doll, water cloth soap.
	6.2. Identify premature baby for referral	- problems of premature baby.	"		
7. identify the problem of the newborn baby during the post partum period and refer to hospital as when necessary.	7.1. Differentiate a normal baby from a birth injury.	- signs and symptoms of cerebral injury.	Discussion lecture  Lecture discussion	Demonstration Observation	
	7.2. Recognise jaundice in baby	- high pitched cry signs and symptoms jaundice.	"		
	7.3. Detect the presence of infection in a baby	- failure to suck, fever continuous crying, convulsions.		Demonstration	
	7.4. Recognise baby with neonatal tetanus.	signs and symptoms of tetanus.			

SPECIFIC OBJECTIVES	SUB-OBJECTIVES	CONTENT	METHOD	LEARNING EXPERIENCE.	VISUAL AIDS
<p>TB will be able to:</p> <p>1. Understand the importance of immunization.</p> <p>2. Identify Children with malnutrition and give nutritional advice based on available foods in the community. Educate TB on the use of arm circumference as a guideline for child growth.</p> <p>3. Recognise early and late signs of dehydration and advise others on how to restore fluids.</p>	<p>1.1. Give reasons for encouraging mothers to attend Children's Clinic.</p> <p>2.1. Describe a well nourished and a poorly nourished child and select those for referral</p> <p>2.2. Advise on good weaning practices.</p> <p>3.1. Know the dangers of dehydration</p> <p>3.2. Recognise severity of dehydration and know when to refer.</p>	<p>Functions of the Children's Clinic</p> <p>Types of immunizations and immunization schedule.</p> <p>Signs and symptoms of malnutrition.</p> <ul style="list-style-type: none"> <li>- Breast feeding</li> <li>- Weaning foods e.g. semi solid nutritious food</li> <li>- porridge with groundnuts.</li> </ul> <p>Preparation for handling of food and utensils</p> <ul style="list-style-type: none"> <li>- signs of dehydration.</li> <li>- sunken fontanelle.</li> <li>- sunken eyes</li> <li>- dry mouth, tongue etc.</li> <li>- making of oral fluids.</li> <li>- safe water.</li> </ul>	<p>Lecture and field trips</p> <p>Lecture</p> <p>Discussion</p> <p>Demonstration</p>	<p>Demonstration</p> <p>Explanation</p> <p>Demonstration and practice</p> <p>Explanation cooking</p> <p>Demonstration</p> <p>Explanation</p> <p>Demonstration</p> <p>Explanation</p> <p>Demonstration</p>	<p>Posters on Children's Clinic.</p> <p>Posters on malnourished children</p> <p>Food real cooking Utensils Posters.</p> <p>Water Salt Sugar Cup.</p>

CHILD CARE

SPECIFIC OBJECTIVE	SUB-OBJECTIVES	CONTENT	METHOD	LEARNING EXPERIENCE	VISUAL AIDS
<p>4. Identify childhood illness and make proper referrals</p> <p>To advise on prevention of home accidents.</p>	<p>4.1. Advise mothers on care of children with common illnesses of childhood.</p> <p>5.1. Should be able to mention some of the common home accidents.</p>	<p>-signs of fever, diarrhoea vomiting Otitis media worms, skin diseases conjunctivitis measles etc. burns paraffin-poisoning minor cuts and injuries fracture swallowing tablets.</p>	<p>Lecture Discussions Demonstration</p> <p>Lecture Discussion</p>	<p>Demonstration</p> <p>Explain Verbally and practice</p>	<p>Posters if available</p> <p>Broken bottles, coins, plastic bag etc.</p>

GENERAL OBJECTIVE: The TBA will understand the principles of personal hygiene and environmental sanitation and appreciate their importance in maintaining health.

SPECIFIC OBJECTIVES	SUB-OBJECTIVES	CONTENT	METHOD	LEARNING EXPERIENCE	TEACHING AIDS
<p>The TBA will be able to:</p> <p>1. Demonstrate good personal hygiene and be able to advise others</p>	<p>1.1. Instruct a mother on cleanliness of her self and her family.</p>	<ul style="list-style-type: none"> <li>- general hygiene measures</li> <li>- safe water</li> <li>- proper handling of food</li> <li>- prevention.</li> </ul>	<p>Lecture Discussions Demonstrations</p>	<p>Demonstration, Explanation on the importance of boiling water, washing hands before meals and after visiting toilet.</p>	<p>Soap, Water.</p>
<p>2. Demonstrate good sanitary practices on her own environment.</p>	<p>2.1. Explain to mothers how to prevent the spread of diseases.</p>	<ul style="list-style-type: none"> <li>- prevention of diseases by use of pit latrine</li> <li>- refuse pits</li> <li>- filling of cracks where bugs enter.</li> <li>- sweeping</li> <li>- separate houses for animals</li> </ul>	<p>Lecture Discussion field trips</p>	<p>Explanation of the importance of having toilet and refuse pits and proper care and sweeping of the house surroundings.</p>	

# ANNEX VIII

## LETTERS OF SUPPORT

INTERPERSONAL CO-OPERATION

GENERAL OBJECTIVE: The TBA will appreciate the existence and role of other P.H.C. workers in her community and be able to work hand in hand with them.

SPECIFIC OBJECTIVES	SUB-OBJECTIVES	CONTENT	METHOD	LEARNING EXPERIENCE	VISUAL AIDS
<p>The TBAs will be able to:</p> <p>1. Identify her role in the health team and her relation to other primary health care worker.</p> <p>General Objective</p> <p>The TBA should be able to advise mothers on the prevention of HIV infection and control of AIDS.</p> <p>The TBA should be able to explain HIV:AIDS. She should know the mode of transmission.</p>	<p>1.1. Understand the duties of others.</p> <p>1.2. Utilize the health resources for referral</p> <p>Identify people at high risk.</p> <p>Know the importance of prevention of infection.</p>	<p>- duties of PHCC, CHW FHN, PHNs, etc</p> <p>- Health centres in hospitals CHW</p> <p>15-45 Years occupational risk Social Risk etc.</p> <p>Sterilizing by boiling methods.</p>	<p>Lecture and Field trip, Discussion.</p> <p>Lecture Discussion.</p> <p>Lecture Discussion Demonstration.</p>	<p>Explanation of the duties of health team</p> <p>TBA explains the high risk groups</p> <p>Sterilizing by boiling</p>	<p>Scissor bowls real instruments e.t.c.</p>

All correspondence should be addressed to  
Provincial Medical Officer  
Telephone: 22304/5  
Telegraphic Address: PROMEDICO  
Fax: 21513



In reply please quote:

MH/EP/101/1/13

REPUBLIC OF ZAMBIA

## MINISTRY OF HEALTH

OFFICE OF THE PROVINCIAL MEDICAL OFFICER  
P.O. BOX 510023  
CHIPATA

17th January, 1996.

The Project Director,  
ADRA-Zambia Child Alive Project,  
Mwami Adventist Hospital,  
Private Bag 5,  
CHIPATA

Dear Dr. Joyce Cook,

ADRA-ZAMBIA CHILD ALIVE PROJECT FOR CHADIZA AND CHIPATA DISTRICTS

Reference is made to your letter dated 11th January, 1996 through which you requested me to write you a letter in support of the project referred to above.

The objectives of the Project proposed by your organisation are in line with what the Ministry of Health in the Province and in particular what Chipata and Chadiza Districts are also trying to address. It is in view of this that I wish to assure you of our desire to work with you so that the objectives out-lined by your organisation are achieved. The achievement of the objectives outlined in the project document will greatly benefit the residents of both Chadiza and Chipata Districts.

In line with the Ministry's policy of Decentralisation I wish to request you to work closely with the District Health Management Teams of the districts involved. Close co-operation between the project staff and the officers in the two districts will enhance the overall benefits of the residents from the project.

Lastly, kindly accept our sincere thanks and appreciation for initiating the project in the two districts.

Yours faithfully,

  
Dr. G. C. Chishimba  
PROVINCIAL MEDICAL OFFICER  
EASTERN PROVINCE

c.c. The District Director,  
CHIPATA

.....2.

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- 2 -

c.c. The District Director,  
CHADIZA

c.c. The Permanent Secretary,  
Eastern Province,  
P.O. Box 510019,  
CHIPATA

c.c. The Permanent Secretary for Health,  
P.O. Box 30205,  
LUSAKA

Attention: Dr. S. Ngoma

mjm:.

Telephone: 51175/51189

Fax: 51179

Telegrams:

Telex: ZA 40436

In reply please quote

No. ....



REPUBLIC OF ZAMBIA  
**MINISTRY OF HEALTH**

P.O. BOX 52003  
CHADIZA

15TH JAN 1996.

The Director,  
ANDRA ZAMBIA CHILD ALIVE PROJECT,  
MWAMI HOSPITAL,  
P/BAG 5,

CHIPATA.

Dear Sir/Madam,

RE: ACCEPTANCE OF ANDRA ZAMBIA CHILD ALIVE PROJECT BY CHADIZA  
DISTRICT HEALTH MANAGEMENT TEAM

The above subject refers,

This serves to inform you that Chadiza District Health Management Team has whole heartedly accepted the coming of the above under lined Project to Chadiza District. The District Health Management Team is ready to work side by side with ANDRA to improve the Health status of Children as well as Mothers in the District. The District Health Management Team is more than ready to see to it that the Project is implemented as soon as possible.

Yours Faithfully,

*W.M. Sililo*

W. M. SILILO  
ACTING DIRECTOR OF HEALTH.  
for/DISTRICT DIRECTOR OF HEALTH.  
CHADIZA.

- c.c The Provincial Medical Officer,  
CHIPATA.
- c.c The Council Secretary,  
P.O BOX 510001,  
CHADIZA.
- c.c The District health management Team,  
CHADIZA.

222

Telephone: 22835



In reply please quote:

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REPUBLIC OF ZAMBIA

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**MINISTRY OF HEALTH**

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---

CHIPATA DISTRICT HEALTH MANAGEMENT TEAM  
P.O. Box 511205  
CHIPATA

5th January, 1996.

The Project Director,  
ADRA Child Alive,  
Mwami Adventist Hospital,  
Private Bag 5,  
CHIPATA.

Dear Madam,

Re: CHILD ALIVE PROPOSAL

I acknowledge receipt of the above mentioned document. This office would be most grateful to support the child Survival Programme. On the ORT Corners, we suggest the establishment of Family Health Corners because CDD has been intergrated to Family Health Programme.

Wish you the best in all the activities.

Yours faithfully,

Miss E. Musukwa,  
Public Health Nurse,  
for DISTRICT DIRECTOR OF HEALTH,  
CHIPATA DISTRICT.

BM/gb.

203

All correspondence should be addressed to  
Provincial Medical Officer  
Telephone: 22304/S  
Telegraphic Address: PROMEDICO  
Fax: 21513



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REPUBLIC OF ZAMBIA

## MINISTRY OF HEALTH

OFFICE OF THE PROVINCIAL MEDICAL OFFICER  
P.O. BOX 510023  
CHIPATA

25th February, 1996.

The Project Director,  
ADRA,  
Zambia Child Alive Project,  
O:O Miami Hospital,  
Private Bag 11,  
CHIPATA.

Dear Sir:Madam,

Re: REQUEST FOR FUNDS TO CARRY OUT A RAPID ASSESSMENT OF  
OF THE NUTRITION SITUATION IN THE PROJECT AREA.

Since 1994 there has been the on going Nutrition Surveillance programme (NUSP) (weight for age indicator). Therefore we are requesting for funds to assess the nutrition situation in the area before introducing new programmes.

The objectives of the assessment are as follows:-

- To build up enough reliable information on nutrition status so that the management at district level can plan solutions to the problem of undernutrition.
- To find out at what extend the present clinic based surveillance work as been implemented at community level through training non-professionals to be able to identify children who are poorly nourished.
- To find out the reasons for poor nutrition and ill health and what possible solutions there are.
- To validate existing information system including NUSP.
- To combine nutrition status information with figures of food production, rainfall, food storage, wages, prices and incomes deaths, illness etc.
- To assess the magnitude of the problem and distribution.

2.....

ASSESSMENT OF SITUATION

- Identify what type of information is available.
- Identify the type of information that needs to be collected in the area.
- Decide how such information will be collected.
- Develop a check list of things to be looked at.

Your cooperation will be highly appreciated.

Yours faithfully,



M. Chirwa (Mr.)  
Nutritionist  
for: PROVINCIAL MEDICAL OFFICER  
EASTERN PROVINCE.

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205

All correspondence should be addressed to  
Provincial Medical Officer  
Telephone: 22304/5  
Telegraphic Address: PROMEDICO  
Fax: 21513



In reply please quote:  
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No. ....

REPUBLIC OF ZAMBIA

## MINISTRY OF HEALTH

OFFICE OF THE PROVINCIAL MEDICAL OFFICER  
P.O. BOX 510023  
CHIPATA

23rd February, 1996.

The Project Director,  
ADPA,  
Zambia Child Alive Project,  
C:O Mwami Hospital,  
Private Bag 11,  
CHIPATA.

Dear Sir:Madam,

Re: REQUEST FOR FUNDS TO CARRY OUT A RAPID ASSESSMENT OF  
OF THE NUTRITION SITUATION IN THE PROJECT AREA.

Since 1991 there has been the on going Nutrition Surveillance programme (NNSP) (weight for age indicator). Therefore we are requesting for funds to assess the nutrition situation in the area before introducing new programmes.

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- To combine nutrition status information with figures of food production, rainfall, food storage, wages, prices and incomes deaths, illness etc.
- To assess the magnitude of the problem and distribution.

2.....

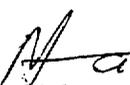
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ASSESSMENT OF SITUATION

- Identify what type of information is available.
- Identify the type of information that need to be collected in the area.
- Decide how such information will be collected.
- Develop a check list of things to be looked at.

Your cooperation will be highly appreciated.

Yours faithfully,

  
M. Chirwa(Mr.)  
Nutritionist  
for: PROVINCIAL MEDICAL OFFICER  
EASTERN PROVINCE.

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# MWAMI ADVENTIST HOSPITAL

PRIVATE BAG 5, CHIPATA . ZAMBIA. AFRICA  
TELEPHONE: (062) 21080 FAX: (062) 21080



---

March 11, 1996

**Dr. Joy Cook**  
Project Manager  
ADRA\Zambia Child Alive Project  
Private Bag 5  
Chipata, Zambia

**Dear Dr. Cook:**

This is to verify our support of the **ADRA\Zambia Child Alive Project** which is based at the **Mwami Adventist Hospital**. The aims and objectives of the project are in full harmony with the public health focus and community health outreach activities of the hospital.

It will be our intention to support and enhance the activities of the project so as to maximize the impact of the selected interventions in the field. The **Mwami Adventist Hospital** enjoys the confidence of the community and it is hoped that as a result of our association together that the project will be readily accepted in the **Chipata and Chadiza Rural Health Districts** where it is working.

Yours truly

A handwritten signature in black ink, consisting of several overlapping loops and a long horizontal stroke at the bottom.

**Allen Fowler CHE**  
Administrator

CHIPATA DORCAMO FAMILY PLANNING PROJECT,  
MWAMI ADVENTIST HOSPITAL,  
PRIVATE BAG 5,  
CHIPATA

29th December, 1995.

The Director ADRA,  
Child Alive Programme,  
Private Bag 5,  
CHIPATA

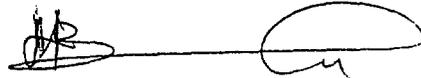
Dear Sir/Madam,

Ref: GOOD WORKING RELATIONSHIP

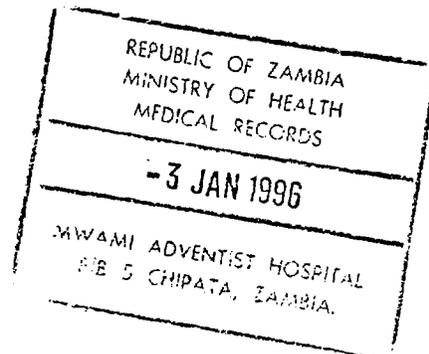
This letter serves to inform you that we are looking forward to work with you. Chipata Dorcamo Family Planning Project is very willing to render all the help you will need from time to time.

We wish to inform you that we are looking forward to a warm and smooth working relationship. We also believe that your Mission is a good one to render the services to the need people of the Rural Zambia. May the almighty Good Bless you as you work for his people.

Yours sincerely,



Kamajibindu Eliaby  
PROJECT CO-ORDINATOR  
FAMILY PLANNING PROJECT



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SAFE DRINKING WATER AND SANITATION

LEARNING OBJECTIVES:

After completion of this topic, the Community Health Worker should be able to:-

1. Tell different sources of water supply for drinking
2. Tell how water may be polluted
3. Tell how drinking water could be made safe from various sources.
4. Tell how to dispose waste water and
5. Tell why the rubbish should be disposed safely and methods of disposal.
6. Tell the danger of human excreta
7. Tell proper disposal of human excreta.
8. Tell the dangers of insects, rodents and stray dogs to health.
9. Tell how to control insects, and rodents and stray dogs.
10. Educate the community about safe drinking water, liquid and solid wastes, home sanitation, kitchen garden, food sanitation.

SCHEDULE OF TEACHING.

3 days - class room

2 days - practical

SAFE DRINKING WATER SUPPLY AND SANITATION

The common sources of drinking water in rural areas are:-

1. Ponds.
2. Wells.
3. Rivers - Streams
4. Lakes.

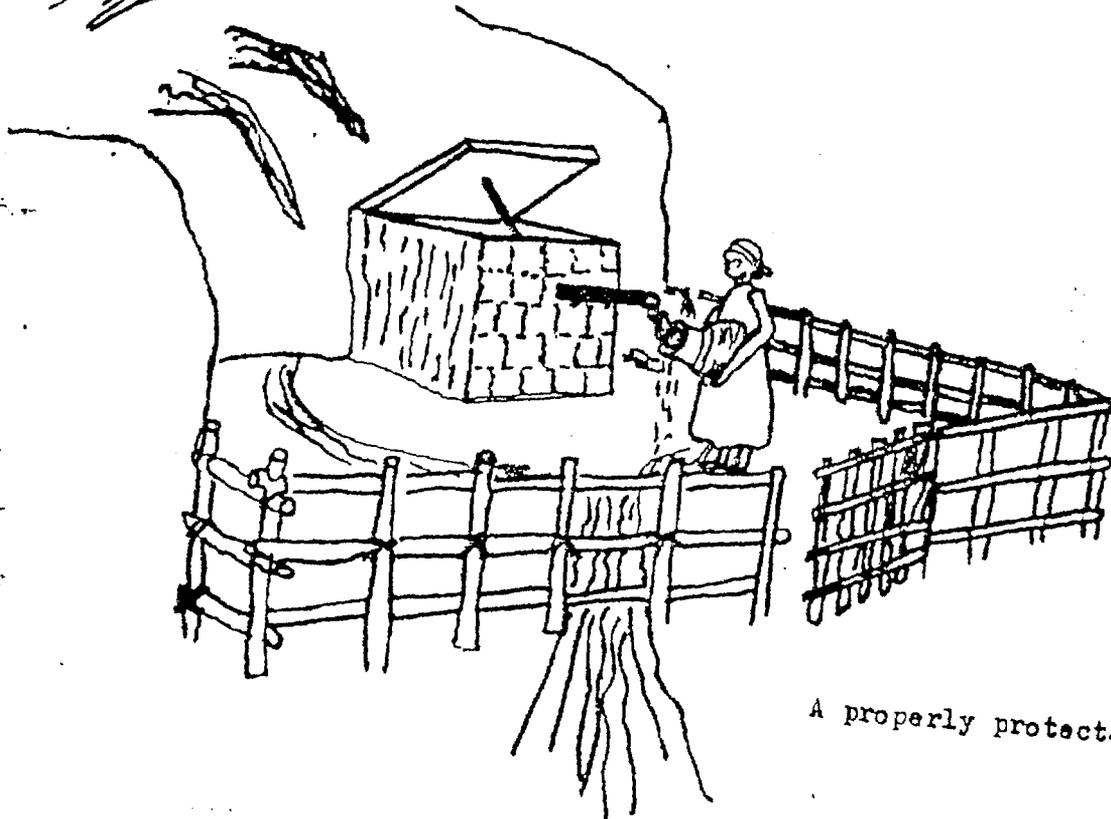
The above sources of water can be polluted in the following ways:-

1. By people defaecating near or in the source.
2. By people bathing in the water
3. By people washing clothes and house hold utensils in or near the water.
4. By washing the animals in or near water.
5. By building toilets or letting used water very near the source of drinking water.
6. By using un-clean containers to draw the water.

The drinking water may also be polluted by storing it in unclean or uncovered containers. Water polluted by human excreta can cause several diseases such as cholera, typhoid, dysentery etc.

The best way of making the drinking water safe from a pond, river and or stream is by boiling it before drinking. People should not use pond water if other sources are available.

Water from a River



A properly protected Spring

FIG - 16

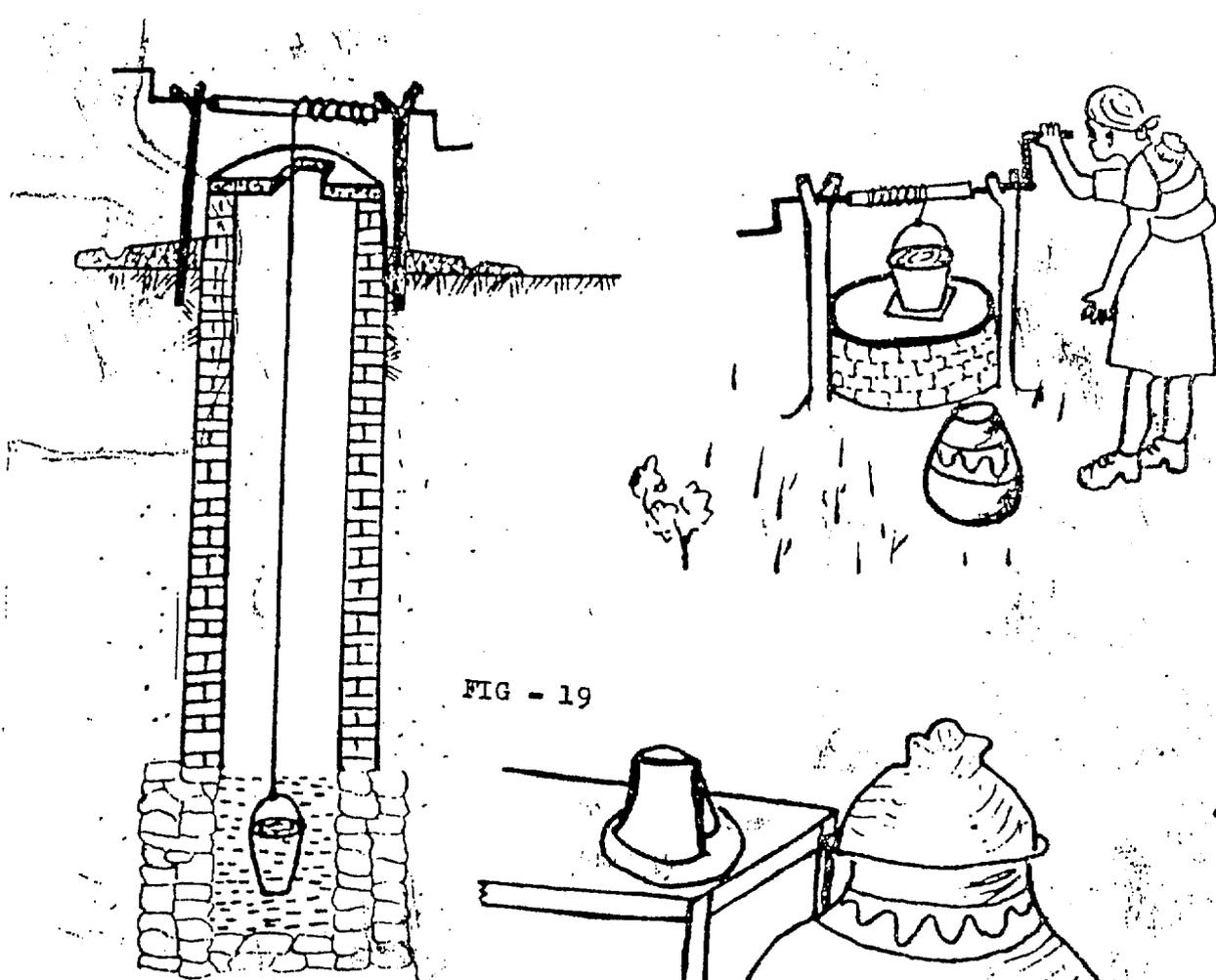
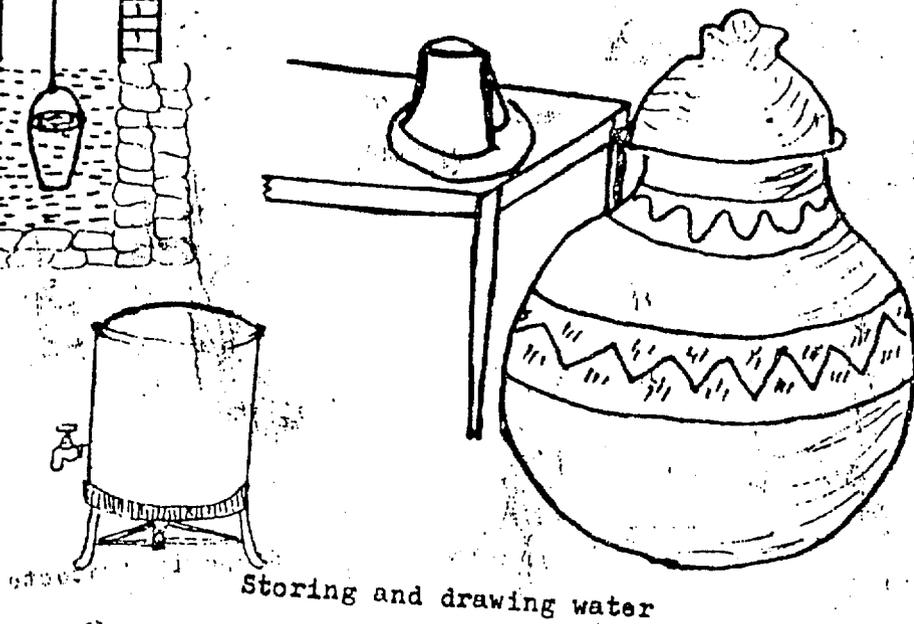
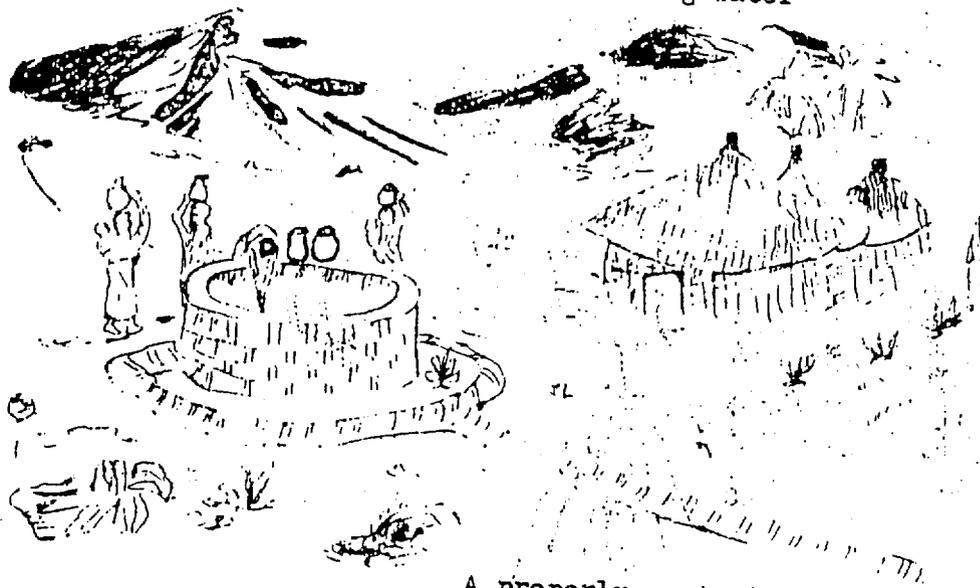


FIG - 19



Storing and drawing water



A properly protected WELL

If the source of drinking water supply is from a river, the people should collect water from it, before it reaches the village and bathe in the river, only where it leaves the village, and the animals be allowed to drink the water only further down the river (Fig.16)

If the the source of drinking water supply is from a spring, it should be protected by properly (Fig.16)

- (1) Constructing a fence all the way round it about 20 meters away from the spring, and the gate of the fence should be kept closed when not in use.
- (2) Forming a ditch round the spring to let the rain water drain away.
- (3) Constructing a 50cm high cemented stone wall round the spring and by arranging a pipe in the wall through which water could be collected.

If the source is from a well the following precautions are to be taken to make it safe. (Fig.19)

- (1) There should not be any toilet or rubbish heap within 20 metres of the well.
- (2) It should be lined inside with stones, jointed with mortar.
- (3) It should be surrounded by a stone wall, which is about 50cms high.
- (4) There should be a plat form all round it with a ditch for the rain water and splashed water to drain away.
- (5) People should use a clean bucket on a pulley for drawing water.
- (6) People should not let dirt get into the well and should not wash in the well. Water in an open well could be made safe by Chlorination with addition of bleaching powder.

#### DISPOSAL WASTE WATER

The used water in the houses can be safely disposed by letting it in to a soakage pit or into a kitchen garden.

SOAKAGE PIT (Fig.20) This is a pit 2 metres deep and 1.5 metres square or 1.5 metres

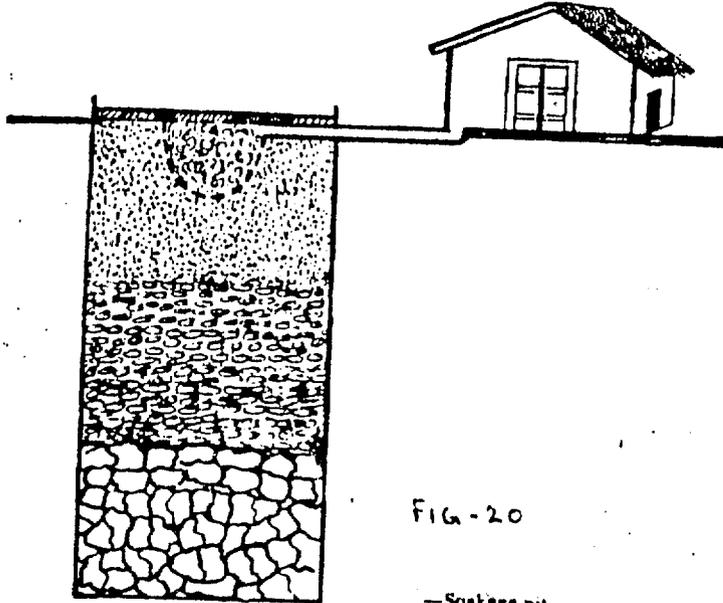


FIG-20

—Soakage pit

# ANNEX VIII

## LETTERS OF SUPPORT

diameter. The lowest  $\frac{1}{3}$  portion is filled with stones, preferably over burnt bricks of  $\frac{3}{4}$  size. The middle  $\frac{1}{3}$  portion is filled with bricks of  $\frac{1}{2}$  size and the upper most portion with bricks of  $\frac{1}{4}$  size. This is covered by a layer of earth. The opening is protected by a parapet of 10cms height, to prevent rain water from entering the pit. The house drain should join the soakage pit through a pipe opening into the middle of the pit after passing through a basket filled with straw, or leaves, which serves as a filter. After a certain period the soakage pit will start over flowing. Then the pit has to be emptied and the bricks washed and dried and replaced. Soakage pits cannot be used in water logged areas and during rainy season. The water in the pit gradually seeps into the ground and this reduces the danger of polluting wells and also prevents small surface collections of water where mosquitoes might breed.

If the household is small, the amount of water is limited and can be easily disposed off by leading it into a kitchen garden, where vegetables and fruits can be grown, which could be used by the family to improve their nutrition.

#### DISPOSAL OF SOLID WASTE (RUBBISH)

If waste is thrown everywhere it will lead to fly breeding, attract dogs and rats, become unsightly and cause unpleasant smells. Hence people should throw the wastes in places where neither they nor children nor animals nor flies can touch it. Refuse should not be dumped into the drains to avoid blockage of drains and mosquito breeding.

Solid household waste and animals manure can be disposed safely by composting: which results in the formation of compost that could be used as fertilizer. A compost pit can be constructed in the following way:

- (1) The pit should be near the house but away from the drinking water sources.
- (2) Dig a pit 4 metres x 3 metres x 1.5 metres or 3 metres x 2 metres x 1 metre.
- (3) The pit should be filled with layers of rubbish and animal manure in the ratio of 3:1 by volume until the whole content of the pit reaches 30cms above ground level.

Telephone: 22835



REPUBLIC OF ZAMBIA

In reply please quote:

No. ....

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## MINISTRY OF HEALTH

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CHIPATA DISTRICT HEALTH MANAGEMENT TEAM  
P.O. Box 511205  
CHIPATA

5th January, 1996.

The Project Director,  
ADRA Child Alive,  
Mwami Adventist Hospital,  
Private Bag 5,  
CHIPATA.

Dear Madam,

Re: CHILD ALIVE PROPOSAL

I acknowledge receipt of the above mentioned document. This office would be most grateful to support the child Survival Programme. On the ORT Corners, we suggest the establishment of Family Health Corners because CDD has been intergrated to Family Health Programme.

Wish you the best in all the activities.

Yours faithfully,

  
Miss E. Musukwa,  
Public Health Nurse,  
for DISTRICT DIRECTOR OF HEALTH,  
CHIPATA DISTRICT.

BM/gb.

218

Telephone: 51175/51189

Fax: 51179

Telegrams:

Telex: ZA 40436

In reply please quote

No. ....



REPUBLIC OF ZAMBIA  
**MINISTRY OF HEALTH**

P.O. BOX 52003  
CHADIZA

15TH JAN 1996

The Director,  
ANDRA ZAMBIA CHILD ALIVE PROJECT,  
MWAMI HOSPITAL,  
P/BAG 5,

CHIPATA.

Dear Sir/Madam,

RE: ACCEPTANCE OF ANDRA ZAMBIA CHILD ALIVE PROJECT BY CHADIZA  
DISTRICT HEALTH MANAGEMENT TEAM

The above subject refers,

This serves to inform you that Chadiza District Health Management Team has whole heartedly accepted the coming of the above under lined Project to Chadiza District. The District Health Management Team is ready to work side by side with ANDRA to improve the Health status of Children as well as Mothers in the District. The District Health Management Team is more than ready to see to it that the Project is implemented as soon as possible.

Yours Faithfully,

*W. M. Siliilo*

W. M. SILILO  
ACTING DIRECTOR OF HEALTH.  
for/DISTRICT DIRECTOR OF HEALTH.  
CHADIZA.

- c.c The Provincial Medical Officer,  
CHIPATA.
- c.c The Council Secretary,  
P.O BOX 510001,  
CHADIZA.
- c.c The District health management Team,  
CHADIZA.

219

All correspondence should be addressed to  
Provincial Medical Officer  
Telephone: 22304/5  
Telegraphic Address: PROMEDICO  
Fax: 21513



In reply please quote:  
WE:LF:101:6:4  
No. ....

REPUBLIC OF ZAMBIA

## MINISTRY OF HEALTH

OFFICE OF THE PROVINCIAL MEDICAL OFFICER  
P.O. BOX 510023  
CHIPATA

23rd February, 1996.

The Project Director,  
ADRA,  
Zambia Child Alive Project,  
C/O Kwami Hospital,  
Private Bag 11,  
CHIPATA.

Dear Sir/Madam,

Re: REQUEST FOR FUNDS TO CARRY OUT A RAPID ASSESSMENT OF  
OF THE NUTRITION SITUATION IN THE PROJECT AREA.

Since 1991 there has been the on going Nutrition Surveillance programme(MNSP) (weight for age indicator). Therefore we are requesting for funds to assess the nutrition situation in the area before introducing new programmes.

The objectives of the assessment are as follows:-

- To build up enough reliable information on nutrition status so that the management at district level can plan solutions to the problem of undernutrition.
- To find out at what extend the present clinic based surveillance work as been implemented at community level through training non-professionals to be able to identify children who are poorly nourished.
- To find out the reasons for poor nutrition and ill health and what possible solutions there are.
- To validate existing information system including MNSP.
- To combine nutrition status information with figures of food production, rainfall, food storage, wages, prices and incomes deaths, illness etc.
- To assess the magnitude of the problem and distribution.

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220

ASSESSMENT OF SITUATION

- Identify what type of information is available.
- Identify the type of information that need to be collected in the area.
- Decide how such information will be collected.
- Develop a check list of things to be looked at.

Your cooperation will be highly appreciated.

Yours faithfully,

  
M. Chirwa(Mr.)  
Nutritionist  
for: PROVINCIAL MEDICAL OFFICER  
EASTERN PROVINCE.

CHIPATA DORCAMO FAMILY PLANNING PROJECT,  
MWAMI ADVENTIST HOSPITAL,  
PRIVATE BAG 5,  
CHIPATA

29th December, 1995.

The Director ADRA,  
Child Alive Programme,  
Private Bag 5,  
CHIPATA

Dear Sir/Madam,

Ref: GOOD WORKING RELATIONSHIP

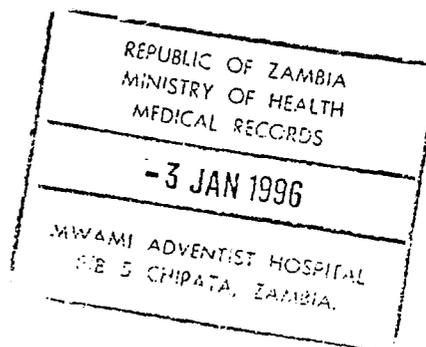
This letter serves to inform you that we are looking forward to work with you. Chipata Dorcamo Family Planning Project is very willing to render all the help you will need from time to time.

We wish to inform you that we are looking forward to a warm and smooth working relationship. We also believe that your Mission is a good one to render the services to the need people of the Rural Zambia. May the almighty Good Bless you as you work for his people.

Yours sincerely,



Kamajibindu Eliaby  
PROJECT CO-ORDINATOR  
FAMILY PLANNING PROJECT



# MWAMI ADVENTIST HOSPITAL

PRIVATE BAG 5, CHIPATA . ZAMBIA. AFRICA  
TELEPHONE: (062) 21080 FAX: (062) 21080



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March 11, 1996

**Dr. Joy Cook**  
Project Manager  
ADRA\Zambia Child Alive Project  
Private Bag 5  
Chipata, Zambia

**Dear Dr. Cook:**

This is to verify our support of the **ADRA\Zambia Child Alive Project** which is based at the **Mwami Adventist Hospital**. The aims and objectives of the project are in full harmony with the public health focus and community health outreach activities of the hospital.

It will be our intention to support and enhance the activities of the project so as to maximize the impact of the selected interventions in the field. The **Mwami Adventist Hospital** enjoys the confidence of the community and it is hoped that as a result of our association together that the project will be readily accepted in the **Chipata and Chadiza Rural Health Districts** where it is working.

Yours truly

A handwritten signature in black ink, appearing to be 'Allen Fowler', written in a cursive style.

**Allen Fowler CHE**  
Administrator

All correspondence should be addressed to  
Provincial Medical Officer  
Telephone: 22304/3  
Telegraphic Address: PROMEDICO  
Fax: 21513



In reply please quote:

MH/EP/101/1/13

REPUBLIC OF ZAMBIA

## MINISTRY OF HEALTH

OFFICE OF THE PROVINCIAL MEDICAL OFFICER  
P.O. BOX 510023  
CHIPATA

17th January, 1996.

The Project Director,  
ADRA-Zambia Child Alive Project,  
Mwami Adventist Hospital,  
Private Bag 5,  
CHIPATA

Dear Dr. Joyce Cook,

ADRA-ZAMBIA CHILD ALIVE PROJECT FOR CHADIZA AND CHIPATA DISTRICTS

Reference is made to your letter dated 11th January, 1996 through which you requested me to write you a letter in support of the project referred to above.

The objectives of the Project proposed by your organisation are in line with what the Ministry of Health in the Province and in particular what Chipata and Chadiza Districts are also trying to address. It is in view of this that I wish to assure you of our desire to work with you so that the objectives out-lined by your organisation are achieved. The achievement of the objectives outlined in the project document will greatly benefit the residents of both Chadiza and Chipata Districts.

In line with the Ministry's policy of Decentralisation I wish to request you to work closely with the District Health Management Teams of the districts involved. Close co-operation between the project staff and the officers in the two districts will enhance the overall benefits of the residents from the project.

Lastly, kindly accept our sincere thanks and appreciation for initiating the project in the two districts.

Yours faithfully,

  
Dr. G. C. Chishimba  
PROVINCIAL MEDICAL OFFICER  
EASTERN PROVINCE

c.c. The District Director,  
CHIPATA

.....2.

224

- 2 -

c.c. The District Director,  
CHADIZA

c.c. The Permanent Secretary,  
Eastern Province,  
P.O. Box 510019,  
CHIPATA

c.c. The Permanent Secretary for Health,  
P.O. Box 30205,  
LUSAKA

Attention: Dr. S. Ngoma

mjm:.

# ANNEX IX

## JOB DESCRIPTIONS

**JOB TITLE: DIRECTOR, CHILD SURVIVAL PROJECT**

**PRINCIPAL DUTIES AND RESPONSIBILITIES:**

1. Staff supervision, including hiring, firing, training, and development
  - a. Develop job descriptions for all staff
  - b. Provide orientation and continuing education as necessary
  - c. Staff evaluations at least once a year
2. Budget accountability
  - a. Pay for project expenditures as budgeted
  - b. Maintain a record of expenditures,
  - c. Financial statement produced on a monthly basis
3. Administer programs
  - a. Overall program planning and implementation
  - b. Program reporting and evaluation
4. Liaison activities
  - a. Establish and chair Child Survival Advisory Committee
  - b. Build supportive network with MOH, PVOs, and other pertinent officials

**KNOWLEDGE, SKILLS, AND EXPERIENCE REQUIRED:**

Graduate degree in health or related fields, business administration or related fields. At least three years experience working in a developing country.

## ***JOB DESCRIPTIONS***

**JOB TITLE:** LOGISTICS MANAGER

**BRIEF SUMMARY:**

The logistics Manager will manage all movements of people and supplies, and make all purchases for the ADRA Child Survival project.

**PRINCIPAL DUTIES AND RESPONSIBILITIES:**

1. Keep all vehicles in good working order.
2. Handle all purchasing for the ADRA Child Survival Project.
3. Help all the movement of people.
4. Make deliveries as required.
5. Assist in organizing of seminars and conferences.
6. Keep bicycles in good working order.
7. Estimate requirements for supplies and equipment in advance and make arrangements for purchases.
8. Assist in the procurement and distribution of payroll.
9. Keep ADRA Country Director informed of all accidents and major repairs.
10. Maintain established department policies, procedures, objectives, quality assurance, and safety at all times.
11. Maintain appropriate records and reports.
12. Ensure security of all property belonging to ADRA.
13. Detect fraud and abuse, then report to ADRA Child Survival Manager.
14. Perform other duties as directed.

**WORKING CONDITIONS:**

Field living and driving will be tiring and hot at times.

**KNOWLEDGE, SKILLS, EXPERIENCE REQUIRED:**

Must have a valid drivers license. Must have a minimum of a Secondary School education and/or prior management experience.

288

**JOB TITLE:** TRAINING COORDINATOR

**BRIEF SUMMARY:**

Coordinate all training sessions for/by project staff, CHWs, TBAs, MOH personnel.

**PRINCIPAL DUTIES AND RESPONSIBILITIES:**

1. Technical Support
  - a. Plan/assist with planning baseline surveys
  - b. Assist with analysis, interpretation, and reporting of data
  - c. Assist project director with project design and writing of the Detailed Implementation Plan
2. Liaison functions
  - a. Assist Project Director in establishing a support and collaboration network with the MOH, government agencies and other NGOs working in the project area
  - b. Monthly meetings with CHWs and Health Center staff, at which monthly reports will be collected, and the data tabulated as part of the HIS
3. Training
  - a. Schedule, organize training sessions for CHWs and TBAs, and support MOH personnel/project staff with training
  - b. Train interviewers to conduct surveys

**KNOWLEDGE, SKILLS, EXPERIENCE REQUIRED:**

Graduate degree (or candidate, using this position in fulfillment of field practicum/internship requirement) in Public Health.

One year of international experience minimum.

**JOB TITLE:** FIELD SUPERVISOR (NUTRITION, CDD, AND EPI COORDINATOR)

**BRIEF SUMMARY:**

Provide supervision and support for the project's nutrition, CDD and EPI training and interventions.

**PRINCIPAL DUTIES AND RESPONSIBILITIES:**

1. To collect, maintain, and use demographic data and assess the health status of the community.
2. If needed, to facilitate the referral of patients.
3. To plan, organize, implement, supervise, and evaluate preventive and health promotive programs in the project area.
4. To participate in the training and supervision of CHWs and TBAs (as pertaining to their work on CDD, EPI, and nutritional matters).
5. To function as an effective and efficient team member of the *Child Alive* project team.
6. To maintain high professional competence through participation in seminars, workshops, refresher courses, clinical meetings, as appropriate.
7. To collaborate and cooperate in activities with workers engaged in community development, agricultural extension officers, teachers, local leaders, and others involved with the project on any level.
8. To conduct regular visits to villages to ensure the optimal functioning of the rural health team (CHWs and TBAs).

**KNOWLEDGE, SKILLS, AND EXPERIENCE REQUIRED:**

Must have completed professional health training (nursing, medical assistant, etc.).

Should have extensive clinical and professional experience, and be familiar with the MOH and district health officials he/she will work in collaboration with.

**JOB TITLE:** FIELD SUPERVISOR (MCH/FP COORDINATOR)

**BRIEF SUMMARY:**

Supervision of and support for the trained Traditional Birth Attendants (TBAs) and Community Based Distributors (CBDs) in the project area.

**PRINCIPAL DUTIES AND RESPONSIBILITIES:**

1. To collect, maintain, and use demographic data and assess the health status of mothers and children community.
2. If needed, to facilitate the referral of patients.
3. To plan, organize, implement, supervise, and evaluate preventive and health promotive programs in the project area.
4. To participate in the recruitment, training, and supervision of TBAs and CHWs (as pertaining to their work on MCH/FP matters).
5. Meeting with and training church leaders, CBDs, community and religious leaders on Family Planning.
6. To function as an effective and efficient team member of the *Child Alive* project team.
7. To maintain high professional competence through participation in seminars, workshops, refresher courses, clinical meetings, as appropriate.
8. To collaborate and cooperate in activities with other agencies/projects involved in Family planning, especially the CBDs of the ADRA/Mwami Family Health Services project.
9. To conduct regular visits to villages to ensure the optimal functioning of the rural health team (CHWs and TBAs).
10. To prepare the MCH component of monthly, quarterly, and annual reports.

**KNOWLEDGE, SKILLS, AND EXPERIENCE REQUIRED:**

Must have completed professional health training (nursing, medical assistant, etc.).  
Should have clinical and professional experience in the area of maternal and/or child health, and be familiar with the MOH and district health officials he/she will work in collaboration with.

**KNOWLEDGE, SKILLS, AND EXPERIENCE REQUIRED:**

Must be a registered nurse with maternal/child health experience

**JOB TITLE:** DRIVER

**BRIEF SUMMARY:**

Drive and care for ADRA vehicles and passengers

**PRINCIPAL DUTIES AND RESPONSIBILITIES:**

1. Obtain specific authorization from Manager for each trip.
2. Insure that vehicle log and other required forms are completed for each trip.
3. Value, and drive in such a way as to maintain comfort and well-being.
4. Drive in a manner and at a speed that is reasonable and prudent under existing conditions.
5. Before moving vehicle, check all fluid levels, tires and safety equipment for condition. Make necessary conditions before driving.
6. Be attentive to any mechanical irregularities and stop vehicle if any threat to vehicle and/or occupants. Report mechanical difficulties to Mechanic. Do not drive if vehicle is unsafe, unlicensed or insured.
7. In case of accident, do not admit any fault. Refer the matter to the ADRA country and complete the Motor Vehicle Accident Report Form.
8. Report any vehicle damages immediately to ADRA Country Director.
9. Transport only ADRA employees and property of ADRA unless specific permission is granted by the ADRA Country Director.
10. Help load and unload supplies and equipment from vehicle.
11. Keep vehicle clean whenever the vehicle is no in use.
12. Maintain established department policies, procedures, objectives, quality assurance, and safety at all times.
13. Perform other duties as requested.

**WORKING CONDITIONS:**

Generally good working environment

**KNOWLEDGE, SKILLS, EXPERIENCE REQUIRED:**

Posses a valid drivers license. familiar with automotive mechanics, General attitude of carefulness, safety, helpfulness, and honesty at all times. Must have previous experience and a good driving record.

**JOB TITLE:** FIELD SUPERVISOR (HIV/AIDS COORDINATOR) (Part-time position)

**BRIEF SUMMARY:**

Provide supervision and support for the project's HIV/AIDS-related training and interventions.

**PRINCIPAL DUTIES AND RESPONSIBILITIES:**

1. To collect, maintain, and use demographic data and assess the rates of HIV/AIDS in the project area, and acquire a good grasp of the HIV/AIDS-related knowledge, attitudes and practices in the same area.
2. To plan, organize, implement, supervise, and evaluate preventive and health promotive HIV/AIDS programs in the project area.
3. To participate in the training and supervision of CHWs and TBAs (as pertaining to their work on HIV/AIDS and STDs).
4. To function as an effective and efficient team member of the *Child Alive* project team.
5. To maintain high professional competence through participation in seminars, workshops, refresher courses, clinical meetings, as appropriate.
6. To collaborate and cooperate in activities with workers engaged in community development, agricultural extension officers, teachers, local leaders, and others involved with the project on any level.

**KNOWLEDGE, SKILLS, AND EXPERIENCE REQUIRED:**

Must have completed professional health training (nursing, medical assistant, etc.).  
Should have extensive clinical and professional experience, preferably in the area of HIV/AIDS/STDs, and be familiar with the MOH and district health officials he/she will work in partnership with.

# ANNEX X

## RESUMES

Joyce A. Cook

**Education:**

- 1988 Ed.D., Health Education  
The University of Tennessee, Knoxville, TN
- 1983 Masters of Health Education  
University of Florida, Gainesville, FL
- 1970 Bachelor of Arts, Religion  
Southern College of Seventh-day Adventists, Collegedale, TN

**Experience:**

- Dec. 1995- Present Project Director, Child Survival  
Adventist Development and Relief Agency, Zambia
- July 1992 - Nov. 1995 Project Manager, Child Survival  
Adventist Development and Relief Agency, Malawi
- 1988-1992 Assistant Professor, Health Education  
University of Nebraska at Omaha
- 1985-1988 Graduate Teaching Associate, Health Education  
The University of Tennessee, Knoxville, TN
- 1984-1985 Elementary School Teacher  
Japan Overseas School, Yokohama, Japan
- 1983-1984 Elementary School Teacher  
Korean Union Foreign School, Seoul, Korea

**RUTH (KAMWENDO) WIAFE, RN, RM**

**Education:**

1977-1982           RN, Registered Midwifery Certificate  
Maluti Adventist Hospital, Mapoteng, Lesotho

**Experience:**

1985 -1986           Mwami Adventist Hospital, Chipata, Zambia

1985                 Yuka Adventist Hospital, Kalabo, Zambia

1982 - 1984           Malamulo Hospital, Makwasa, Malawi

1982                 Maluti Adventist Hospital, Mapoteng, Lesotho

## ALINA B. BACIU

### Education:

- 1996 M.P.H., International Health (candidate)  
Loma Linda University School of Public Health, Loma Linda, California
- 1993 B.A., English  
Pacific Union College, Angwin, California

### Experience:

- 1995-1996 Secretary  
Epidemiology Department, Loma Linda University School of Public Health
- 1993-1994 English Teacher  
International Teacher Service, Moscow (Russia) English Language Schools
- 1991-1993 Desk Clerk  
Women's Residence Hall, Pacific Union College, California
- 1991-1992 Reader/Secretary  
Pacific Union College English Department, California
- 1991 Tutor, English-as-a-Second Language  
Library Learning Center, Pacific Union College, California

## JEROME MUSANGO KAYUMBA

### Education:

- 1994 Certificate in the Control of STDs  
Chainamo Hospital, Lusaka, Zambia
- 1992 Certificate of Specialized Training in STD/AIDS  
Lusaka University Teaching Hospital  
Zambia Ministry of Health, in conjunction with WHO, USAID, UNICEF
- 1972 Medical Assistant Certificate  
Tanga Medical Training School, Tanzania
- 1970 Medical Assistant Certificate  
Malamulo Adventist Hospital, School for Medical Education, Malawi

### Experience:

- 1970-present Medical Assistant/Registered Clinical Officer  
Mwami Adventist Hospital

28

## MAXWELL MWENITETE

### Education:

- 1995 Completed Workshop on the Elimination of Leprosy  
Ministry of Health, Zambia
- 1985 TB/Leprosy Control Officer  
Mvome Hospital, Mvome; Kabwe Leprosarium, Zambia
- 1983 Certificate in Ophthalmological Assisting  
Chainamo School of Sciences, Lusaka, Zambia
- 1963 Medical Assistant Certificate  
Malamulo Adventist Hospital Medical Assistant Training School
- 1967 Enrolled Nurse Certificate  
Mwami Adventist Hospital School of Nursing

### Experience:

- 1982-present Clinical Officer/TB/Leprosy Control Officer  
Mwami Adventist Hospital
- 1976-1982 Medical Assistant/TB/Leprosy Control Officer  
Fiwila Mission, Zambia
- 1967-1976 Medical Assistant  
Kabwe Hospital, Zambia
- 1967 Medical Assistant  
Yuka Adventist Hospital, Western Province, Zambia

# ANNEX XI

## KEY HEALTH MESSAGES FOR EACH INTERVENTION

# AIDS Prime Messages

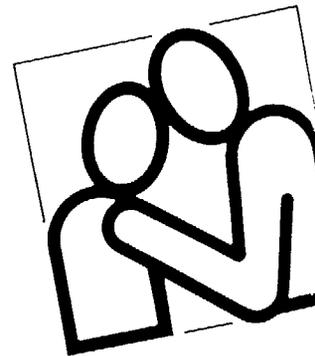
**1** AIDS is an incurable disease. It is caused by a virus which can be passed on by sexual intercourse, by infected blood, and by infected mothers to their unborn children.

**2** People who are sure that both they and their partner are uninfected and have no other sex partners are not at risk from AIDS. People who know or suspect that this might not be the case should practise safer sex. This means either sex without intercourse (penetration), or intercourse only when protected by a condom.

**3** Any injection with an unsterilized needle or syringe is dangerous.

**4** Women infected with HIV should think carefully about having a baby - and seek advice. There is a one-in-three chance that their babies will also be born infected with HIV.

**5** All parents should tell their children that AIDS is spread.



**Injection with an unsterilized needle or syringe is dangerous.**

needle or syringe can pick up small amounts of blood from the person being injected. If that person's blood contains HIV, and if the needle or syringe is used for injecting another person without being sterilized first, then HIV can be injected.

People who inject themselves with drugs are therefore particularly at risk from AIDS. So are people who have sex with those who inject drugs.

Injecting is in itself dangerous. But because of the additional risk of infection, those who do inject drugs should never use another person's needle or syringe or allow their own needle or syringe to be used by anyone else.

Traditional child immunization programmes use needles which are cleaned between each use and are therefore safe. All infants should be given a full course of immunizations in the first year of life.

Other injections are often unnecessary, as many useful medicines can be taken by mouth. Where injections are necessary, they should be given by a trained person using a sterilized needle and syringe.

Body-piercing, dental treatment, tattooing, facial marking and body art are not safe if the equipment used is not sterilized. It is also dangerous to be shaved by a barber using an unsterilized razor.

**Men infected with HIV should think carefully about having a child and seek advice. There is a one-in-three chance that their child will also be born infected with HIV.**

Men with HIV infection have about a 30% chance of giving birth to a child who will also be infected with HIV. Most babies infected with the virus will die before they are three years old.

In some countries, HIV tests are available to couples who are considering having a child, so that one or both of them might be infected. The results can help them decide whether to have children. Even if only the man is infected, the woman may become infected through sexual intercourse. If she is attempting to conceive, thereby putting herself and her baby at risk.

**5**

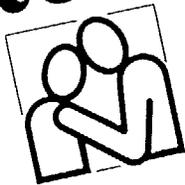
**All parents should tell their children how HIV is spread.**

⊙ Apart from protecting yourself and your partner, you can also help to protect your children against HIV by making sure they know the facts about how to avoid getting and spreading the infection.

⊙ Children also need to know the facts about how HIV *does not* spread. They need to be reassured that they run no risk of getting the virus from ordinary social contact with HIV-infected children or adults. Children should be encouraged to be sympathetic towards people who are infected with HIV.

○ Everyone can help in the worldwide effort to stop HIV from spreading to the new generation.

# Porting Information



AIDS is an incurable disease. It is caused by a virus which can be passed on by sexual intercourse, by infected blood, and by infected mothers to their unborn children.

AIDS is caused by a virus known as the human immunodeficiency virus (HIV). HIV damages the body's defence system. People who have AIDS die because their body can no longer fight off other serious diseases.

People infected with HIV usually go for many years without any signs of disease. They may look and feel perfectly normal and healthy for all of their life. But anybody infected with HIV can infect others.

AIDS is the late stage of HIV infection. It takes an average of 7 to 10 years to develop - from the time when a person is first infected with HIV. AIDS is not curable, although some medicines have been developed to help people with AIDS healthier for longer.

Anyone who suspects that he or she may be infected with HIV should contact a health worker or an AIDS testing centre. It is vital for those who have the virus to learn how to avoid passing it to others, and to receive advice about how to take care of their own health.

AIDS can only be passed from one person to another in a limited number of ways:

by sexual intercourse, during which the semen or vaginal fluid of an infected person passes into the body of another person. HIV can be passed in this way from man to man, man to woman, and woman to man. Worldwide, nine out of ten infections in adults have been passed on through sexual intercourse

by the use of unsterilized needles or syringes for injecting drugs

by blood transfusions, if the blood used has not been tested for HIV

by an infected woman to her unborn child.

are a common cause of death in babies, not breastfeeding is a much greater risk. Without safe water, sterile bottles and teats, and enough milk-powder, bottle-fed babies are much more likely to become ill and malnourished, and to die, than babies who are breastfed. In such conditions, it is safer for the child to be breastfed even if the mother is infected with HIV.

○ It is not possible to get HIV from being near to or touching those who are infected with the virus. Hugging, shaking hands, coughing and sneezing will not spread the disease. HIV cannot be transmitted by toilet seats, telephones, plates, glasses, spoons, towels, bed linen, swimming pools, or public baths.

○ A person infected with HIV is not a public health danger.

## 2

**People who are sure that both they and their partner are uninfected and have no other sex partners are not at risk from AIDS. People who know or suspect that this might not be the case should practise safer sex. This means either sex without intercourse (penetration), or intercourse only when protected by a condom.**

○ Mutual fidelity between two uninfected partners protects both people from HIV.

○ The more sex partners you have, the greater the risk that one of them will be infected and can infect you. The more partners your partner has, the greater the risk that he or she will be infected and can infect you.

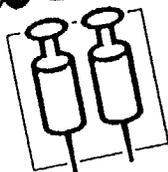
○ People who have genital sores, ulcers, or inflammation, or a discharge from the vagina or penis, are at greater risk of becoming infected with HIV and of passing it to others. Prompt treatment for all genital infections is therefore very important.

○ Unless you and your partner have sex only with each other, and are sure you are both uninfected, you should reduce your risk of HIV by practising safer sex. Safer sex means kissing, caressing and other kinds of non-penetrative sex (where the penis does not enter the mouth, vagina or anus), or using a condom (a sheath or rubber) every time you have intercourse.

○ Even if a condom is used, anal intercourse (in which the penis enters the rectum or back passage) is much more risky than vaginal or oral penetration.

○ The only way to avoid any such risk is to abstain from sex.

# Immunization Supporting Information



## 1

Immunization protects against several dangerous diseases. A child who is not immunized is more likely to become undernourished, to become disabled, and to die.

- Immunization protects children against some of the most dangerous diseases of childhood. A child is immunized by vaccines which are injected or given by mouth. The vaccines work by building up the child's defences. If the disease strikes before a child is immunized, immunization is too late.
- A child who is not immunized is very likely to get measles and whooping cough. These diseases can kill. But even children who survive these diseases are weakened by them. They may not grow well. And they may die later from malnutrition or other illnesses.
- Measles is also an important cause of malnutrition, poor mental growth, and blindness.
- An unimmunized child will almost certainly be infected with the polio virus. And for every 200 children who are infected, one will be crippled for life.
- Tetanus germs grow in dirty cuts and kill most of the people who become infected - if they are not immunized.
- Breastfeeding is a kind of natural immunization against several diseases. Some of the mother's resistance to disease is passed to the child in her breastmilk, and especially in the thick yellow milk (called colostrum) which is produced during the first few days after the birth.

## 2

Immunization is urgent. All immunizations should be completed in the first year of the child's life.

- It is vital to immunize children early in life. Half of all deaths from whooping cough, one third of all cases of polio, and a quarter of all deaths from measles, occur before the age of one year.
- It is vital for infants to complete the full course of immunizations, otherwise the vaccines may not work. Some vaccines need to be given only once. Others have to be given three times, with a gap of at least four weeks between each dose.
- The important thing for parents to know is that a child should be taken for immunization five times in the first year of the child's life:
  - at birth, or as soon as possible afterwards, babies should be immunized against tuberculosis
  - in countries where polio is still a problem, newborn babies can also be given a dose of polio vaccine. This is in addition to the three doses given at the ages of 6, 10 and 14 weeks
  - at the age of 6 weeks, parents should bring their babies for a first immunization against diphtheria, whooping cough, and tetanus. These three vaccines are given together in a single injection called DPT. The first of three doses of polio vaccine should also be given at this time
  - at the ages of 10 and 14 weeks, parents should return for their infant to complete the full course of DPT and polio vaccines
  - as soon as possible after the age of nine months, parents should bring their babies for immunization against measles.
- Measles is one of the most dangerous of all childhood diseases. For the first few months of life, the child has some natural protection against measles. This natural protection is inherited from the child's mother. It may prevent measles vaccination from doing its job. But after about nine months, natural protection comes to an end. The child is now at risk from measles and can and should be immunized. So it is vital to take a child for measles vaccination as soon as possible after the age of nine months.
- If for any reason a child has not been fully immunized in the first year of life, it is vital to have the child immunized as soon as possible.

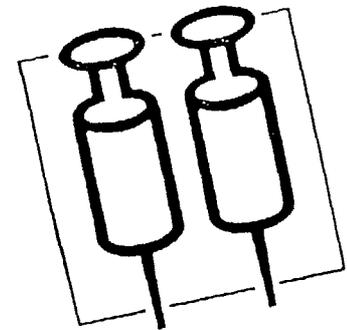
# Immunization Prime Messages

**1** Immunization protects against several dangerous diseases. A child who is not immunized is more likely to become undernourished, to become disabled, and to die.

**2** Immunization is urgent. All immunizations should be completed in the first year of the child's life.

**3** It is safe to immunize a sick child.

**4** Every woman between the ages of 15 and 44 should be fully immunized against tetanus.



215

# Breastfeeding Prime Messages

**1** Breastmilk alone is the best possible food and drink for a baby. No other food or drink is needed for about the first six months of life.

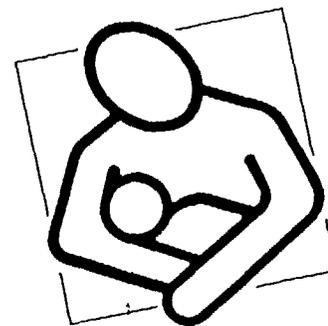
**2** Babies should start to breastfeed as soon as possible after birth. Virtually every mother can breastfeed her baby.

**3** Breastfeeding causes more milk to be produced. A baby needs to suck frequently at the breast so that enough breastmilk is produced to meet the baby's needs.

**4** Breastfeeding helps to protect babies and young children against dangerous diseases. Bottle-feeding can lead to serious illness and death.

**5** A variety of additional foods is necessary when a child is about six months old, but breastfeeding should continue well into the second year of a child's life and for longer if possible.

**6** Breastfeeding gives a mother 98% protection against pregnancy for six months after giving birth - *if* her baby breastfeeds frequently, day and night, *if* the baby is not regularly given other food and drink, and *if* the mother's periods have not returned.



Immunization schedule for infants* ↓	
AGE	DISEASE TO BE IMMUNIZED AGAINST
Birth	Tuberculosis (and polio in some countries)
6 weeks	Diphtheria, whooping cough, tetanus, polio
10 weeks	Diphtheria, whooping cough, tetanus, polio
14 weeks	Diphtheria, whooping cough, tetanus, polio
9 months	Measles (12-15 months in industrialized countries and polio in some countries)
*National immunization schedules may differ slightly from country to country.	

### 3

- One of the main reasons why parents do not bring their children for immunization is that the child has a fever, a cough, a cold, diarrhoea, or some other mild illness on the day the child is to be immunized. Even if the child with a case of mild illness or malnutrition is brought for immunization, health workers may advise against giving the injections. This is wrong advice. It is now known that it is safe to immunize a child who is suffering from a minor illness or malnutrition.
- After an injection the child may cry, develop a fever, a rash, or a small sore. As with any illness, a child should be given plenty of food and liquids. Breastfeeding is especially helpful. If the problem seems serious or lasts more than three days, the child should be taken to a health centre.

### 4

Every woman between the ages of 15 and 44 should be fully immunized against tetanus.

- In many parts of the world, mothers give birth in unhygienic conditions. This puts both mother and child at risk from tetanus, a major killer of the newborn. If the mother is not immunized against tetanus, then one baby in every 100 will die from the disease.
- Tetanus germs grow in dirty cuts. This can happen, for example, if an unclean knife is used to cut the umbilical cord or if anything unclean is put on the stump of the cord. (Anything used to cut the cord should first be cleaned and then boiled or heated in a flame and allowed to cool.)

If the tetanus germs enter the mother's body, and if she is not immunized against tetanus, then her life will also be at risk.

○ All women of child-bearing age should be immunized against tetanus. All women who become pregnant should check to make sure they have been immunized against tetanus. In this way, both mothers and their new-born babies will be protected.

○ If a woman is not already immunized, a first dose of tetanus vaccine should be given as soon as she becomes pregnant. The second dose can be given four weeks after the first. This second dose should be given *before* the last two weeks of the pregnancy.

A third dose should be given 6 to 12 months after the second dose, or during the next pregnancy.

These three tetanus vaccinations protect the mother, and her newborn baby, for five years. All infants should be immunized against tetanus during the first year of life.

○ If a girl or a woman has been vaccinated five times against tetanus, then she is protected against the disease throughout her years of child-bearing. Any children she may then have will also be protected for the first few weeks of life.

- Mothers employed outside the home need adequate maternity leave, breastfeeding breaks during the working day, and crèches where their babies can be looked after at the workplace. So employers and trade unions also have a part to play in supporting breastfeeding.
- Husbands, families, and communities can help to protect the health of both mothers and babies by making sure that the mother has enough food and by helping with her many tiring tasks.
- Breastfeeding can be an opportunity for a mother to take a few minutes of much-needed rest. Husbands or other family members can help by encouraging the mother to lie down, in peace and quiet, while she breastfeeds her baby.

### 3

Breastfeeding causes more milk to be produced. A baby needs to suck frequently at the breast so that enough breastmilk is produced to meet the baby's needs.

- From birth, the baby should breastfeed whenever he or she wants to - often indicated by crying. Frequent sucking at the breast is necessary to stimulate the production of more breastmilk.
- Frequent sucking helps to stop the breasts from becoming swollen and painful.
- 'Topping up' breastmilk feeds with milk-powder solutions, infant formulas, cow's milk, water, or other drinks, reduces the amount of milk the baby takes from the breast. This leads to less breastmilk being produced. The use of a bottle to give other drinks can cause the baby to stop breastfeeding completely. It can also confuse the baby because the sucking action of bottle-feeding is very different from sucking at the breast. Babies who are confused between sucking at the breast and sucking at the bottle may drink less breastmilk. This will cause less breastmilk to be produced.

### 4

Breastfeeding helps to protect babies and young children against dangerous diseases. Bottle-feeding can lead to serious illness and death.

- Breastmilk is the baby's first 'immunization'. It helps to protect the baby against diarrhoea, coughs and colds, and other common illnesses. The protection is greatest when breastmilk alone is given to the baby for about the first six months.

- Cow's milk, infant formulas, milk-powder solutions, maize gruel and other infant foods do not give babies any special protection against diarrhoea, coughs and colds, and other diseases.

○ Bottle-feeding can cause illnesses such as diarrhoea unless the water is boiled and the bottle and teats are sterilized in boiling water before each feed. The more often a child is ill, the more likely it is that he or she will become malnourished. That is why, in a community without clean drinking water, a bottle-fed baby is many times more likely to die of diarrhoea than a baby fed exclusively on breastmilk for about the first six months.

○ Mothers should be helped to breastfeed their babies. If for any reason a mother does not breastfeed, then she should be helped in other ways to give her baby good nutrition and protection against disease.

○ The best food for a baby who, for whatever reason, cannot be breastfed, is milk squeezed from the mother's breast. It should be given in a cup that has been very well cleaned. Cups are safer than bottles and teats because they are easier to keep clean.

○ The best food for any baby whose own mother's milk is not available is the breastmilk of another mother.

○ If non-human milk has to be used, it should be given from a clean cup rather than a bottle. Milk-powder solutions should be prepared using water that has been boiled and then cooled.

○ Cow's milk, infant formula, or milk-powder solutions can cause poor growth if too much water is added in order to make them go further.

○ Cow's milk and milk-powder solutions go bad if left to stand at room temperature for a few hours. Breastmilk can be stored for at least eight hours at room temperature without going bad.

○ In low-income communities, the cost of cow's milk or powdered milk plus bottles, teats, and the fuel for boiling water, can be as much as 25-50% of a family's income.

### 5

A variety of additional foods is necessary when a child is about six months old, but breastfeeding should continue well into the second year of a child's life and for longer if possible.

- Although children need additional foods after about the first six months of life, breastmilk is still an important source of energy and protein, and other nutrients such as vitamin A, and helps to protect against disease during the child's second year of life.

# Breastfeeding Supporting Information



## 1

Breastmilk alone is the best possible food and drink for a baby. No other food or drink is needed for about the first six months of life.

○ From the moment of birth up to the age of about six months, breastmilk is all the food and drink a baby needs. It is the best food a child will ever have. All substitutes, including cow's milk, infant formula, milk-powder solutions, and cereal gruels, are inferior.

○ Even in hot, dry climates, breastmilk contains sufficient water for a young baby's needs. Additional water or sugary drinks are not needed to quench the baby's thirst. They can also be harmful. If the baby is also given water, or drinks made with water, then the risk of getting diarrhoea and other illnesses increases.

○ Other foods and drinks are necessary when a baby reaches the age of about six months. If monthly weighing shows that a child under six months of age is not growing well, then the child may need more frequent breastfeeding. If the child is already being breastfed frequently, then lack of weight gain shows either that the child has an illness or that other foods, in addition to breastmilk, are now necessary.

○ Until the age of nine or ten months, the baby should be breastfed before other foods are given. Breastfeeding should continue well into the second year of life - and for longer if possible.

## 2

Babies should start to breastfeed as soon as possible after birth. Virtually every mother can breastfeed her baby.

○ Mothers and newborn babies should not be in different rooms. The baby should be allowed to suck at the breast as often as he or she wants.

○ If a mother gives birth in a maternity unit, then she has a right to expect that her newborn baby will be kept near her in the same room,

24 hours a day, and that no other food or drink will be given to her baby except breastmilk.

○ Starting to breastfeed immediately after birth stimulates the production of breastmilk. Breastfeeding should begin not later than an hour after the delivery of the baby.

○ The thick yellowish milk (called colostrum) that the mother produces in the first few days after birth is good for babies. It is nutritious and helps to protect them against common infections. The baby does not need any other food or drink while waiting for the mother's milk to 'come in'. In some countries, mothers are advised not to feed this colostrum to their babies. This advice is wrong.

○ Many mothers need help when they begin to breastfeed, especially if the baby is their first. An experienced and sympathetic adviser, such as a woman who has successfully breastfed, can help a mother avoid or solve many common problems.

○ The position of the baby on the breast is very important. A bad sucking position is the cause of problems such as:

- sore or cracked nipples
- not enough milk
- refusal to feed.

○ Signs that the baby is in a good position for breastfeeding are:

- the baby's whole body is turned towards the mother
- the baby takes long, deep sucks
- the baby is relaxed and happy
- the mother does not feel nipple pain.

○ Almost all mothers can produce enough milk if:

- the baby takes the breast into his or her mouth in a good position
- the baby sucks as often, and for as long, as he or she wants, including during the night.

○ Crying is not a sign that a baby needs artificial feeds. It normally means that the baby needs to be held and cuddled more. Some babies need to suck the breast simply for comfort. If the baby is hungry, more sucking will produce more breastmilk.

○ Mothers who are not confident that they have enough breastmilk should not give their babies other food or drink in the first few months of life. This means that the baby sucks at the breast less often. So less breastmilk is produced. To stop this happening, mothers need to be reassured that they can feed their young babies properly with *breastmilk alone*. They need the encouragement and practical support of their families, the doctor, father, neighbours, friends, health workers and women's organizations.

# Child Growth Prime Messages

**1** Children from birth to the age of three years should be weighed every month. If there is no weight gain for two months, something is wrong.

**2** Breastmilk alone is the best possible food for about the first six months of a child's life.

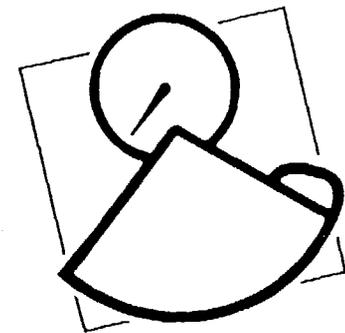
**3** By the age of about six months, the child needs other foods in addition to breastmilk.

**4** A child under three years of age needs food five or six times a day.

**5** A child under three years of age needs a small amount of extra fat or oil added to the family's ordinary food.

**6** All children need foods rich in vitamin A—breastmilk, green leafy vegetables, and orange-coloured fruits and vegetables.

**7** After an illness, a child needs one extra meal every day for at least a week.



○ A mother can continue to breastfeed her child for as long as she wishes, but it is best for her own and her children's health if she avoids becoming pregnant again until her youngest child has reached the age of two years. Most methods of avoiding pregnancy - including condoms, IUDs, and voluntary sterilization - do not affect breastfeeding. 'Minipills' and injectable contraceptives also have no effect on breastmilk providing that they contain no oestrogen. But conventional contraceptive pills can reduce the amount of breastmilk.

○ Babies get ill frequently as they learn to crawl, walk, and play. A child who is ill needs breastmilk. It provides a nutritious, easily digestible food when the child loses appetite for other foods.

○ Between the ages of one and two, a baby benefits from breastmilk as well as needing family foods. Breastfeeding is good for the child as part of a meal, or between meals, or whenever the child feels hungry. But at this time, all children need other foods. In the second year of life, breastfeeding should be an addition to, not a substitute for, normal meals.

○ Breastfeeding also comforts a child when he or she is frightened, hurt, angry, or tearful.

## 6

Breastfeeding gives a mother 98% protection against pregnancy for six months after giving birth - *if* her baby breastfeeds frequently, day and night, *if* the baby is not regularly given other food and drink, and *if* the mother's periods have not returned.

○ It is now known that the sucking of the baby on the mother's breast causes a delay in the return of the mother's fertility. For some women, breastfeeding delays the return of menstrual periods for up to 12 months - or even longer. For other mothers, menstrual periods return only three or four months after giving birth.

○ How often the baby sucks at the mother's breast is the most important fact in deciding how long it will be before the mother's periods return.

If a baby sucks very frequently at the breast (whenever the baby wants to, including at night) then the return of the mother's periods will be delayed for much longer. But if breastfeeding is restricted to a regular routine, then the mother's periods will return much more quickly. Or if a mother gives other food or drink to a baby who is less than six months old, then the baby may suck less often at the breast and the mother's periods are likely to return much sooner.

○ The return of menstrual periods lets the mother know that she can become pregnant again.

○ It is possible for a mother to become pregnant again before her monthly period returns. This becomes more likely when six months have

passed since the birth of the baby. A woman who wants to be protected against another pregnancy should choose another method of family planning if *any* of the following apply:

○ her baby has reached the age of six months

○ her monthly periods have returned

○ the baby is starting to take other food and drink in addition to breastmilk.

○ Whether or not a mother intends to breastfeed a newborn child, parents should be provided with advice on family planning at the maternity unit or hospital where their child has been born. If the child is born at home, trained birth attendants can also give advice on family planning.

○ If the child is already being breastfed frequently, then failure to gain weight shows that other foods in addition to breastmilk are now necessary.

○ For an infant who continues to grow well, additional food may not be necessary until seven or even eight months. After that, all children need other foods in addition to breastmilk.

○ The baby should be breastfed *before* being given other foods so that the mother will have more breastmilk for a longer period.

○ Boiled, peeled and mashed vegetables should be added to a young child's gruel or other weaning food at least once each day.

○ The greater the variety of foods the child eats, the better.

## 4

A child under three years of age needs food five or six times a day.

○ A child's stomach is smaller than an adult's, so a child cannot eat as much as an adult at one meal. But its energy needs, for its size, are greater. So the problem is how to get enough 'energy food' into the child. The answer is:

○ feed the child frequently - five or six times a day

○ enrich the child's gruel or porridge with mashed vegetables and a little oil or fat.

○ A child's food should not be left standing for hours. Germs can grow in it which may make the child ill. As it is usually not possible to cook fresh food for a child five or six times a day, dried foods or snacks should be given in between meals - fruits, bread, patties, biscuits, nuts, coconut, bananas or whatever clean food is easily available. Breastmilk is also an ideal 'snack' and is always clean and free from germs.

## 5

A child under three years of age needs a small amount of extra fat or oil added to the family's ordinary food.

○ The family's normal food needs to be enriched to meet the special energy needs of the child. This means adding mashed vegetables and small amounts of fats or oils - butter, ghee, vegetable oil, soya oil, coconut oil, corn oil, groundnut oil, or crushed nuts.

○ Breastmilk also enriches a child's diet, and breastfeeding should continue, if possible, until well into the second year of a child's life.

## 6

All children need foods rich in vitamin A - breastmilk, green leaf vegetables, and orange-coloured fruits and vegetables.

○ Over 200,000 children go blind each year because they do not have enough vitamin A in their bodies. Vitamin A may also protect children against other illnesses such as diarrhoea. It should therefore be a part of every child's daily diet.

○ Vitamin A comes from breastmilk, dark green leafy vegetables, and from orange or yellow fruits and vegetables such as carrots, papayas, a mangoes.

○ If a child has had diarrhoea or measles, vitamin A will be lost from the child's body. It can be replaced by breastfeeding more often, and by feeding the child more fruit and vegetables.

## 7

After an illness, a child needs one extra meal every day for at least a week.

○ One of the most important skills of a parent is the skill of stopping illnesses from holding back a child's growth. In times of illness, and especially if the illness is diarrhoea or measles, the appetite falls and less of the food that is eaten is absorbed into the body. If this happens several times a year, the child's growth will be held back.

○ So it is essential to encourage a child who is ill to eat and drink. This can be difficult if the child does not want to eat, so it is important to keep offering food the child likes, usually soft, sweet foods, a little at a time as often as possible. Breastfeeding is especially important.

○ When the illness is over, extra meals should be given so that the child catches up on the growth lost. A good rule is to give a child an extra meal every day for at least a week after the illness is over. The child is not fully recovered from an illness until he or she is at least the same weight as when the illness began.

○ If illness and poor appetite persist for more than a few days, the child should be taken to a health worker.

○ It is also important to protect a child's growth by preventing illness:

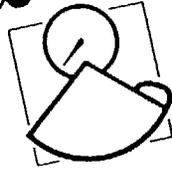
○ give a child breastmilk alone for about the first six months of life.

Then introduce other foods, and continue to breastfeed

○ make sure your child is fully immunized before the age of one year

○ always use latrines and keep hands, food, and kitchens clean.

# Child Growth Supporting Information



## 1

Children from birth to the age of three years should be weighed every month. If there is no weight gain for two months, something is wrong.

○ Regular monthly weight gain is the most important sign of a child's overall health and development. It is the child's own weight gain which is important, not how the child compares in weight to other children.

○ It is therefore important to weigh young children every month. If a child does not gain weight over a two-month period, then parents and health workers should act. The child is being held back either by illness, or poor food, or lack of attention. The following paragraphs cover the most likely causes of poor growth, and the most important actions parents can take to keep a child growing well.

○ Breastfeeding helps protect a baby from common illnesses and ensure its growth for the first few months of life. A full course of immunizations in the first year of life is also essential - it protects against diseases which cause undernutrition.

○ When additional foods are given, the risk of infection increases. From now on, it is specially important to check that the child is putting on weight regularly from one month to the next. If a child under the age of three is not gaining weight, and if the child has good food, these are the 10 most important questions to ask:

- is the child eating frequently enough? (a child should eat five or six times a day)
- do the child's meals have too little energy in them? (small amounts of oil or fats should be added)
- is the child frequently ill? (needs medical attention)
- has the child been refusing to eat when ill? (needs tempting to eat when ill and extra meals to catch up afterwards)

- is the child getting enough vitamin A? (needs dark green vegetables every day)
- is the child being bottle-fed? (bottle and water may not be clean, sugary drinks may be being used instead of milk)
- are food and water being kept clean? (if not, child will often be ill)
- are faeces being put into a latrine or buried? (if not, child will often be ill)
- does the child have worms? (needs deworming medicine from health centre)
- is the child alone too much? (needs more stimulation and attention)

Recording the child's weight with a dot on the child's 'growth chart' and joining up the dots after each monthly weighing gives a line which enables a mother to see her child's growth. An upward line means the child is doing well. A flat line is a cause for concern. A downward line is a sure sign that all is not well with the child. A child who is given only breastmilk will almost always grow well in the first few months of life. Seeing this good progress on a growth chart helps give the mother confidence.

## 2

Breastmilk alone is the best possible food for about the first six months of a child's life.

○ From the moment of birth up to the age of about six months, breastmilk is all the food and drink a baby needs to grow well. In these early months, when a baby is most at risk, breastmilk helps to protect against diarrhoea and other common infections.

○ Breastmilk is the best food a child will ever have. If possible, breastfeeding should continue well into the second year of life and for longer if possible.

## 3

By the age of about six months, the child needs other foods in addition to breastmilk.

○ At the age of about six months, most infants need other foods in addition to breastmilk. Before the age of six months, an infant who is not gaining enough weight may need more frequent breastfeeding.

# Diarrhoea Supporting Information



## 1

Diarrhoea can kill children by draining too much liquid from the body. So it is essential to give a child with diarrhoea plenty of liquids to drink.

- Diarrhoea is dangerous. Roughly one in every two hundred children who get diarrhoea will die from it.
- Most often, diarrhoea kills by dehydration. This means that too much liquid has been drained out of the child's body. So as soon as diarrhoea starts, it is essential to give the child extra drinks to replace the liquid being lost.
- Suitable drinks to prevent a child from losing too much liquid during diarrhoea are:
  - breastmilk
  - gruels (mixtures of cooked cereals and water)
  - soups
  - rice water
  - fresh fruit juices
  - weak teas
  - green coconut water
  - water from the cleanest possible source (if possible, brought to the boil and then cooled)
  - oral rehydration salts solution.
- In almost all countries, special drinks for children with diarrhoea are available in pharmacies, shops, or health centres. Usually, these come in the form of packets of oral rehydration salts (ORS) to be mixed with the recommended amount of clean water (*see box*). Although ORS is especially made for the treatment of dehydration, it can also be used to prevent dehydration.

Do not add ORS to liquids such as milk, soup, fruit juice or soft drinks.

- If ORS is not available, dehydration can be treated by giving the child drink made from four level teaspoons of sugar and half a level teaspoon salt dissolved in one litre of clean water.

This is less salt and less sugar than recommended in the first edition of *Facts for Life*. In practice, too much salt and sugar have sometimes been used because spoon sizes differ and because parents sometimes add more salt and sugar in the belief that this will make the treatment more effective. But too much sugar can make the diarrhoea worse and too much salt can be harmful to the child. Therefore a more dilute formula is now recommended. If the mixture is made a little too dilute, no harm can be done, and there is very little loss of effectiveness.

- To replace the liquid being lost from the child's body, one of these drinks should be given to the child every time a watery stool is passed:
  - between a quarter and a half of a large cup for a child under the age of two
  - between a half and a whole large cup for older children.
- The drink should be given directly from a cup or by a teaspoon - not from a feeding bottle. If the child vomits, wait for 10 minutes and then begin again, giving the drink to the child slowly, small sips at a time.
- Extra liquids should be given until the diarrhoea has stopped. This usually takes between three and five days.

### ORS - a special drink

A special drink for diarrhoea can be made by using a packet of oral rehydration salts (ORS). This drink is used by doctors and health workers to treat dehydrated children. But it can also be used in the home to prevent dehydration.

- Dissolve the contents of the packet in the amount of water indicated on the packet. If you use too little water, the drink could make the diarrhoea worse. If you use too much water, the drink will be less effective.
- Stir well, and give to the child to drink in a cup or feed with a spoon

# Diarrhoea Prime Messages

**1** Diarrhoea can kill children by draining too much liquid from the body. So it is essential to give a child with diarrhoea plenty of liquids to drink.

**2** A child with diarrhoea needs food.

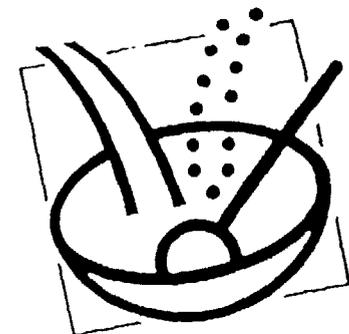
**3** When a breastfed child has diarrhoea, it is important to continue breastfeeding.

**4** A child who is recovering from diarrhoea needs an extra meal every day for at least two weeks.

**5** Trained help is needed if diarrhoea is more serious than usual, if it persists for more than two weeks, or if there is blood in the stool.

**6** Medicines other than ORS should not be used for diarrhoea, except on medical advice.

**7** Diarrhoea can be prevented by breastfeeding, by immunizing all children against measles, by using latrines, by keeping food and water clean, and by washing hands before touching food.



# 7

Diarrhoea can be prevented by breastfeeding, by immunizing all children against measles, by using latrines, by keeping food and water clean, and by washing hands before touching food.

- Diarrhoea is caused by germs from faeces entering the mouth. These germs can be spread in water, in food, on hands, on eating and drinking utensils, by flies, and by dirt under fingernails. To prevent diarrhoea, the germs must be stopped from entering the child's mouth.
- Poverty and lack of basic services such as clean drinking water mean that many families find it difficult to prevent diarrhoea. But the most effective ways are to:
  - give breastmilk alone for about the first six months of a baby's life (breastmilk helps to protect babies against diarrhoea and other illnesses)
  - at the age of about six months, introduce clean, nutritious, well-mashed, semi-solid foods and continue to breastfeed
  - if a milk-powder solution or cow's milk has to be used, give it to the child from a cup rather than a bottle
  - use the cleanest water available for drinking (water from wells, springs or rivers should be brought to the boil and cooled before use)
  - always use latrines to dispose of faeces, and be sure to put children's faeces in a latrine immediately (or bury them). (Children's faeces are even more dangerous to health than those of adults)
  - wash hands with soap and water immediately after using the latrine and before preparing or eating food
  - cover food and drinking water to protect it from germs
  - if possible, food should be thoroughly cooked, and prepared just before eating. It should not be left standing, or it will collect germs
  - bury or burn all refuse to stop flies spreading disease.
- Measles frequently results in serious diarrhoea. Immunization against measles therefore also protects a child against this cause of diarrhoea. There is no vaccine to prevent ordinary diarrhoea.

## 2

A child with diarrhoea needs food.

○ It is often said that a child with diarrhoea should not be given any food or drink while the diarrhoea lasts. This advice is wrong. Food can help to stop the diarrhoea. Also, diarrhoea can lead to serious malnutrition unless parents make a special effort to keep feeding the child during and after the illness.

○ A child with diarrhoea usually has less appetite, so feeding may be difficult at first. But the child should be tempted to eat - as frequently as possible - by offering small amounts of his or her favourite foods.

○ After the age of about six months, all children need extra food in addition to breastmilk. They should be given soft, well-mashed mixes of cereal and beans, or cereal and well-cooked meat or fish. Add one or two teaspoonfuls of oil to cereal and vegetable mixes if possible. Also good for the child are yoghurt and fruits. Foods should be freshly prepared and given to the child five or six times a day. This diet should be continued if the child has diarrhoea.

## 3

When a breastfed child has diarrhoea, it is important to continue breastfeeding.

○ Mothers are sometimes advised to give less breastmilk if a child has diarrhoea. This is wrong advice. Breastfeeding should continue - and if possible the child should be fed more often.

○ If the child is being fed on milk-powder solutions or cow's milk, then feeding should continue as usual.

## 4

A child who is recovering from diarrhoea needs an extra meal every day for at least two weeks.

○ Extra feeding after the diarrhoea stops is vital for a full recovery. At this time, the child has more appetite and can eat an extra meal a day for at least a week. This will help the child to catch up on the food 'lost' while the child was ill and the appetite was low. A child is not fully recovered from diarrhoea until he or she is at least the same weight as when the illness began.

○ Breastfeeding more frequently than usual also helps to speed up recovery.

## 5

Trained help is needed if diarrhoea is more serious than usual, if it persists for more than two weeks, or if there is blood in the stool.

○ Parents should seek help from a health worker without delay if the child:

○ has a fever

○ is extremely thirsty

○ will not eat or drink normally

○ vomits frequently

○ passes several watery stools in one or two hours

○ passes blood in the stool (a sign of dysentery)

○ if the diarrhoea persists for more than two weeks.

○ If a child has any of these signs, qualified medical help is needed quickly. The doctor or health worker will give the child a drink made with special oral rehydration salts (*see box*). In the meantime, keep trying to make the child drink liquids.

## 6

Medicines other than ORS should not be used for diarrhoea, except on medical advice.

○ Most medicines for diarrhoea are either useless or harmful. The diarrhoea will usually cure itself in a few days. The real danger is usually not the diarrhoea but malnutrition and the loss of liquids from the child's body.

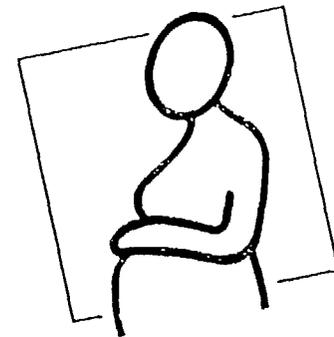
○ Do not give a child tablets or other medicines for diarrhoea unless these have been prescribed by a trained health worker.

○ Antibiotics should be given - after seeking medical advice - if a child has diarrhoea with blood in the stool. Other drugs should not be used.

# Safe Motherhood Prime Messages

- 1** The risks of childbirth can be drastically reduced by going to the nearest health worker for regular check-ups during pregnancy.
- 2** A trained person should assist at every birth.
- 3** To reduce the dangers of pregnancy and childbirth, all families should know the warning signs.
- 4** All women need more food during pregnancy. All pregnant women need more rest.
- 5** Spacing pregnancies at least two years apart, and avoiding pregnancies below the age of 18 or above the age of 35, drastically reduces the dangers of child-bearing.

- 6** Girls who are healthy and well fed during their own childhood and teenage years have fewer problems in pregnancy and childbirth.
- 7** If a woman who is pregnant smokes, or takes alcohol or drugs, her child may be damaged in the womb.



# Hygiene Prime Messages

- 1** Illnesses can be prevented by washing hands with soap and water after contact with faeces and before handling food.
- 2** Illnesses can be prevented by using latrines.
- 3** Illnesses can be prevented by using clean water.
- 4** Illnesses can be prevented by boiling drinking water if it is not from a safe piped supply.
- 5** Raw food is often dangerous. It should be washed or cooked. Cooked food should be eaten straight away - not left to stand. Warmed-up food should be thoroughly reheated.

- 6** Illnesses can be prevented by keeping food clean.
- 7** Illnesses can be prevented by burning or burying household refuse.



Warning signs developing during pregnancy:

- failure to gain weight (at least 6 kilos should be gained in pregnancy)
- paleness of inside eyelids (should be red or pink)
- unusual swelling of legs, arms, or face.

Four signs which mean get help immediately:

- bleeding from the vagina during pregnancy
- severe headaches (sign of high blood pressure)
- severe vomiting
- high fever.

○ Dangerous problems can arise during the process of giving birth. In at least half of all cases, there are no warning signs in pregnancy. Therefore all couples should know - *in advance* - where the nearest hospital or maternity unit is to be found and how to get there. In case problems arise during labour, the father-to-be should make advance arrangements for moving the mother-to-be to the nearest hospital or maternity unit. In particular, transport should be arranged in case it is needed.

## 4

All women need more food during pregnancy. All pregnant women need more rest.

- The husband and family of a pregnant woman should ensure that she has a variety of extra foods every day - starting as soon as pregnancy is confirmed. She should also have more rest than usual during the daytime, especially in the three months before the birth.
- A pregnant woman needs a variety of the best foods available to the family: milk, fruit, vegetables, meat, fish, eggs, pulses, and grains. There is no reason to avoid any of these foods during pregnancy.
- If possible, a woman should be weighed as soon as she knows that she is pregnant. It is important to gain weight every month during pregnancy, and to try to gain a total of 8-10 kilos before the baby is born.

## 5

Spacing pregnancies at least two years apart, and avoiding pregnancies below the age of 18 or above the age of 35, drastically reduces the dangers of child-bearing.

○ One of the most effective ways of reducing the dangers of pregnancy and childbirth - for both mother and child - is to plan the timing of birth. The risks of child-bearing are greatest when the mother-to-be is under or over 35, or has had four or more previous pregnancies, or when there is a gap of less than two years since the last birth.

○ Avoiding births by having an unsafe abortion can be very dangerous. Illegal abortions carried out by untrained persons kill between 100,000 and 200,000 women every year.

## 6

Girls who are healthy and well fed during their own childhood at teenage years have fewer problems in pregnancy and childbirth.

○ Safe and successful childbearing depends most of all on the health and readiness of the mother-to-be. So special attention should be paid to the health, feeding, and education of adolescent girls. The first pregnancy should wait until at least the age of 18.

## 7

If a woman who is pregnant smokes, or takes alcohol or drugs, her child may be damaged in the womb.

○ A pregnant woman can damage her unborn child by smoking tobacco, drinking alcohol, and using narcotic drugs. It is particularly important to take medicines during pregnancy unless they are absolutely necessary and prescribed by a trained health worker.

# Safe Motherhood Supporting Information



## 1

The risks of childbirth can be drastically reduced by going to the nearest health worker for regular check-ups during pregnancy.

- Many of the dangers of pregnancy and childbirth can be avoided if the mother-to-be goes to a health centre as soon as she believes she is pregnant. A health worker will help ensure a safe birth and a healthy baby by:
  - checking the progress of the pregnancy so that if problems are likely the woman can be moved to a hospital for the birth
  - checking for high blood pressure, which is a danger to both mother and child
  - giving tablets to prevent anaemia ('thin blood')
  - giving the two injections which will protect the mother and her newborn baby against tetanus
  - checking that the baby is growing properly
  - giving anti-malarial tablets where necessary
  - preparing the mother for the experience of childbirth and giving advice on breastfeeding and care of the newborn
  - advising on where to go or how to get help if problems arise during childbirth
  - advising on ways of delaying the next pregnancy.

## 2

A trained person should assist at every birth.

- A trained birth attendant will know:
  - when labour has gone on for too long (more than 12 hours) and a move to hospital is necessary

- how to keep the birth clean and reduce the risk of infection
- how to cut the cord cleanly and safely
- what to do if the baby is being born in the wrong position
- what to do if too much blood is being lost
- what to do if the baby does not begin breathing straight away
- how to help the mother to start breastfeeding immediately after the birth
- how to dry and keep the baby warm after delivery
- how to help the mother prevent or postpone another birth.
- If serious problems arise during childbirth, a trained birth attendant will know when medical help is needed and how to get it.

## 3

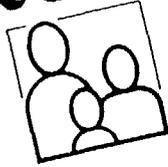
To reduce the dangers of pregnancy and childbirth, all families should know the warning signs.

- With any pregnancy, it is important to ask the advice of a health worker about where the baby should be born and who should attend the birth. If a family knows that a birth is likely to be difficult or risky, it may be possible to have the baby in a hospital or maternity clinic. Or it may be possible to move, temporarily, closer to a clinic or hospital so that the mother is within reach of medical help.
- So it is important for pregnant women, their husbands, and other family members to know the signs which indicate that extra care, and regular visits to a health worker, are needed.

Warning signs before pregnancy begins:

- an interval of less than two years since the last birth
- mother-to-be is less than 18 or more than 35 years old
- mother-to-be has had four or more previous children
- mother-to-be has had a previous baby weighing less than 2 kilograms at birth
- mother-to-be has had a previous difficult or Caesarian birth
- mother-to-be has had a previous premature birth
- mother-to-be has had a previous miscarriage, abortion or stillbirth
- mother-to-be weighs less than 38 kilograms before pregnancy
- mother-to-be is less than 145 cm in height.

# Timing Births Supporting Information



## 1

Becoming pregnant before the age of 18, or after the age of 35, increases the health risks for both mother and child.

○ Every year over half a million women die from problems linked to pregnancy and childbirth, leaving behind over 1 million motherless children. Most of these deaths could be prevented by acting on today's knowledge about the importance of planning pregnancies.

All girls should be allowed the time to become women before becoming mothers. In societies where many girls marry at an early age, couples should delay the first pregnancy until at least the age of 18.

○ For health reasons alone, no girl should become pregnant before the age of 18. A woman is not physically ready to begin bearing children until she is about 18 years of age. Babies born to women younger than 18 are more likely to be born too early and to weigh too little at birth. The birth itself is likely to be more difficult. Babies born to mothers who are too young are also much more likely to die in the first year of life. The risks to the mother's own health are also greater.

○ After the age of 35, the health risks of pregnancy and childbirth begin to increase again. If a woman is over the age of 35, and has had four or more previous pregnancies, then another pregnancy is a serious risk to her own health and that of her unborn child.

## 2

The risk of death for young children is increased by about 50% if the space between births is less than two years.

○ For the health of both mothers and children, parents should wait until their youngest child is at least two years old before having another baby.

○ Children born too close together do not usually develop as well, physically or mentally, as children born at least two years apart.

○ One of the greatest threats to the health and growth of a child under the age of two is the birth of a new baby. Breastfeeding stops too suddenly, and the mother has less time to prepare the special foods a young child needs. Also, she may not be able to give the older child the care and attention he or she needs, especially during illness. As a result the child often fails to grow and develop properly.

○ A mother's body needs two years to recover fully from pregnancy and childbirth. The risk to the mother's health is therefore greater if the new birth follows too closely upon the last. The mother needs to give herself time to get her strength and energy back before she becomes pregnant again.

○ If a woman becomes pregnant before she is fully recovered from bearing a previous child, there is a higher chance that her new baby will be born too early and too light in weight. Low-birth-weight babies are less likely to grow well, more likely to fall ill, and four times more likely to die in the first year of life than babies of normal weight.

## 3

Having more than four children increases the health risks of pregnancy and childbirth.

○ After a woman has had four children, further pregnancies bring greater risks to the life and health of both mother and child.

Especially if the previous births have not been spaced more than two years apart, a woman's body can easily become exhausted by repeated pregnancy, childbirth, breastfeeding, and looking after small children. Further pregnancies usually mean that her own health begins to suffer.

○ After four pregnancies, there is an increased risk of serious health problems such as anaemia ('thin blood') and haemorrhage (heavy loss of blood). The risk of giving birth to babies with disabilities, or with low birth weight, also increases after four pregnancies and after the mother reaches the age of 35.

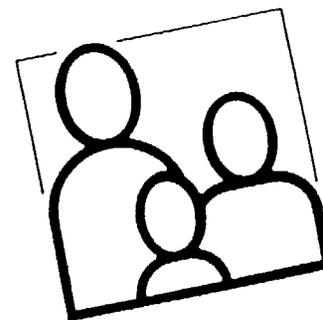
## 4

There are many safe and acceptable ways of avoiding pregnancy. Family planning services can give couples the knowledge and the means to plan when to begin having children, how far apart to have them, and when to stop.

○ Most health clinics can offer different methods of family planning so that all couples can choose a method which is acceptable, safe,

# Timing Births Prime Messages

- 1** Becoming pregnant before the age of 18, or after the age of 35, increases the health risks for both mother and child.
- 2** The risk of death for young children is increased by up to about 50% if the space between births is less than two years.
- 3** Having more than four children increases the health risks of pregnancy and childbirth.
- 4** There are many safe and acceptable ways of avoiding pregnancy. Family planning services can give couples the knowledge and the means to plan when to begin having children, how far apart to have them, and when to stop.



# ANNEX XII

## ORGANIZATIONAL CHART

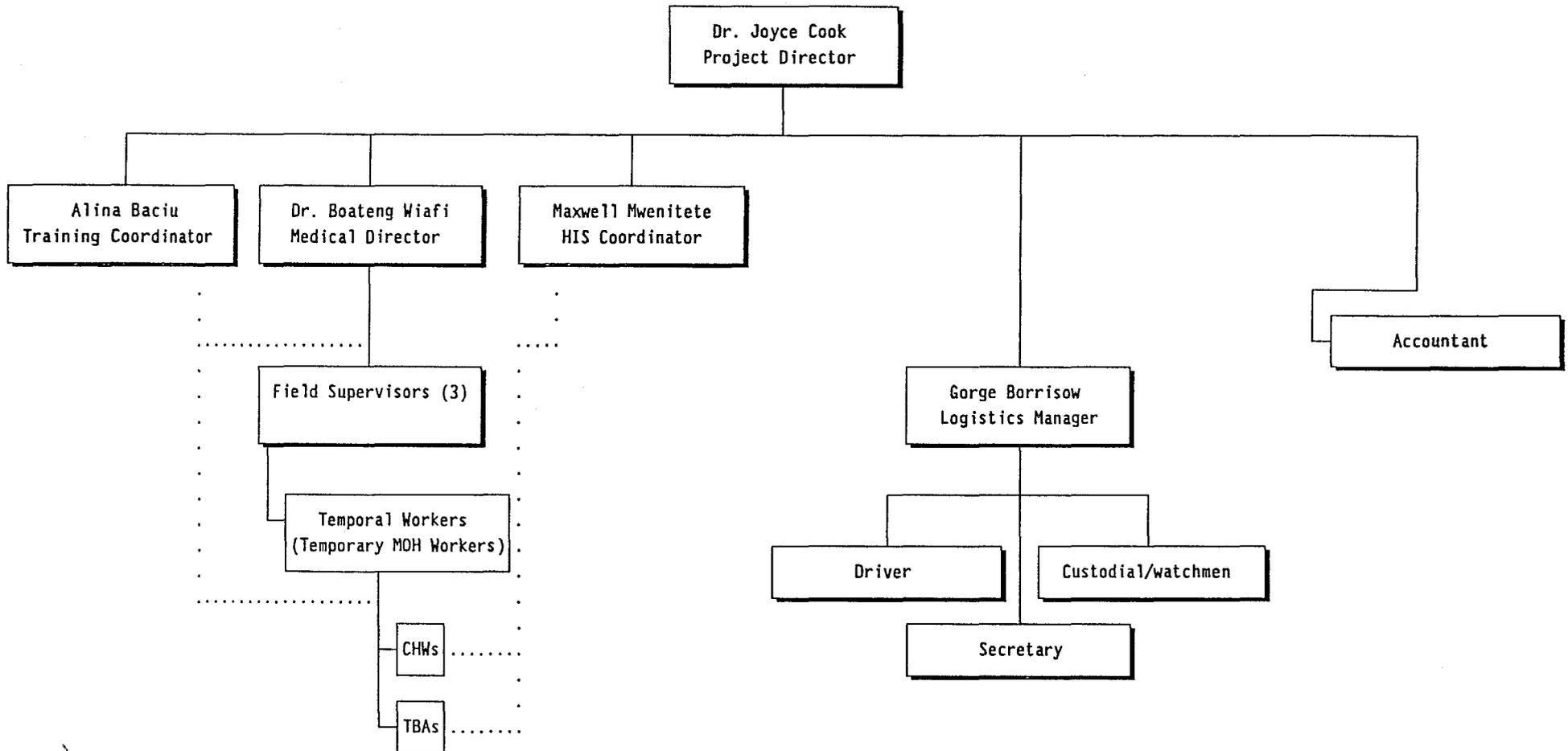
convenient, and effective. Couples should ask advice about the most suitable means of family planning from the nearest trained health worker or family planning clinic.

Some methods of family planning, such as condoms and contraceptive pills, may also be available from pharmacies and other shops.

○ Family planning is the responsibility of men as well as women. All men should be aware of the health benefits of family planning - and of the different methods now available.

# ZAMBIA CHILD SURVIVAL XI

## Organizational Chart



266

# ANNEX IX

## JOB DESCRIPTIONS

**JOB TITLE: DIRECTOR, CHILD SURVIVAL PROJECT**

**PRINCIPAL DUTIES AND RESPONSIBILITIES:**

1. Staff supervision, including hiring, firing, training, and development
  - a. Develop job descriptions for all staff
  - b. Provide orientation and continuing education as necessary
  - c. Staff evaluations at least once a year
2. Budget accountability
  - a. Pay for project expenditures as budgeted
  - b. Maintain a record of expenditures,
  - c. Financial statement produced on a monthly basis
3. Administer programs
  - a. Overall program planning and implementation
  - b. Program reporting and evaluation
4. Liaison activities
  - a. Establish and chair Child Survival Advisory Committee
  - b. Build supportive network with MOH, PVOs, and other pertinent officials

**KNOWLEDGE, SKILLS, AND EXPERIENCE REQUIRED:**

Graduate degree in health or related fields, business administration or related fields. At least three years experience working in a developing country.

## ***JOB DESCRIPTIONS***

**JOB TITLE:** LOGISTICS MANAGER

**BRIEF SUMMARY:**

The logistics Manager will manage all movements of people and supplies, and make all purchases for the ADRA Child Survival project.

**PRINCIPAL DUTIES AND RESPONSIBILITIES:**

1. Keep all vehicles in good working order.
2. Handle all purchasing for the ADRA Child Survival Project.
3. Help all the movement of people.
4. Make deliveries as required.
5. Assist in organizing of seminars and conferences.
6. Keep bicycles in good working order.
7. Estimate requirements for supplies and equipment in advance and make arrangements for purchases.
8. Assist in the procurement and distribution of payroll.
9. Keep ADRA Country Director informed of all accidents and major repairs.
10. Maintain established department policies, procedures, objectives, quality assurance, and safety at all times.
11. Maintain appropriate records and reports.
12. Ensure security of all property belonging to ADRA.
13. Detect fraud and abuse, then report to ADRA Child Survival Manager.
14. Perform other duties as directed.

**WORKING CONDITIONS:**

Field living and driving will be tiring and hot at times.

**KNOWLEDGE, SKILLS, EXPERIENCE REQUIRED:**

Must have a valid drivers license. Must have a minimum of a Secondary School education and/or prior management experience.

**JOB TITLE:** TRAINING COORDINATOR

**BRIEF SUMMARY:**

Coordinate all training sessions for/by project staff, CHWs, TBAs, MOH personnel.

**PRINCIPAL DUTIES AND RESPONSIBILITIES:**

1. Technical Support
  - a. Plan/assist with planning baseline surveys
  - b. Assist with analysis, interpretation, and reporting of data
  - c. Assist project director with project design and writing of the Detailed Implementation Plan
2. Liaison functions
  - a. Assist Project Director in establishing a support and collaboration network with the MOH, government agencies and other NGOs working in the project area
  - b. Monthly meetings with CHWs and Health Center staff, at which monthly reports will be collected, and the data tabulated as part of the HIS
3. Training
  - a. Schedule, organize training sessions for CHWs and TBAs, and support MOH personnel/project staff with training
  - b. Train interviewers to conduct surveys

**KNOWLEDGE, SKILLS, EXPERIENCE REQUIRED:**

Graduate degree (or candidate, using this position in fulfillment of field practicum/internship requirement) in Public Health.

One year of international experience minimum.

**JOB TITLE:** FIELD SUPERVISOR (MCH/FP COORDINATOR)

**BRIEF SUMMARY:**

Supervision of and support for the trained Traditional Birth Attendants (TBAs) and Community Based Distributors (CBDs) in the project area.

**PRINCIPAL DUTIES AND RESPONSIBILITIES:**

1. To collect, maintain, and use demographic data and assess the health status of mothers and children community.
2. If needed, to facilitate the referral of patients.
3. To plan, organize, implement, supervise, and evaluate preventive and health promotive programs in the project area.
4. To participate in the recruitment, training, and supervision of TBAs and CHWs (as pertaining to their work on MCH/FP matters).
5. Meeting with and training church leaders, CBDs, community and religious leaders on Family Planning.
6. To function as an effective and efficient team member of the *Child Alive* project team.
7. To maintain high professional competence through participation in seminars, workshops, refresher courses, clinical meetings, as appropriate.
8. To collaborate and cooperate in activities with other agencies/projects involved in Family planning, especially the CBDs of the ADRA/Mwami Family Health Services project.
9. To conduct regular visits to villages to ensure the optimal functioning of the rural health team (CHWs and TBAs).
10. To prepare the MCH component of monthly, quarterly, and annual reports.

**KNOWLEDGE, SKILLS, AND EXPERIENCE REQUIRED:**

Must have completed professional health training (nursing, medical assistant, etc.).  
Should have clinical and professional experience in the area of maternal and/or child health, and be familiar with the MOH and district health officials he/she will work in collaboration with.

**KNOWLEDGE, SKILLS, AND EXPERIENCE REQUIRED:**

Must be a registered nurse with maternal/child health experience

**JOB TITLE:** FIELD SUPERVISOR (NUTRITION, CDD, AND EPI COORDINATOR)

**BRIEF SUMMARY:**

Provide supervision and support for the project's nutrition, CDD and EPI training and interventions.

**PRINCIPAL DUTIES AND RESPONSIBILITIES:**

1. To collect, maintain, and use demographic data and assess the health status of the community.
2. If needed, to facilitate the referral of patients.
3. To plan, organize, implement, supervise, and evaluate preventive and health promotive programs in the project area.
4. To participate in the training and supervision of CHWs and TBAs (as pertaining to their work on CDD, EPI, and nutritional matters).
5. To function as an effective and efficient team member of the *Child Alive* project team.
6. To maintain high professional competence through participation in seminars, workshops, refresher courses, clinical meetings, as appropriate.
7. To collaborate and cooperate in activities with workers engaged in community development, agricultural extension officers, teachers, local leaders, and others involved with the project on any level.
8. To conduct regular visits to villages to ensure the optimal functioning of the rural health team (CHWs and TBAs).

**KNOWLEDGE, SKILLS, AND EXPERIENCE REQUIRED:**

Must have completed professional health training (nursing, medical assistant, etc.).  
Should have extensive clinical and professional experience, and be familiar with the MOH and district health officials he/she will work in collaboration with.

**JOB TITLE:** FIELD SUPERVISOR (HIV/AIDS COORDINATOR) (Part-time position)

**BRIEF SUMMARY:**

Provide supervision and support for the project's HIV/AIDS-related training and interventions.

**PRINCIPAL DUTIES AND RESPONSIBILITIES:**

1. To collect, maintain, and use demographic data and assess the rates of HIV/AIDS in the project area, and acquire a good grasp of the HIV/AIDS-related knowledge, attitudes and practices in the same area.
2. To plan, organize, implement, supervise, and evaluate preventive and health promotive HIV/AIDS programs in the project area.
3. To participate in the training and supervision of CHWs and TBAs (as pertaining to their work on HIV/AIDS and STDs).
4. To function as an effective and efficient team member of the *Child Alive* project team.
5. To maintain high professional competence through participation in seminars, workshops, refresher courses, clinical meetings, as appropriate.
6. To collaborate and cooperate in activities with workers engaged in community development, agricultural extension officers, teachers, local leaders, and others involved with the project on any level.

**KNOWLEDGE, SKILLS, AND EXPERIENCE REQUIRED:**

Must have completed professional health training (nursing, medical assistant, etc.).  
Should have extensive clinical and professional experience, preferably in the area of HIV/AIDS/STDs, and be familiar with the MOH and district health officials he/she will work in partnership with.

**JOB TITLE:** DRIVER

**BRIEF SUMMARY:**

Drive and care for ADRA vehicles and passengers

**PRINCIPAL DUTIES AND RESPONSIBILITIES:**

1. Obtain specific authorization from Manager for each trip.
2. Insure that vehicle log and other required forms are completed for each trip.
3. Value, and drive in such a way as to maintain comfort and well-being.
4. Drive in a manner and at a speed that is reasonable and prudent under existing conditions.
5. Before moving vehicle, check all fluid levels, tires and safety equipment for condition. Make necessary conditions before driving.
6. Be attentive to any mechanical irregularities and stop vehicle if any threat to vehicle and/or occupants. Report mechanical difficulties to Mechanic. Do not drive if vehicle is unsafe, unlicensed or insured.
7. In case of accident, do not admit any fault. Refer the matter to the ADRA country and complete the Motor Vehicle Accident Report Form.
8. Report any vehicle damages immediately to ADRA Country Director.
9. Transport only ADRA employees and property of ADRA unless specific permission is granted by the ADRA Country Director.
10. Help load and unload supplies and equipment from vehicle.
11. Keep vehicle clean whenever the vehicle is no in use.
12. Maintain established department policies, procedures, objectives, quality assurance, and safety at all times.
13. Perform other duties as requested.

**WORKING CONDITIONS:**

Generally good working environment

**KNOWLEDGE, SKILLS, EXPERIENCE REQUIRED:**

Posses a valid drivers license. familiar with automotive mechanics, General attitude of carefulness, safety, helpfulness, and honesty at all times. Must have previous experience and a good driving record.

# ANNEX X

## RESUMES

275

**Joyce A. Cook**

**Education:**

- 1988 Ed.D., Health Education  
The University of Tennessee, Knoxville, TN
- 1983 Masters of Health Education  
University of Florida, Gainesville, FL
- 1970 Bachelor of Arts, Religion  
Southern College of Seventh-day Adventists, Collegedale, TN

**Experience:**

- Dec. 1995- Present Project Director, Child Survival  
Adventist Development and Relief Agency, Zambia
- July 1992 - Nov. 1995 Project Manager, Child Survival  
Adventist Development and Relief Agency, Malawi
- 1988-1992 Assistant Professor, Health Education  
University of Nebraska at Omaha
- 1985-1988 Graduate Teaching Associate, Health Education  
The University of Tennessee, Knoxville, TN
- 1984-1985 Elementary School Teacher  
Japan Overseas School, Yokohama, Japan
- 1983-1984 Elementary School Teacher  
Korean Union Foreign School, Seoul, Korea

**RUTH (KAMWENDO) WIAFE, RN, RM**

**Education:**

1977-1982           RN, Registered Midwifery Certificate  
Maluti Adventist Hospital, Mapoteng, Lesotho

**Experience:**

1985 -1986           Mwami Adventist Hospital, Chipata, Zambia

1985                 Yuka Adventist Hospital, Kalabo, Zambia

1982 - 1984           Malamulo Hospital, Makwasa, Malawi

1982                 Maluti Adventist Hospital, Mapoteng, Lesotho

## ALINA B. BACIU

### Education:

- 1996 M.P.H., International Health (candidate)  
Loma Linda University School of Public Health, Loma Linda, California
- 1993 B.A., English  
Pacific Union College, Angwin, California

### Experience:

- 1995-1996 Secretary  
Epidemiology Department, Loma Linda University School of Public Health
- 1993-1994 English Teacher  
International Teacher Service, Moscow (Russia) English Language Schools
- 1991-1993 Desk Clerk  
Women's Residence Hall, Pacific Union College, California
- 1991-1992 Reader/Secretary  
Pacific Union College English Department, California
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Library Learning Center, Pacific Union College, California

## MAXWELL MWENITETE

### Education:

- 1995 Completed Workshop on the Elimination of Leprosy  
Ministry of Health, Zambia
- 1985 TB/Leprosy Control Officer  
Mvome Hospital, Mvome; Kabwe Leprosarium, Zambia
- 1983 Certificate in Ophthalmological Assisting  
Chainamo School of Sciences, Lusaka, Zambia
- 1963 Medical Assistant Certificate  
Malamulo Adventist Hospital Medical Assistant Training School
- 1967 Enrolled Nurse Certificate  
Mwami Adventist Hospital School of Nursing

### Experience:

- 1982-present Clinical Officer/TB/Leprosy Control Officer  
Mwami Adventist Hospital
- 1976-1982 Medical Assistant/TB/Leprosy Control Officer  
Fiwila Mission, Zambia
- 1967-1976 Medical Assistant  
Kabwe Hospital, Zambia
- 1967 Medical Assistant  
Yuka Adventist Hospital, Western Province, Zambia

## **JEROME MUSANGO KAYUMBA**

### **Education:**

- 1994 Certificate in the Control of STDs  
Chainamo Hospital, Lusaka, Zambia
- 1992 Certificate of Specialized Training in STD/AIDS  
Lusaka University Teaching Hospital  
Zambia Ministry of Health, in conjunction with WHO, USAID, UNICEF
- 1972 Medical Assistant Certificate  
Tanga Medical Training School, Tanzania
- 1970 Medical Assistant Certificate  
Malamulo Adventist Hospital, School for Medical Education, Malawi

### **Experience:**

- 1970-present Medical Assistant/Registered Clinical Officer  
Mwami Adventist Hospital

# ANNEX XI

## KEY HEALTH MESSAGES FOR EACH INTERVENTION

# AIDS Prime Messages

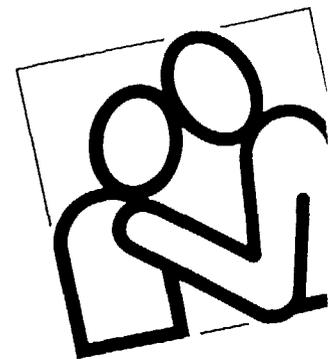
**1** AIDS is an incurable disease. It is caused by a virus which can be passed on by sexual intercourse, by infected blood, and by infected mothers to their unborn children.

**2** People who are sure that both they and their partner are uninfected and have no other sex partners are not at risk from AIDS. People who know or suspect that this might not be the case should practise safer sex. This means either sex without intercourse (penetration), or intercourse only when protected by a condom.

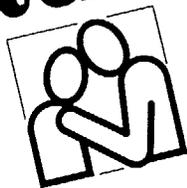
**3** Any injection with an unsterilized needle or syringe is dangerous.

**4** Women infected with HIV should think carefully about having a baby - and seek advice. There is a one-in-three chance that their babies will also be born infected with HIV.

**5** All parents should tell their children how AIDS is spread.



# Porting Information



AIDS is an incurable disease. It is caused by a virus which can be passed on by sexual intercourse, by infected blood, and by infected mothers to their unborn children.

AIDS is caused by a virus known as the human immunodeficiency virus (HIV). HIV damages the body's defence system. People who have AIDS die because their body can no longer fight off other serious diseases.

People infected with HIV usually go for many years without any signs of disease. They may look and feel perfectly normal and healthy for all of that time. But anybody infected with HIV can infect others.

AIDS is the late stage of HIV infection. It takes an average of 7 to 10 years to develop - from the time when a person is first infected with HIV. AIDS is not curable, although some medicines have been developed to help people with AIDS healthier for longer.

Anyone who suspects that he or she may be infected with HIV should contact a health worker or an AIDS testing centre. It is vital for those who have the virus to learn how to avoid passing it to others, and to receive advice about how to take care of their own health.

HIV can only be passed from one person to another in a limited number of ways:

by sexual intercourse, during which the semen or vaginal fluid of an infected person passes into the body of another person. HIV can be passed in this way from man to man, man to woman, and woman to man. Worldwide, nine out of ten infections in adults have been passed on through sexual intercourse

by the use of unsterilized needles or syringes for injecting drugs

by blood transfusions, if the blood used has not been tested for HIV

by an infected woman to her unborn child.

are a common cause of death in babies, not breastfeeding is a much greater risk. Without safe water, sterile bottles and teats, and enough milk-powder, bottle-fed babies are much more likely to become ill and malnourished, and to die, than babies who are breastfed. In such conditions, it is safer for the child to be breastfed even if the mother is infected with HIV.

○ It is not possible to get HIV from being near to or touching those who are infected with the virus. Hugging, shaking hands, coughing and sneezing will not spread the disease. HIV cannot be transmitted by toilet seats, telephones, plates, glasses, spoons, towels, bed linen, swimming pools, or public baths.

○ A person infected with HIV is not a public health danger.

## 2

**People who are sure that both they and their partner are uninfected and have no other sex partners are not at risk from AIDS. People who know or suspect that this might not be the case should practise safer sex. This means either sex without intercourse (penetration), or intercourse only when protected by a condom.**

○ Mutual fidelity between two uninfected partners protects both people from HIV.

○ The more sex partners you have, the greater the risk that one of them will be infected and can infect you. The more partners your partner has, the greater the risk that he or she will be infected and can infect you.

○ People who have genital sores, ulcers, or inflammation, or a discharge from the vagina or penis, are at greater risk of becoming infected with HIV and of passing it to others. Prompt treatment for all genital infections is therefore very important.

○ Unless you and your partner have sex only with each other, and are sure you are both uninfected, you should reduce your risk of HIV by practising safer sex. Safer sex means kissing, caressing and other kinds of non-penetrative sex (where the penis does not enter the mouth, vagina or anus), or using a condom (a sheath or rubber) every time you have intercourse.

○ Even if a condom is used, anal intercourse (in which the penis enters the rectum or back passage) is much more risky than vaginal or oral penetration.

○ The only way to avoid any such risk is to abstain from sex.

**injection with an unsterilized needle or syringe is dangerous.**

A needle or syringe can pick up small amounts of blood from the person being injected. If that person's blood contains HIV, and if the same needle or syringe is used for injecting another person without being sterilized first, then HIV can be injected.

Those who inject themselves with drugs are therefore particularly at risk from AIDS. So are people who have sex with those who inject drugs.

Injecting is in itself dangerous. But because of the additional risk of infection, those who do inject drugs should never use another person's needle or syringe or allow their own needle or syringe to be used by anyone else.

National child immunization programmes use needles which are sterilized between each use and are therefore safe. All infants should be vaccinated for a full course of immunizations in the first year of life.

Other injections are often unnecessary, as many useful medicines can be taken by mouth. Where injections are necessary, they should be given by a trained person using a sterilized needle and syringe.

Ear-piercing, dental treatment, tattooing, facial marking and acupuncture are not safe if the equipment used is not sterilized. It is also unsafe to be shaved by a barber using an unsterilized razor.

**Men infected with HIV should think carefully about having a child - and seek advice. There is a one-in-three chance that their children will also be born infected with HIV.**

Women with HIV infection have about a 30% chance of giving birth to a child who will also be infected with HIV. Most babies infected with the virus will die before they are three years old.

In some countries, HIV tests are available to couples who are concerned that one or both of them might be infected. The results can help them decide whether to have children. Even if only the man is tested, the woman may become infected through sexual intercourse while attempting to conceive, thereby putting herself and her baby at risk.

## 5

**All parents should tell their children how HIV is spread.**

⊙ Apart from protecting yourself and your partner, you can also help to protect your children against HIV by making sure they know the facts about how to avoid getting and spreading the infection.

⊙ Children also need to know the facts about how HIV *does not* spread. They need to be reassured that they run no risk of getting the virus from ordinary social contact with HIV-infected children or adults. Children should be encouraged to be sympathetic towards people who are infected with HIV.

⊙ Everyone can help in the worldwide effort to stop HIV from spreading to the new generation.

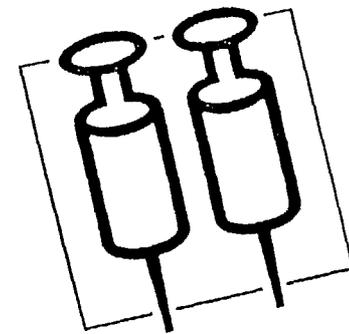
# Immunization Prime Messages

**1** Immunization protects against several dangerous diseases. A child who is not immunized is more likely to become undernourished, to become disabled, and to die.

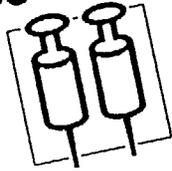
**2** Immunization is urgent. All immunizations should be completed in the first year of the child's life.

**3** It is safe to immunize a sick child.

**4** Every woman between the ages of 15 and 44 should be fully immunized against tetanus.



# Immunization Supporting Information



## 1

Immunization protects against several dangerous diseases. A child who is not immunized is more likely to become undernourished, to become disabled, and to die.

○ Immunization protects children against some of the most dangerous diseases of childhood. A child is immunized by vaccines which are injected or given by mouth. The vaccines work by building up the child's defences. If the disease strikes before a child is immunized, immunization is too late.

○ A child who is not immunized is very likely to get measles and whooping cough. These diseases can kill. But even children who survive these diseases are weakened by them. They may not grow well. And they may die later from malnutrition or other illnesses.

○ Measles is also an important cause of malnutrition, poor mental growth, and blindness.

○ An unimmunized child will almost certainly be infected with the polio virus. And for every 200 children who are infected, one will be crippled for life.

○ Tetanus germs grow in dirty cuts and kill most of the people who become infected - if they are not immunized.

○ Breastfeeding is a kind of natural immunization against several diseases. Some of the mother's resistance to disease is passed to the child in her breastmilk, and especially in the thick yellow milk (called colostrum) which is produced during the first few days after the birth.

## 2

Immunization is urgent. All immunizations should be completed in the first year of the child's life.

○ It is vital to immunize children early in life. Half of all deaths from whooping cough, one third of all cases of polio, and a quarter of all deaths from measles, occur before the age of one year.

○ It is vital for infants to complete the full course of immunizations, otherwise the vaccines may not work. Some vaccines need to be given only once. Others have to be given three times, with a gap of at least four weeks between each dose.

○ The important thing for parents to know is that a child should be taken for immunization five times in the first year of the child's life:

○ at birth, or as soon as possible afterwards, babies should be immunized against tuberculosis

○ in countries where polio is still a problem, newborn babies can also be given a dose of polio vaccine. This is in addition to the three doses given at the ages of 6, 10 and 14 weeks

○ at the age of 6 weeks, parents should bring their babies for a first immunization against diphtheria, whooping cough, and tetanus. These three vaccines are given together in a single injection called DPT. The first of three doses of polio vaccine should also be given at this time

○ at the ages of 10 and 14 weeks, parents should return for their infant to complete the full course of DPT and polio vaccines

○ as soon as possible after the age of nine months, parents should bring their babies for immunization against measles.

○ Measles is one of the most dangerous of all childhood diseases. For the first few months of life, the child has some natural protection against measles. This natural protection is inherited from the child's mother. It may prevent measles vaccination from doing its job. But after about nine months, natural protection comes to an end. The child is now at risk from measles and can and should be immunized. So it is vital to take a child for measles vaccination as soon as possible after the age of nine months.

○ If for any reason a child has not been fully immunized in the first year of life, it is vital to have the child immunized as soon as possible.

Immunization schedule for infants* y	
AGE	DISEASE TO BE IMMUNIZED AGAINST
Birth	Tuberculosis (and polio in some countries)
6 weeks	Diphtheria, whooping cough, tetanus, polio
10 weeks	Diphtheria, whooping cough, tetanus, polio
14 weeks	Diphtheria, whooping cough, tetanus, polio
9 months	Measles (12-15 months in industrialized countries and polio in some countries)
*National immunization schedules may differ slightly from country to country.	

### 3

- One of the main reasons why parents do not bring their children for immunization is that the child has a fever, a cough, a cold, diarrhoea, or some other mild illness on the day the child is to be immunized. Even if the child with a case of mild illness or malnutrition is brought for immunization, health workers may advise against giving the injections. This is wrong advice. It is now known that it is safe to immunize a child who is suffering from a minor illness or malnutrition.
- After an injection the child may cry, develop a fever, a rash, or a small sore. As with any illness, a child should be given plenty of food and liquids. Breastfeeding is especially helpful. If the problem seems serious or lasts more than three days, the child should be taken to a health centre.

### 4

Every woman between the ages of 15 and 44 should be fully immunized against tetanus.

- In many parts of the world, mothers give birth in unhygienic conditions. This puts both mother and child at risk from tetanus, a major killer of the newborn. If the mother is not immunized against tetanus, then one baby in every 100 will die from the disease.
- Tetanus germs grow in dirty cuts. This can happen, for example, if an unclean knife is used to cut the umbilical cord or if anything unclean is put on the stump of the cord. (Anything used to cut the cord should first be cleaned and then boiled or heated in a flame and allowed to cool.)

If the tetanus germs enter the mother's body, and if she is not immunized against tetanus, then her life will also be at risk.

○ All women of child-bearing age should be immunized against tetanus. All women who become pregnant should check to make sure they have been immunized against tetanus. In this way, both mothers and their new-born babies will be protected.

○ If a woman is not already immunized, a first dose of tetanus vaccine should be given as soon as she becomes pregnant. The second dose can be given four weeks after the first. This second dose should be given *before* the last two weeks of the pregnancy.

A third dose should be given 6 to 12 months after the second dose, or during the next pregnancy.

These three tetanus vaccinations protect the mother, and her newborn baby, for five years. All infants should be immunized against tetanus during the first year of life.

○ If a girl or a woman has been vaccinated five times against tetanus, then she is protected against the disease throughout her years of child-bearing. Any children she may then have will also be protected for the first few weeks of life.

# Breastfeeding Prime Messages

**1** Breastmilk alone is the best possible food and drink for a baby. No other food or drink is needed for about the first six months of life.

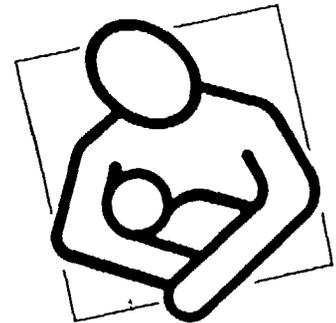
**2** Babies should start to breastfeed as soon as possible after birth. Virtually every mother can breastfeed her baby.

**3** Breastfeeding causes more milk to be produced. A baby needs to suck frequently at the breast so that enough breastmilk is produced to meet the baby's needs.

**4** Breastfeeding helps to protect babies and young children against dangerous diseases. Bottle-feeding can lead to serious illness and death.

**5** A variety of additional foods is necessary when a child is about six months old, but breastfeeding should continue well into the second year of a child's life and for longer if possible.

**6** Breastfeeding gives a mother 98% protection against pregnancy for six months after giving birth - *if* her baby breastfeeds frequently, day and night, *if* the baby is not regularly given other food and drink, and *if* the mother's periods have not returned.



# Breastfeeding Supporting Information



## 1

Breastmilk alone is the best possible food and drink for a baby. No other food or drink is needed for about the first six months of life.

○ From the moment of birth up to the age of about six months, breastmilk is all the food and drink a baby needs. It is the best food a child will ever have. All substitutes, including cow's milk, infant formula, milk-powder solutions, and cereal gruels, are inferior.

○ Even in hot, dry climates, breastmilk contains sufficient water for a young baby's needs. Additional water or sugary drinks are not needed to quench the baby's thirst. They can also be harmful. If the baby is also given water, or drinks made with water, then the risk of getting diarrhoea and other illnesses increases.

○ Other foods and drinks are necessary when a baby reaches the age of about six months. If monthly weighing shows that a child under six months of age is not growing well, then the child may need more frequent breastfeeding. If the child is already being breastfed frequently, then lack of weight gain shows either that the child has an illness or that other foods, in addition to breastmilk, are now necessary.

○ Until the age of nine or ten months, the baby should be breastfed before other foods are given. Breastfeeding should continue well into the second year of life - and for longer if possible.

## 2

Babies should start to breastfeed as soon as possible after birth. Virtually every mother can breastfeed her baby.

○ Mothers and newborn babies should not be in different rooms. The baby should be allowed to suck at the breast as often as he or she wants.

○ If a mother gives birth in a maternity unit, then she has a right to expect that her newborn baby will be kept near her in the same room,

24 hours a day, and that no other food or drink will be given to her baby except breastmilk.

○ Starting to breastfeed immediately after birth stimulates the production of breastmilk. Breastfeeding should begin not later than an hour after the delivery of the baby.

○ The thick yellowish milk (called colostrum) that the mother produces in the first few days after birth is good for babies. It is nutritious and helps to protect them against common infections. The baby does not need any other food or drink while waiting for the mother's milk to 'come in'. In some countries, mothers are advised not to feed this colostrum to their babies. This advice is wrong.

○ Many mothers need help when they begin to breastfeed, especially if the baby is their first. An experienced and sympathetic adviser, such as a woman who has successfully breastfed, can help a mother avoid or solve many common problems.

○ The position of the baby on the breast is very important. A bad sucking position is the cause of problems such as:

- sore or cracked nipples
- not enough milk
- refusal to feed.

○ Signs that the baby is in a good position for breastfeeding are:

- the baby's whole body is turned towards the mother
- the baby takes long, deep sucks
- the baby is relaxed and happy
- the mother does not feel nipple pain.

○ Almost all mothers can produce enough milk if:

- the baby takes the breast into his or her mouth in a good position
- the baby sucks as often, and for as long, as he or she wants, including during the night.

○ Crying is not a sign that a baby needs artificial feeds. It normally means that the baby needs to be held and cuddled more. Some babies need to suck the breast simply for comfort. If the baby is hungry, more sucking will produce more breastmilk.

○ Mothers who are not confident that they have enough breastmilk should not give their babies other food or drink in the first few months of life. This means that the baby sucks at the breast less often. So less breastmilk is produced. To stop this happening, mothers need to be reassured that they can feed their young babies properly with *breastmilk alone*. They need the encouragement and practical support of their families, the father, neighbours, friends, health workers and women's organizations.

○ Mothers employed outside the home need adequate maternity leave, breastfeeding breaks during the working day, and crèches where their babies can be looked after at the workplace. So employers and trade unions also have a part to play in supporting breastfeeding.

○ Husbands, families, and communities can help to protect the health of both mothers and babies by making sure that the mother has enough food and by helping with her many tiring tasks.

○ Breastfeeding can be an opportunity for a mother to take a few minutes of much-needed rest. Husbands or other family members can help by encouraging the mother to lie down, in peace and quiet, while she breastfeeds her baby.

### 3

Breastfeeding causes more milk to be produced. A baby needs to suck frequently at the breast so that enough breastmilk is produced to meet the baby's needs.

○ From birth, the baby should breastfeed whenever he or she wants to - often indicated by crying. Frequent sucking at the breast is necessary to stimulate the production of more breastmilk.

○ Frequent sucking helps to stop the breasts from becoming swollen and painful.

○ 'Topping up' breastmilk feeds with milk-powder solutions, infant formulas, cow's milk, water, or other drinks, reduces the amount of milk the baby takes from the breast. This leads to less breastmilk being produced. The use of a bottle to give other drinks can cause the baby to stop breastfeeding completely. It can also confuse the baby because the sucking action of bottle-feeding is very different from sucking at the breast. Babies who are confused between sucking at the breast and sucking at the bottle may drink less breastmilk. This will cause less breastmilk to be produced.

### 4

Breastfeeding helps to protect babies and young children against dangerous diseases. Bottle-feeding can lead to serious illness and death.

○ Breastmilk is the baby's first 'immunization'. It helps to protect the baby against diarrhoea, coughs and colds, and other common illnesses. The protection is greatest when breastmilk alone is given to the baby for about the first six months.

○ Cow's milk, infant formulas, milk-powder solutions, maize gruel and other infant foods do not give babies any special protection against diarrhoea, coughs and colds, and other diseases.

○ Bottle-feeding can cause illnesses such as diarrhoea unless the water is boiled and the bottle and teats are sterilized in boiling water before each feed. The more often a child is ill, the more likely it is that he or she will become malnourished. That is why, in a community without clean drinking water, a bottle-fed baby is many times more likely to die of diarrhoea than a baby fed exclusively on breastmilk for about the first six months.

○ Mothers should be helped to breastfeed their babies. If for any reason a mother does not breastfeed, then she should be helped in other ways to give her baby good nutrition and protection against disease.

○ The best food for a baby who, for whatever reason, cannot be breastfed, is milk squeezed from the mother's breast. It should be given in a cup that has been very well cleaned. Cups are safer than bottles and teats because they are easier to keep clean.

○ The best food for any baby whose own mother's milk is not available is the breastmilk of another mother.

○ If non-human milk has to be used, it should be given from a clean cup rather than a bottle. Milk-powder solutions should be prepared using water that has been boiled and then cooled.

○ Cow's milk, infant formula, or milk-powder solutions can cause poor growth if too much water is added in order to make them go further.

○ Cow's milk and milk-powder solutions go bad if left to stand at room temperature for a few hours. Breastmilk can be stored for at least eight hours at room temperature without going bad.

○ In low-income communities, the cost of cow's milk or powdered milk plus bottles, teats, and the fuel for boiling water, can be as much as 25-50% of a family's income.

### 5

A variety of additional foods is necessary when a child is about six months old, but breastfeeding should continue well into the second year of a child's life and for longer if possible.

○ Although children need additional foods after about the first six months of life, breastmilk is still an important source of energy and protein, and other nutrients such as vitamin A, and helps to protect against disease during the child's second year of life.

○ A mother can continue to breastfeed her child for as long as she wishes, but it is best for her own and her children's health if she avoids becoming pregnant again until her youngest child has reached the age of two years. Most methods of avoiding pregnancy - including condoms, IUDs, and voluntary sterilization - do not affect breastfeeding. 'Minipills' and injectable contraceptives also have no effect on breastmilk providing that they contain no oestrogen. But conventional contraceptive pills can reduce the amount of breastmilk.

○ Babies get ill frequently as they learn to crawl, walk, and play. A child who is ill needs breastmilk. It provides a nutritious, easily digestible food when the child loses appetite for other foods.

○ Between the ages of one and two, a baby benefits from breastmilk as well as needing family foods. Breastfeeding is good for the child as part of a meal, or between meals, or whenever the child feels hungry. But at this time, all children need other foods. In the second year of life, breastfeeding should be an addition to, not a substitute for, normal meals.

○ Breastfeeding also comforts a child when he or she is frightened, hurt, angry, or tearful.

## 6

Breastfeeding gives a mother 98% protection against pregnancy for six months after giving birth - *if* her baby breastfeeds frequently, day and night, *if* the baby is not regularly given other food and drink, and *if* the mother's periods have not returned.

○ It is now known that the sucking of the baby on the mother's breast causes a delay in the return of the mother's fertility. For some women, breastfeeding delays the return of menstrual periods for up to 12 months - or even longer. For other mothers, menstrual periods return only three or four months after giving birth.

○ How often the baby sucks at the mother's breast is the most important fact in deciding how long it will be before the mother's periods return.

If a baby sucks very frequently at the breast (whenever the baby wants to, including at night) then the return of the mother's periods will be delayed for much longer. But if breastfeeding is restricted to a regular routine, then the mother's periods will return much more quickly. Or if a mother gives other food or drink to a baby who is less than six months old, then the baby may suck less often at the breast and the mother's periods are likely to return much sooner.

○ The return of menstrual periods lets the mother know that she can become pregnant again.

○ It is possible for a mother to become pregnant again before her monthly period returns. This becomes more likely when six months have

passed since the birth of the baby. A woman who wants to be protected against another pregnancy should choose another method of family planning if *any* of the following apply:

○ her baby has reached the age of six months

○ her monthly periods have returned

○ the baby is starting to take other food and drink in addition to breastmilk.

○ Whether or not a mother intends to breastfeed a newborn child, parents should be provided with advice on family planning at the maternity unit or hospital where their child has been born. If the child is born at home, trained birth attendants can also give advice on family planning.

# Child Growth Prime Messages

**1** Children from birth to the age of three years should be weighed every month. If there is no weight gain for two months, something is wrong.

**2** Breastmilk alone is the best possible food for about the first six months of a child's life.

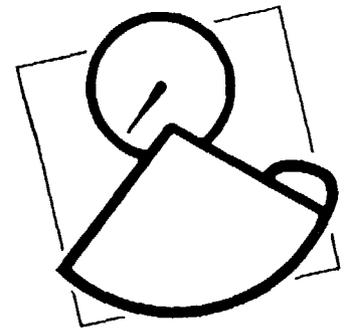
**3** By the age of about six months, the child needs other foods in addition to breastmilk.

**4** A child under three years of age needs food five or six times a day.

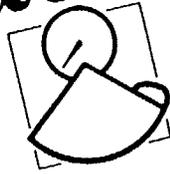
**5** A child under three years of age needs a small amount of extra fat or oil added to the family's ordinary food.

**6** All children need foods rich in vitamin A – breastmilk, green leafy vegetables, and orange-coloured fruits and vegetables.

**7** After an illness, a child needs one extra meal every day for at least a week.



# Child Growth Supporting Information



## 1

Children from birth to the age of three years should be weighed every month. If there is no weight gain for two months, something is wrong.

○ Regular monthly weight gain is the most important sign of a child's overall health and development. It is the child's own weight gain which is important, not how the child compares in weight to other children.

○ It is therefore important to weigh young children every month. If a child does not gain weight over a two-month period, then parents and health workers should act. The child is being held back either by illness, or poor food, or lack of attention. The following paragraphs cover the most likely causes of poor growth, and the most important actions parents can take to keep a child growing well.

○ Breastfeeding helps protect a baby from common illnesses and ensure its growth for the first few months of life. A full course of immunizations in the first year of life is also essential - it protects against diseases which cause undernutrition.

○ When additional foods are given, the risk of infection increases. From now on, it is specially important to check that the child is putting on weight regularly from one month to the next. If a child under the age of three is not gaining weight, and if the child has good food, these are the 10 most important questions to ask:

- is the child eating frequently enough? (a child should eat five or six times a day)
- do the child's meals have too little energy in them? (small amounts of oil or fats should be added)
- is the child frequently ill? (needs medical attention)
- has the child been refusing to eat when ill? (needs tempting to eat when ill and extra meals to catch up afterwards)

- is the child getting enough vitamin A? (needs dark green vegetables every day)
- is the child being bottle-fed? (bottle and water may not be clean, sugary drinks may be being used instead of milk)
- are food and water being kept clean? (if not, child will often be ill)
- are faeces being put into a latrine or buried? (if not, child will often be ill)
- does the child have worms? (needs deworming medicine from health centre)
- is the child alone too much? (needs more stimulation and attention)

Recording the child's weight with a dot on the child's 'growth chart' and joining up the dots after each monthly weighing gives a line which enables a mother to see her child's growth. An upward line means the child is doing well. A flat line is a cause for concern. A downward line is a sure sign that all is not well with the child. A child who is given only breastmilk will almost always grow well in the first few months of life. Seeing this good progress on a growth chart helps give the mother confidence.

## 2

Breastmilk alone is the best possible food for about the first six months of a child's life.

○ From the moment of birth up to the age of about six months, breastmilk is all the food and drink a baby needs to grow well. In these early months, when a baby is most at risk, breastmilk helps to protect against diarrhoea and other common infections.

○ Breastmilk is the best food a child will ever have. If possible, breastfeeding should continue well into the second year of life and for longer if possible.

## 3

By the age of about six months, the child needs other foods in addition to breastmilk.

○ At the age of about six months, most infants need other foods in addition to breastmilk. Before the age of six months, an infant who is not gaining enough weight may need more frequent breastfeeding.

○ If the child is already being breastfed frequently, then failure to gain weight shows that other foods in addition to breastmilk are now necessary.

○ For an infant who continues to grow well, additional food may not be necessary until seven or even eight months. After that, all children need other foods in addition to breastmilk.

○ The baby should be breastfed *before* being given other foods so that the mother will have more breastmilk for a longer period.

○ Boiled, peeled and mashed vegetables should be added to a young child's gruel or other weaning food at least once each day.

○ The greater the variety of foods the child eats, the better.

## 4

A child under three years of age needs food five or six times a day.

○ A child's stomach is smaller than an adult's, so a child cannot eat as much as an adult at one meal. But its energy needs, for its size, are greater. So the problem is how to get enough 'energy food' into the child. The answer is:

○ feed the child frequently - five or six times a day

○ enrich the child's gruel or porridge with mashed vegetables and a little oil or fat.

○ A child's food should not be left standing for hours. Germs can grow in it which may make the child ill. As it is usually not possible to cook fresh food for a child five or six times a day, dried foods or snacks should be given in between meals - fruits, bread, patties, biscuits, nuts, coconut, bananas or whatever clean food is easily available. Breastmilk is also an ideal 'snack' and is always clean and free from germs.

## 5

A child under three years of age needs a small amount of extra fat or oil added to the family's ordinary food.

○ The family's normal food needs to be enriched to meet the special energy needs of the child. This means adding mashed vegetables and small amounts of fats or oils - butter, ghee, vegetable oil, soya oil, coconut oil, corn oil, groundnut oil, or crushed nuts.

○ Breastmilk also enriches a child's diet, and breastfeeding should continue, if possible, until well into the second year of a child's life.

## 6

All children need foods rich in vitamin A - breastmilk, green leaf vegetables, and orange-coloured fruits and vegetables.

○ Over 200,000 children go blind each year because they do not have enough vitamin A in their bodies. Vitamin A may also protect children against other illnesses such as diarrhoea. It should therefore be a part of every child's daily diet.

○ Vitamin A comes from breastmilk, dark green leafy vegetables, and from orange or yellow fruits and vegetables such as carrots, papayas, and mangoes.

○ If a child has had diarrhoea or measles, vitamin A will be lost from the child's body. It can be replaced by breastfeeding more often, and by feeding the child more fruit and vegetables.

## 7

After an illness, a child needs one extra meal every day for at least a week.

○ One of the most important skills of a parent is the skill of stopping illnesses from holding back a child's growth. In times of illness, and especially if the illness is diarrhoea or measles, the appetite falls and less of the food that is eaten is absorbed into the body. If this happens several times a year, the child's growth will be held back.

○ So it is essential to encourage a child who is ill to eat and drink. This can be difficult if the child does not want to eat, so it is important to keep offering food the child likes, usually soft, sweet foods, a little at a time as often as possible. Breastfeeding is especially important.

○ When the illness is over, extra meals should be given so that the child catches up on the growth lost. A good rule is to give a child an extra meal every day for at least a week after the illness is over. The child is not fully recovered from an illness until he or she is at least the same weight as when the illness began.

○ If illness and poor appetite persist for more than a few days, the child should be taken to a health worker.

○ It is also important to protect a child's growth by preventing illness:

○ give a child breastmilk alone for about the first six months of life. Then introduce other foods, and continue to breastfeed

○ make sure your child is fully immunized before the age of one year

○ always use latrines and keep hands, food, and kitchens clean.

# Diarrhoea Prime Messages

**1** Diarrhoea can kill children by draining too much liquid from the body. So it is essential to give a child with diarrhoea plenty of liquids to drink.

**2** A child with diarrhoea needs food.

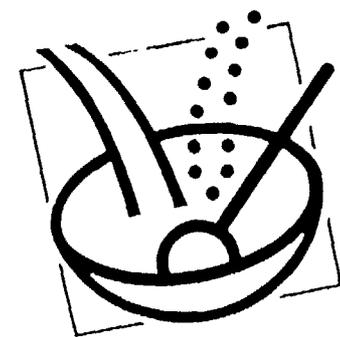
**3** When a breastfed child has diarrhoea, it is important to continue breastfeeding.

**4** A child who is recovering from diarrhoea needs an extra meal every day for at least two weeks.

**5** Trained help is needed if diarrhoea is more serious than usual, if it persists for more than two weeks, or if there is blood in the stool.

**6** Medicines other than ORS should not be used for diarrhoea, except on medical advice.

**7** Diarrhoea can be prevented by breastfeeding, by immunizing all children against measles, by using latrines, by keeping food and water clean, and by washing hands before touching food.



22

# Diarrhoea Supporting Information



## 1

Diarrhoea can kill children by draining too much liquid from the body. So it is essential to give a child with diarrhoea plenty of liquids to drink.

- Diarrhoea is dangerous. Roughly one in every two hundred children who get diarrhoea will die from it.
- Most often, diarrhoea kills by dehydration. This means that too much liquid has been drained out of the child's body. So as soon as diarrhoea starts, it is essential to give the child extra drinks to replace the liquid being lost.
- Suitable drinks to prevent a child from losing too much liquid during diarrhoea are:
  - breastmilk
  - gruels (mixtures of cooked cereals and water)
  - soups
  - rice water
  - fresh fruit juices
  - weak teas
  - green coconut water
  - water from the cleanest possible source (if possible, brought to the boil and then cooled)
  - oral rehydration salts solution.
- In almost all countries, special drinks for children with diarrhoea are available in pharmacies, shops, or health centres. Usually, these come in the form of packets of oral rehydration salts (ORS) to be mixed with the recommended amount of clean water (*see box*). Although ORS is especially made for the treatment of dehydration, it can also be used to prevent dehydration.

Do not add ORS to liquids such as milk, soup, fruit juice or soft drinks.

- If ORS is not available, dehydration can be treated by giving the child drink made from four level teaspoons of sugar and half a level teaspoon of salt dissolved in one litre of clean water.

This is less salt and less sugar than recommended in the first edition of *Facts for Life*. In practice, too much salt and sugar have sometimes been used because spoon sizes differ and because parents sometimes add more salt and sugar in the belief that this will make the treatment more effective. But too much sugar can make the diarrhoea worse and too much salt can be harmful to the child. Therefore a more dilute formula is now recommended. If the mixture is made a little too dilute, no harm can be done, and there is very little loss of effectiveness.

- To replace the liquid being lost from the child's body, one of these drinks should be given to the child every time a watery stool is passed:
  - between a quarter and a half of a large cup for a child under the age of two
  - between a half and a whole large cup for older children.
- The drink should be given directly from a cup or by a teaspoon - not from a feeding bottle. If the child vomits, wait for 10 minutes and then begin again, giving the drink to the child slowly, small sips at a time.
- Extra liquids should be given until the diarrhoea has stopped. This usually takes between three and five days.

### ORS - a special drink

A special drink for diarrhoea can be made by using a packet of oral rehydration salts (ORS). This drink is used by doctors and health workers to treat dehydrated children. But it can also be used in the home to prevent dehydration.

- Dissolve the contents of the packet in the amount of water indicated on the packet. If you use too little water, the drink could make the diarrhoea worse. If you use too much water, the drink will be less effective.
- Stir well, and give to the child to drink in a cup or feed with a spoon

## 2

**A child with diarrhoea needs food.**

○ It is often said that a child with diarrhoea should not be given any food or drink while the diarrhoea lasts. This advice is wrong. Food can help to stop the diarrhoea. Also, diarrhoea can lead to serious malnutrition unless parents make a special effort to keep feeding the child during and after the illness.

○ A child with diarrhoea usually has less appetite, so feeding may be difficult at first. But the child should be tempted to eat - as frequently as possible - by offering small amounts of his or her favourite foods.

○ After the age of about six months, all children need extra food in addition to breastmilk. They should be given soft, well-mashed mixes of cereal and beans, or cereal and well-cooked meat or fish. Add one or two teaspoonfuls of oil to cereal and vegetable mixes if possible. Also good for the child are yoghurt and fruits. Foods should be freshly prepared and given to the child five or six times a day. This diet should be continued if the child has diarrhoea.

## 3

**When a breastfed child has diarrhoea, it is important to continue breastfeeding.**

○ Mothers are sometimes advised to give less breastmilk if a child has diarrhoea. This is wrong advice. Breastfeeding should continue - and if possible the child should be fed more often.

○ If the child is being fed on milk-powder solutions or cow's milk, then feeding should continue as usual.

## 4

**A child who is recovering from diarrhoea needs an extra meal every day for at least two weeks.**

○ Extra feeding after the diarrhoea stops is vital for a full recovery. At this time, the child has more appetite and can eat an extra meal a day for at least a week. This will help the child to catch up on the food 'lost' while the child was ill and the appetite was low. A child is not fully recovered from diarrhoea until he or she is at least the same weight as when the illness began.

○ Breastfeeding more frequently than usual also helps to speed up recovery.

## 5

**Trained help is needed if diarrhoea is more serious than usual, if it persists for more than two weeks, or if there is blood in the stool.**

○ Parents should seek help from a health worker without delay if the child:

○ has a fever

○ is extremely thirsty

○ will not eat or drink normally

○ vomits frequently

○ passes several watery stools in one or two hours

○ passes blood in the stool (a sign of dysentery)

○ if the diarrhoea persists for more than two weeks.

○ If a child has any of these signs, qualified medical help is needed quickly. The doctor or health worker will give the child a drink made with special oral rehydration salts (*see box*). In the meantime, keep trying to make the child drink liquids.

## 6

**Medicines other than ORS should not be used for diarrhoea, except on medical advice.**

○ Most medicines for diarrhoea are either useless or harmful. The diarrhoea will usually cure itself in a few days. The real danger is usually not the diarrhoea but malnutrition and the loss of liquids from the child's body.

○ Do not give a child tablets or other medicines for diarrhoea unless these have been prescribed by a trained health worker.

○ Antibiotics should be given - after seeking medical advice - if a child has diarrhoea with blood in the stool. Other drugs should not be used.

# 7

Diarrhoea can be prevented by breastfeeding, by immunizing all children against measles, by using latrines, by keeping food and water clean, and by washing hands before touching food.

○ Diarrhoea is caused by germs from faeces entering the mouth. These germs can be spread in water, in food, on hands, on eating and drinking utensils, by flies, and by dirt under fingernails. To prevent diarrhoea, the germs must be stopped from entering the child's mouth.

○ Poverty and lack of basic services such as clean drinking water mean that many families find it difficult to prevent diarrhoea. But the most effective ways are to:

- give breastmilk alone for about the first six months of a baby's life (breastmilk helps to protect babies against diarrhoea and other illnesses)
  - at the age of about six months, introduce clean, nutritious, well-mashed, semi-solid foods and continue to breastfeed
  - if a milk-powder solution or cow's milk has to be used, give it to the child from a cup rather than a bottle
  - use the cleanest water available for drinking (water from wells, springs or rivers should be brought to the boil and cooled before use)
  - always use latrines to dispose of faeces, and be sure to put children's faeces in a latrine immediately (or bury them). (Children's faeces are even more dangerous to health than those of adults)
  - wash hands with soap and water immediately after using the latrine and before preparing or eating food
  - cover food and drinking water to protect it from germs
  - if possible, food should be thoroughly cooked, and prepared just before eating. It should not be left standing, or it will collect germs
  - bury or burn all refuse to stop flies spreading disease.
- Measles frequently results in serious diarrhoea. Immunization against measles therefore also protects a child against this cause of diarrhoea. There is no vaccine to prevent ordinary diarrhoea.

# Hygiene Prime Messages

**1** Illnesses can be prevented by washing hands with soap and water after contact with faeces and before handling food.

**2** Illnesses can be prevented by using latrines.

**3** Illnesses can be prevented by using clean water.

**4** Illnesses can be prevented by boiling drinking water if it is not from a safe piped supply.

**5** Raw food is often dangerous. It should be washed or cooked. Cooked food should be eaten straight away - not left to stand. Warmed-up food should be thoroughly reheated.

**6** Illnesses can be prevented by keeping food clean.

**7** Illnesses can be prevented by burning or burying household refuse.

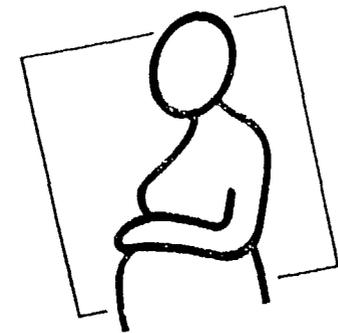


90  
91

# Safe Motherhood Prime Messages

- 1** The risks of childbirth can be drastically reduced by going to the nearest health worker for regular check-ups during pregnancy.
- 2** A trained person should assist at every birth.
- 3** To reduce the dangers of pregnancy and childbirth, all families should know the warning signs.
- 4** All woman need more food during pregnancy. All pregnant women need more rest.
- 5** Spacing pregnancies at least two years apart, and avoiding pregnancies below the age of 18 or above the age of 35, drastically reduces the dangers of child-bearing.

- 6** Girls who are healthy and well fed during their own childhood and teenage years have fewer problems in pregnancy and childbirth.
- 7** If a woman who is pregnant smokes, or takes alcohol or drugs, her child may be damaged in the womb.



# Safe Motherhood Supporting Information



## 1

The risks of childbirth can be drastically reduced by going to the nearest health worker for regular check-ups during pregnancy.

- Many of the dangers of pregnancy and childbirth can be avoided if the mother-to-be goes to a health centre as soon as she believes she is pregnant. A health worker will help ensure a safe birth and a healthy baby by:
  - checking the progress of the pregnancy so that if problems are likely the woman can be moved to a hospital for the birth
  - checking for high blood pressure, which is a danger to both mother and child
  - giving tablets to prevent anaemia ('thin blood')
  - giving the two injections which will protect the mother and her newborn baby against tetanus
  - checking that the baby is growing properly
  - giving anti-malarial tablets where necessary
  - preparing the mother for the experience of childbirth and giving advice on breastfeeding and care of the newborn
  - advising on where to go or how to get help if problems arise during childbirth
  - advising on ways of delaying the next pregnancy.

## 2

A trained person should assist at every birth.

- A trained birth attendant will know:
  - when labour has gone on for too long (more than 12 hours) and a move to hospital is necessary

- how to keep the birth clean and reduce the risk of infection
- how to cut the cord cleanly and safely
- what to do if the baby is being born in the wrong position
- what to do if too much blood is being lost
- what to do if the baby does not begin breathing straight away
- how to help the mother to start breastfeeding immediately after the birth
- how to dry and keep the baby warm after delivery
- how to help the mother prevent or postpone another birth.
- If serious problems arise during childbirth, a trained birth attendant will know when medical help is needed and how to get it.

## 3

To reduce the dangers of pregnancy and childbirth, all families should know the warning signs.

- With any pregnancy, it is important to ask the advice of a health worker about where the baby should be born and who should attend the birth. If a family knows that a birth is likely to be difficult or risky, it may be possible to have the baby in a hospital or maternity clinic. Or it may be possible to move, temporarily, closer to a clinic or hospital so that the mother is within reach of medical help.
- So it is important for pregnant women, their husbands, and other family members to know the signs which indicate that extra care, and regular visits to a health worker, are needed.

Warning signs before pregnancy begins:

- an interval of less than two years since the last birth
- mother-to-be is less than 18 or more than 35 years old
- mother-to-be has had four or more previous children
- mother-to-be has had a previous baby weighing less than 2 kilograms at birth
- mother-to-be has had a previous difficult or Caesarian birth
- mother-to-be has had a previous premature birth
- mother-to-be has had a previous miscarriage, abortion or stillbirth
- mother-to-be weighs less than 38 kilograms before pregnancy
- mother-to-be is less than 145 cm in height.

#### Warning signs developing during pregnancy:

- failure to gain weight (at least 6 kilos should be gained in pregnancy)
- paleness of inside eyelids (should be red or pink)
- unusual swelling of legs, arms, or face.

#### Four signs which mean get help immediately:

- bleeding from the vagina during pregnancy
- severe headaches (sign of high blood pressure)
- severe vomiting
- high fever.

○ Dangerous problems can arise during the process of giving birth. In at least half of all cases, there are no warning signs in pregnancy. Therefore all couples should know - *in advance* - where the nearest hospital or maternity unit is to be found and how to get there. In case problems arise during labour, the father-to-be should make advance arrangements for moving the mother-to-be to the nearest hospital or maternity unit. In particular, transport should be arranged in case it is needed.

## 4

All women need more food during pregnancy. All pregnant women need more rest.

- The husband and family of a pregnant woman should ensure that she has a variety of extra foods every day - starting as soon as pregnancy is confirmed. She should also have more rest than usual during the daytime, especially in the three months before the birth.
- A pregnant woman needs a variety of the best foods available to the family: milk, fruit, vegetables, meat, fish, eggs, pulses, and grains. There is no reason to avoid any of these foods during pregnancy.
- If possible, a woman should be weighed as soon as she knows that she is pregnant. It is important to gain weight every month during pregnancy, and to try to gain a total of 8-10 kilos before the baby is born.

## 5

Spacing pregnancies at least two years apart, and avoiding pregnancies below the age of 18 or above the age of 35, drastically reduces the dangers of child-bearing.

- One of the most effective ways of reducing the dangers of pregnancy and childbirth - for both mother and child - is to plan the timing of birth. The risks of child-bearing are greatest when the mother-to-be is under or over 35, or has had four or more previous pregnancies, or when there is a gap of less than two years since the last birth.
- Avoiding births by having an unsafe abortion can be very dangerous. Illegal abortions carried out by untrained persons kill between 100,000 and 200,000 women every year.

## 6

Girls who are healthy and well fed during their own childhood at teenage years have fewer problems in pregnancy and childbirth.

- Safe and successful childbearing depends most of all on the health, readiness of the mother-to-be. So special attention should be paid to the health, feeding, and education of adolescent girls. The first pregnancy should wait until at least the age of 18.

## 7

If a woman who is pregnant smokes, or takes alcohol or drugs, her child may be damaged in the womb.

- A pregnant woman can damage her unborn child by smoking tobacco, drinking alcohol, and using narcotic drugs. It is particularly important to take medicines during pregnancy unless they are absolutely necessary and prescribed by a trained health worker.

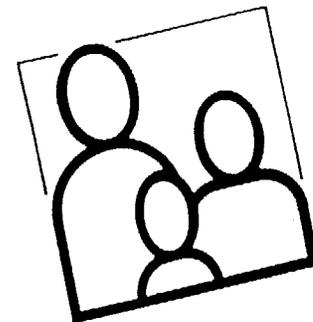
# Timing Births Prime Messages

**1** Becoming pregnant before the age of 18, or after the age of 35, increases the health risks for both mother and child.

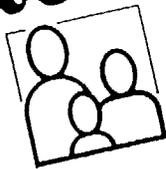
**2** The risk of death for young children is increased by up to about 50% if the space between births is less than two years.

**3** Having more than four children increases the health risks of pregnancy and childbirth.

**4** There are many safe and acceptable ways of avoiding pregnancy. Family planning services can give couples the knowledge and the means to plan when to begin having children, how far apart to have them, and when to stop.



# Timing Births Supporting Information



## 1

Becoming pregnant before the age of 18, or after the age of 35, increases the health risks for both mother and child.

○ Every year over half a million women die from problems linked to pregnancy and childbirth, leaving behind over 1 million motherless children. Most of these deaths could be prevented by acting on today's knowledge about the importance of planning pregnancies.

All girls should be allowed the time to become women before becoming mothers. In societies where many girls marry at an early age, couples should delay the first pregnancy until at least the age of 18.

○ For health reasons alone, no girl should become pregnant before the age of 18. A woman is not physically ready to begin bearing children until she is about 18 years of age. Babies born to women younger than 18 are more likely to be born too early and to weigh too little at birth. The birth itself is likely to be more difficult. Babies born to mothers who are too young are also much more likely to die in the first year of life. The risks to the mother's own health are also greater.

○ After the age of 35, the health risks of pregnancy and childbirth begin to increase again. If a woman is over the age of 35, and has had four or more previous pregnancies, then another pregnancy is a serious risk to her own health and that of her unborn child.

## 2

The risk of death for young children is increased by about 50% if the space between births is less than two years.

○ For the health of both mothers and children, parents should wait until their youngest child is at least two years old before having another baby.

○ Children born too close together do not usually develop as well, physically or mentally, as children born at least two years apart.

○ One of the greatest threats to the health and growth of a child under the age of two is the birth of a new baby. Breastfeeding stops too suddenly, and the mother has less time to prepare the special foods a young child needs. Also, she may not be able to give the older child the care and attention he or she needs, especially during illness. As a result the child often fails to grow and develop properly.

○ A mother's body needs two years to recover fully from pregnancy and childbirth. The risk to the mother's health is therefore greater if the new birth follows too closely upon the last. The mother needs to give herself time to get her strength and energy back before she becomes pregnant again.

○ If a woman becomes pregnant before she is fully recovered from bearing a previous child, there is a higher chance that her new baby will be born too early and too light in weight. Low-birth-weight babies are less likely to grow well, more likely to fall ill, and four times more likely to die in the first year of life than babies of normal weight.

## 3

Having more than four children increases the health risks of pregnancy and childbirth.

○ After a woman has had four children, further pregnancies bring greater risks to the life and health of both mother and child.

Especially if the previous births have not been spaced more than two years apart, a woman's body can easily become exhausted by repeated pregnancy, childbirth, breastfeeding, and looking after small children. Further pregnancies usually mean that her own health begins to suffer.

○ After four pregnancies, there is an increased risk of serious health problems such as anaemia ('thin blood') and haemorrhage (heavy loss of blood). The risk of giving birth to babies with disabilities, or with low birth weight, also increases after four pregnancies and after the mother reaches the age of 35.

## 4

There are many safe and acceptable ways of avoiding pregnancy. Family planning services can give couples the knowledge and the means to plan when to begin having children, how far apart to have them, and when to stop.

○ Most health clinics can offer different methods of family planning so that all couples can choose a method which is acceptable, safe,

# ANNEX XII

## ORGANIZATIONAL CHART

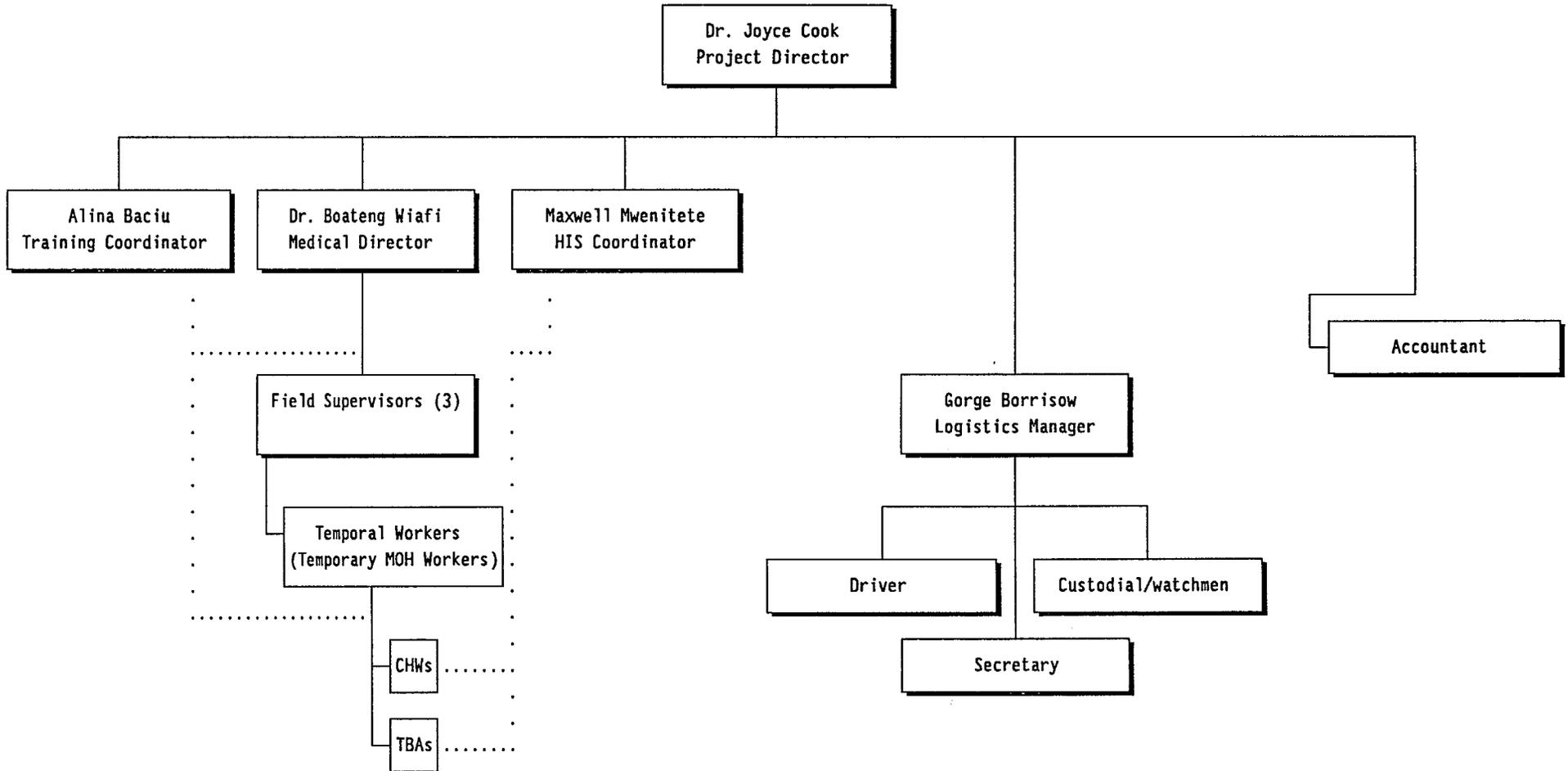
convenient, and effective. Couples should ask advice about the most suitable means of family planning from the nearest trained health worker or family planning clinic.

Some methods of family planning, such as condoms and contraceptive pills, may also be available from pharmacies and other shops.

○ Family planning is the responsibility of men as well as women. All men should be aware of the health benefits of family planning - and of the different methods now available.

# ZAMBIA CHILD SURVIVAL XI

## Organizational Chart



307

Specific Objectives of the Workshop.

1. The aim is to improve the training of the TBAs.
2. The other objectives are:-
  - (a) Formulation of syllabus or curriculum for training.
  - (b) Formulation of a pretraining questionnaire.
  - (c) Outline the functions of the TBA.
  - (d) Agree on the selection and training period.
  - (e) Design assessment and evaluation forms for TBAs supervisors.
  - (f) Discuss possibilities of having a local TBA Kit and suggest the contents of the Kit including simple drugs which could be used by TBA.
  - (g) Work out implementation strategies.
  - (h) Design a reporting system.

General Objectives of TBA Training Programme.

At the end of the programme the participants will be able to:

1. Provide care and advice to mothers during the ante-natal period.
2. Skillfully provided care to a woman during labour.
3. To provide care to a woman after delivery.
4. To provide care to a newborn baby immediately following delivery.
5. To provide appropriate care to a mother during the puerperium.
6. To Provide assistance and advice to a family on the care of the pre-school child,
7. To identify common childhood ailments and provide practical advice to the family.
8. To provide advise on the importance of family planning.
9. Create awareness among the community on the dangers and prevention of HIV/AIDS.

In 1982 an evaluation of the programme was done by the Traditional Medicine and during the 1984 EPI/MCH/PHC evaluation the TBA activities were looked into. In both evaluation reports it was found out that there was need to strengthen the programme in a number of areas, it was also found out that about 60% of all total deliveries still take place in homes. Up to date there has been no figures to show the impact of the TBAs on the Maternal and Child Health Services. The present figures show that there is a high percentage of mothers attending ante natal clinics in health institutions but only about 40% of these deliver in health institutions.

3/.....

The other problem which was observed during EPI/MCH/PHC evaluation was that the staff who actually supervise the TBA are not trained in training and supervision of the TBAs hence the need to review the programme.

SELECTION

1. 1. Criteria for Selection.

The trainees should be selected on the basis of:

- 1. Community acceptability in the performance of midwifery.
- 2. Maturity - preferably between 30 - 45 years of age and above.
- 3. Parity of 3 or more
- 4. Educability
- 5. Leadership
- 6. Should be a practicing TBA.

- 1. 2. The trainee should be selected in collaboration with community organizations like the village productivity committee, health centres staff, community development, department and the Ministry of Labour and Social Services.

TRAINING PERIOD

Duration

6 weeks theory training which can be broken into modules or can be continuous until the TBA qualifies. In between the training the trainer should observe the TBA conducting at least one delivery.

FUNCTIONS OF A.T.B.A.

3. 1. Ante-natal Care.

- 1. Health education on the importance of early antenatal care.
- 2. History taking
- 3. Identification of high mothers and making appropriate referral.
- 4. Advice on nutrition during pregnancy.
- 5. Examination of antenatal mothers.
- 6. Advise and prepare mothers for delivery.

3. 2. Intra - partum Care - Natal

1. Monitoring and conducting normal delivery.
2. Preparation of equipment before delivery and maintenance of TBA Kit.
3. Identification and referral of high risk mothers.

3. 3. Post-natal Care.

1. Conduct post-natal examination of mothers and infant.
2. Health education.
3. Advise on nutrition after delivery and during breast feeding.
4. To identify and refer complicated post-natal cases.

3. 4. Child Care.

1. Health education on importance of immunization.
2. Health education on child nutrition.
3. Health education on the control of diarrhoeal diseases.
4. Teach and demonstrate how to manage a diarrhoea case at home, using home made ORS.
5. Health education on the six preventable childhood diseases and other communicable diseases.

3. 5. Hygiene.

1. Advise on:
  - Personal hygiene.
  - Environment Health.

3. 6. Family Planning.

1. Motivating and case finding.
2. Advise mothers on available methods of family planning.

5:..... HIV/AIDS PREVENTION

1/ To give advise on to mothers on the prevent of HIV infection and AIDS control.

a/ Health education on causes, transmission of AIDS.

- 2 -  
PROPOSED T.B.A. TRAINING SYLLABUS

5. Ante-partum Period.

General Objective: To enable the TBA to Provide safe and effective care to the pregnant mother.

SPECIFIC OBJECTIVES	SUB-OBJECTIVES	CONTENT	METHOD	LEARNING EXPERIENCE	VISUAL AIDS
The TBA will be able to: 1. To briefly describe the anatomy and physiology of the female reproductive system.	1. 1. The TBA will be able to: Name the parts of the female reproductive system.	<ul style="list-style-type: none"> <li>- External genitalia</li> <li>- internal genitalia</li> <li>- Vagina</li> <li>- Cervix</li> <li>-Uterus</li> <li>- Fallopian tubes</li> <li>- Pelvis</li> </ul>	Lecture discussion demonstration	Demonstration on a pelvis	Pelvis Board:Chal Flip Chart
2. Explain the importance of early ante-natal care to the mother.	2. 1. Give reasons why it is important to start early antenatal care(3-4 months)	<ul style="list-style-type: none"> <li>-Importance of antenatal Clinic.</li> </ul>	Lecture discussion role play.	explain verbally.	
3. Perform a general physical examination of a mother and select mothers for referral to ante-natal clinics Palpate and recognise the lie of	The TBA will be able to: 3.1. describe the signs of normal	<ul style="list-style-type: none"> <li>-Enlargement of the Abdomen amenorrhoeaBreast changes morning sickness</li> </ul>	demonstration role play Discussion	Demonstration on a pregnant woman	Pregnant woman Foetal scope.

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Antepartum Period continued

General Objective: To enable the TBA to provide safe and effective care to the pregnant mother

SPECIFIC OBJECTIVE	SUB-OBJECTIVES	CONTENT	METHOD	LEARNING EXPERIENCE	VISUAL AIDS
	The TBA will be able to 3.2. Assess height and the danger of short stature (below 5 feet).	-Will measure mothers against a wall mark of 5 feet	Lecture and demonstration	Demonstration and practice of measuring by each TBA	5 feet string or stick.
	3.3. Recognise an anaemic mother from a non-anaemic and refer to the health centre.	-Pallor of face and conjunctive -shortness of breath -anorexia -general weakness -oedema	Lecture and Demonstration	Show anaemic and non-anaemic mother at P.M.	2 Pregnant Mothers
	3.4. Recognise an abnormal gait by observing the general walking pattern.	Limping and rickets.	Lecture Role play Discussion.	Explain Verbally and Demonstration.	
	3.5. Differentiate between a well nourished and a poorly nourished mother.	- Instructions of good eating habits. - A varied diet -Alternative Cheap sources of proteins -General signs of poor nutrition.		Demonstration of limping mother. Identifi- cation of on posters, flannel graphs and real foods.	Flannel graphs posters of foods and real food.

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2/12

Ante-partur Period.

SPECIFIC OBJECTIVE	SUB-OBJECTIVE	CONTENT	METHOD	LEARNING EXPERIENCE	VISA AIDS
<p>The TBA will be able to:</p> <p>3.6. Advise on general care of breasts.</p> <p>3.7. Recognise flat and inverted nipples and advise methods to improve condition of nipples.</p> <p>3.8. Examine the abdomen and determine the progress of pregnancy of need for referral.</p> <p>4. 1. select those mothers with short status and deformities.</p> <p>4.2. Identify at risk mothers and explain the importance of early referral.</p> <p>Identify "at risk" mothers and explain the importance of early referral.</p>	<p>The TBA will be able to:</p> <p>3.6. Advise on general care of breasts.</p> <p>3.7. Recognise flat and inverted nipples and advise methods to improve condition of nipples.</p> <p>3.8. Examine the abdomen and determine the progress of pregnancy of need for referral.</p> <p>4. 1. select those mothers with short status and deformities.</p> <p>4.2. Identify at risk mothers and obstetrical history.</p> <p>Identification of deformities.</p>	<p>-Checking of breasts</p> <p>-Cleanliness of breasts (daily bath)</p> <p>-Determine if abdomen is increasing in size.</p> <p>-Palpitation to determine lie, presentation and fundal height.</p> <p>-Significance of scars.</p> <p>-Dangers of oedema.</p> <p>- examination of oedematous legs to show pitting oedema</p> <p>Identification of deformities</p> <p>- Grand multipara</p> <p>- Prolonged labour</p> <p>- Postpartum haem.</p> <p>- Operative delivery</p> <p>- Neonatal death</p> <p>-stillbirth</p> <p>-abortion</p> <p>-prolapsed</p> <p>-Primigravida</p>	<p>Lecture and demonstration. Discussion.</p> <p>Lecture and demonstration</p> <p>Lecture and demonstration</p> <p>Lecture and demonstration</p> <p>Lecture demonstration</p> <p>Role Play.</p> <p>Lecture Discussion</p>	<p>Demonstration on pregnant mothers</p> <p>Demonstration of rolling and pulling of nipple.</p> <p>Demonstration and practice</p> <p>Demonstration and practice on mother with oedema.</p> <p>Explain verbally</p> <p>Explain verbally.</p>	<p>Pregnant mother</p> <p>Pregnant mother</p> <p>Pregnant mother Foetal Scope</p> <p>Pregnant mother.</p>

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Ante-partum Period

SPECIFIC OBJECTIVE	SUB-OBJECTIVE	CONTENT	METHOD	LEARNING EXPERIENCE	VISUAL AIDS
7. Create an awareness of the danger of traditional medicine given in labour	Review the type of traditional medicine in use. 7.1. Discourage the use of traditional medicine during labour	Danger of traditional medicine with specific examples	Role Play	Explanation	Actual Medicine (Traditional) if available
<u>Post partum Period</u>					
8. The TBA will be able to: understand the importance of balanced diet	The TBA will be able to advise the mother on the importance of balanced diet.	<ul style="list-style-type: none"> <li>- body building foods</li> <li>- energy giving foods</li> <li>- Protective foods</li> <li>- Plenty of fluids</li> </ul>	Discussions Lecture	<ul style="list-style-type: none"> <li>- Verbal explanations</li> <li>- Cooking demonstration</li> <li>- Emphasize on varied diet</li> </ul>	Real foods
<p><u>Family Spacing:</u> The TBA should be able to:</p> <p>1. Explain the importance of child spacing</p>	1.1. The TBA should be able to explain the advantages of child spacing	<p>give advice on child spacing.</p> <ul style="list-style-type: none"> <li>- Prolonged breast feeding</li> <li>- Prevention of unplanned pregnancies</li> <li>- Promotion of Family Health, RHCs, Hospital Traditional, Artificial, Natural methods</li> </ul>	Discussions	Demonstration visit to a Family Planning Clinic	Pills, Condoms, IUD.

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214

Intra-Partam Period

General Objectives: The TBA should be able to conduct a safe and clean delivery of a live infant and healthy mother.

SPECIFIC OBJECTIVES	SUB-OBJECTIVE	CONTENT	METHOD	LEARNING EXPERIENCE	VISUAL AIDS
The TBA will be able to : 1. Prepare instruments and materials for delivery	1.1. Identify instruments she will use during delivery and be able to use them.	boiling instruments bowls, scissors, etc. cord ties gloves	Lecture Discussion Demonstration	Naming and explaining of the use of instruments	Actual instruments
	1.2. Wash instruments and sterilise them by boiling method	sterilising by boiling method	Lecture Demonstration	Sterilising by boiling using traditional fire for 30 minutes	Actual Instrument fire
2. Deliver her patients in a clean, dry, well ventilated and well lit room.	2.1. Explain the importance of prevention of infection	- advantages of clean room with windows - sweeping -dusting	Discussion Ideal home visit TBA Demonstration	Practise in daily sweeping and dusting of room where TBA training takes place	broom, duster water for sprinkling on the floor etc.
3. Keep herself clean when in attendance to the mother and baby.	3.1. Always be presentable	TBA daily baths - wash clothes - emphasis on hand washing - Look for anaemia colour of conjunctive oedema, pressure on ankles for pitting	Lecture and Demonstration on hand washing Demonstration Discussions, observation (ANC ward)?	Wash hands  Examine and differentiate between normal and abnormal -take history and interprets	Soap, bowl of water clean hand cloth
4. Take a labour history on mothers who come in labour and identify the "at risk" mothers for referral	4.1. Examine the mother for anaemia and oedema 4.2. Re-organise early signs of external bleeding	signs symptoms and observations of bleeding	Observation and Lecture	TBA explains verbally to the group	

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32

Intra Partum Period

SPECIFIC OBJECTIVES	SUB-OBJECTIVES	CONTENT	METHOD	LEARNING EXPERIENCE	VISUAL AIDS
	4.3. Recognise early signs of obstructed labour	Signs of obstruction  -importance of severe abdominal pain not related to labour contractions	Discussion Lecture  Lecture	TBA Explain verbally to the group	Doll with big head Pelvis
5. Distinguish between true and false labour	5.1. Recognise signs and symptoms of true labour	- signs of true labour by feeling strength and frequency of contractions.  - Show or rupture of membranes	Lecture questions and answers Discussions	State signs and symptoms of true labour	Mother in labour
6. Demonstrate understanding of cleanliness during delivery	6.1. Encourage the mother to have a bath before delivery and shave	-encourage bath of patient -provide water	Discussion Observation	Provide water and bathroom Explanation	Soap, water razor blade
7. Management of normal labour	7.1. Understand the care of bladder  7.2. Recognise the progress of normal labour by strength of contractions and descent.	- reason for frequent emptying of bladder  -descent of head by abdominal palpitation.	Lecture Discussion  Discussion Observation Demonstration	Practising feeling for constriction and descent of head	Pregnant Mother in labour

Intra Partum Period

SPECIFIC OBJECTIVES	SUBJECTIVES	CONTENT	METHOD	LEARNING EXPERIENCE	VISUAL AIDS
<p>8. Recognise Obstructed labour</p>	<p>7.3. Recognise/ the stages of labour and normal duration of each stage</p> <p>7.4. Instruct the mother not to push before full dilation and be able reassure the mother throughout labour</p> <p>7.5. Provide and encourage the mother to take porridge and fluids during first stage of labour</p> <p>8.1. Recognise complications and refer the mother to hospital early Need to review the stages of labour</p>	<p>-First stage not to let sun set twice</p> <p>-second stage not more than one hour</p> <p>-third stage- not more than 30 minutes or time TBA takes to receive and wrap baby</p> <p>-4th stage observe mother and baby for one hour</p> <p>- dangers of pushing before full dilata- tion of cervix (second stage)</p> <p>-encourage light diet e.g. porridge and any sweet drink during first stage of labour</p> <p>-explain verbally reasons for giving porridge</p>	<p>Discussion Lecture</p> <p>Lecture Discussion Role play Discussion</p>	<p>Explanatio of different stages of labour and when to refer</p> <p>Watch a delivery</p>	<p>Mother in 2nd stage</p>

Intra-Partum Period

SPECIFIC OBJECTIVES	SUB-OBJECTIVE	CONTENT	METHOD	LEARNING EXPERIENCE	VISUAL AIDS
10.5 Instruct the mother to push with a contraction	reasons for instructing mother to wash with soap contraction and encouragement to relax in between contractions.	Discussion Demonstration Role play	Practice		
	10.6 Support the pad during crowning of head cover the sums	dangers of unassisted delivery	Discussion Demonstration	Practice	
	10.7 Receive the baby on a clean cloth and clean the airway	dangers of asphyxiation and infection	Discussion Demonstration	Practice	doll + clean cloth
	10.8 Ties the cord with two sterile ligatures and but the cord between ligatures with sterile scissors or razor blade.	cuts the cord with sterile scissors or razor blade after application of sterile ligatures or sisal, bark, cotton thread or material	Discussion Demonstration Role Play	Practice	All items mentioned
	10.9 Keep the baby warm immediately after delivery encourage skin to skin contact	How to keep the baby warm	Lecture Discussion Demonstration	Practice	doll, small blanket
11. Determine placenta separation	11.1 Recognise the signs of placental separation	signs of separation of placenta by feeling the firmness of the uterus, lengthening of the-	Lecture Discussion Questions and Answers, Observation	Verbal explanation	warm clothing

SPECIFIC OBJECTIVES	SUB-OBJECTIVE	CONTENT	METHOD	LEARNING EXPERIENCE	VISUAL AIDS
<p>12. Manage the blood stage of normal labour</p>	<p>12.1 Deliver the placenta and membranes by maternal effort and examine for completeness</p>	<p>cord and trickling of blood</p> <p>- delivery of the placenta and membranes by maternal effort and examination of the placenta for completeness</p>	<p>Lecture Discussion Demonstration</p>	<p>Practice</p>	<p>Placenta</p>
	<p>12.2. Assess the amount of blood loss</p>	<p>- Assess the amount of blood loss by estimating amount in cups and condition of the patient</p>	<p>Discussion Demonstration</p>	<p>Practice estimation by using gollynet from delivery kit</p>	<p>Receiver</p>
	<p>12.3 Control P.P.H.</p>	<p>-have patient void</p> <p>- control of PPH by rubbing up the uterus for a contraction and immediate referral</p>	<p>Discussion Demonstration</p>	<p>Practice</p>	
	<p>12.4 Inspect the perineum for tears and refer the extensive ones</p>	<p>- Put baby to breast</p> <p>- description of tears for referral</p> <p>- danger of unrepaired tears</p>	<p>Lecture Lecture Discussion Observation</p>	<p>Practice on a sponge</p>	

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3/9

Para-Partum Period

SPECIFIC OBJECTIVES	SUB-OBJECTIVE	CONTENT	METHOD	LEARNING EXPERIENCE	VISUAL AIDS
	12.5. Refer retained placenta if not delivered after 30 minutes	<ul style="list-style-type: none"><li>- signs of retained placenta</li> <li>- dangers of retained placenta or membranes.</li> <li>- importance of referral</li></ul>	Discussion Questions and Answers	Explaining verbally	

SPECIFIC OBJECTIVES	SUB-OBJECTIVES	CONTENT	METHOD	LEARNING EXPERIENCE	VISUAL AIDS
The TBA will be able to:	The TBA will be able to:	- normal colour of conjunctiva and tongue.	Lecture and Demonstration	Lecture and Demonstration	
1. Identify anaemia in the post-partum period.	1.1. recognise normal colour of conjunctiva and tongue	- abnormal colour of conjunctiva and tongue		- Classroom	
2. Detect breast engorgement.	2.1. Recognise breast engorgement.	- oedema - breast examination.	Lecture Discussion and Demonstration.	Demonstration and Practice (postnatal ward)	
	2.2. Recognise cracked nipples	- signs and symptoms of breast engorgement - cleaning nipples - treatment of cracked nipples - advice on when to refer for treatment.			water soap, clean cloth mother.
3. Differentiate a well contracted uterus from uncontracted uterus	3.1. Recognise well contracted uterus by palpating on abdomen	- uncontracted uterus - contracted uterus.	Discussion and Lecture		
	4.1. TBA should recognise and advise mother on normal colour amount and odour of lochia and duration.	normal colour, amount odour of lochia.		Demonstration patient with a septic postnatal ward.	mother if available
4. Acquire understanding of involution of the uterus.	4.2. TBA should recognise and advise mother on abnormal lochia.	- abnormal lochia need for referral	Lecture and discussion		
	4.3. TBA should recognise change in size of uterus.	change in size of involuting uterus.			

21

SPECIFIC OBJECTIVES	SUB-OBJECTIVES	CONTENT	METHOD	LEARNING EXPERIENCE	VISUAL AIDS
<p>5. Provide appropriate cord care during post-natal period.</p> <p>6. Having adequate knowledge of care of premature baby</p> <p>7. identify the problem of the new born baby during the post partum period and refer to hospital as when necessary.</p>	<p>5.1. Appreciate danger of applying medicines on the cord.</p> <p>6.1. Keep the baby warm by wrapping in dry linen.</p> <p>6.2. Identify premature baby for referral</p> <p>7.1. Differentiate a normal baby from a birth injury.</p> <p>7.2. Recognise jaundice in baby</p> <p>7.3. Detect the presence of infection in a baby</p> <p>7.4. Recognise baby with neonatal tetanus.</p>	<p>Cord care: - dangers of applying local medicines.</p> <p>- Characteristics of a premature baby.</p> <p>- problems of premature baby.</p> <p>- signs and symptoms of cerebral injury.</p> <p>- high pitched cry signs and symptoms jaundice.</p> <p>- failure to suck, fever continuous crying, convulsions.</p> <p>- signs and symptoms of tetanus.</p>	<p>Discussion lecture and Demonstration</p> <p>Discussion lecture and Demonstration.</p> <p>"</p> <p>Discussion lecture</p> <p>Lecture discussion</p> <p>"</p> <p>"</p>	<p>Practice cleaning cord-post metal Ward</p> <p>Demonstration of premature baby.</p> <p>"</p> <p>Demonstration Observation</p> <p>"</p> <p>Demonstration</p> <p>"</p>	<p>Soap, water clean wool spirit salt baby.</p> <p>doll, water cloth soap.</p>

322

- 18 -

SPECIFIC OBJECTIVES	SUB-OBJECTIVES	CONTENT	METHOD	LEARNING EXPERIENCE.	VISUAL AIDS
<p>TBA will be able to:</p> <p>1. Understand the importance of immunization.</p> <p>2. Identify Children with malnutrition and give nutritional advice based on available foods in the community. Educate TBA on the use of arm circumference as a guideline for child growth.</p> <p>3. Recognise early and late signs of dehydration and advise mothers on how to restore fluids.</p>	<p>1.1. Give reasons for encouraging mothers to attend Children's Clinic.</p> <p>2.1. Describe a well nourished and a poorly nourished child and select those for referral</p> <p>2.2. Advise on good weaning practices.</p> <p>3.1. Know the dangers of dehydration</p> <p>3.2. Recognise severity of dehydration and know when to refer.</p>	<p>Functions of the Children's Clinic</p> <p>Types of immunizations and immunization schedule.</p> <p>Signs and symptoms of malnutrition.</p> <ul style="list-style-type: none"> <li>- Breast feeding</li> <li>- Weaning foods e.g. semi solid nutritious food</li> <li>- porridge with groundnuts.</li> </ul> <p>Proper handling of food and utensils</p> <ul style="list-style-type: none"> <li>- signs of dehydration.</li> <li>- sunken fontanelle.</li> <li>- sunken eyes</li> <li>- dry mouth, tongue etc.</li> <li>- making of oral fluids.</li> <li>- safe water.</li> </ul>	<p>Lecture and field trips</p> <p>Lecture</p> <p>Discussion</p> <p>Demonstration</p>	<p>Demonstration</p> <p>Explanation</p> <p>Demonstration and practice</p> <p>Explanation</p> <p>cooking</p> <p>Demonstration</p> <p>Explanation</p> <p>Demonstration</p> <p>Explanation</p> <p>Demonstration</p>	<p>Posters on Children's Clinic.</p> <p>Posters on malnourished children</p> <p>Food real cooking Utensils Posters.</p> <p>Water Salt Sugar Cup.</p>

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CHILD CARE

SPECIFIC OBJECTIVE	SUB-OBJECTIVES	CONTENT	METHOD	LEARNING EXPERIENCE	VISUAL AIDS
<p>4. Identify childhood illness and make proper referrals</p> <p>To advise on prevention of home accidents.</p>	<p>4.1. Advise mothers on care of children with common illnesses of childhood.</p> <p>5.1. Should be able to mention some of the common home accidents.</p>	<p>-signs of fever, diarrhoea vomiting Otitis media worms, skin diseases conjunctivitis measles etc. burns paraffin-poisoning finger cuts and injuries fracture swallowing tablets.</p>	<p>Lecture Discussions Demonstration</p> <p>Lecture Discussion</p>	<p>Demonstration</p> <p>Explain Verbally and practice</p>	<p>Posters if available</p> <p>Broken bottles, coins, plastic bag etc.</p>

17/6

**GENERAL OBJECTIVE:** The TBA will understand the principles of personal hygiene and environmental sanitation and appreciate their importance in maintaining health.

SPECIFIC OBJECTIVES	SUB-OBJECTIVES	CONTENT	METHOD	LEARNING EXPERIENCE	TEACHING AIDS
<p>The TBA will be able to:</p> <p>1. Demonstrate good personal hygiene and be able to advise others</p>	<p>1.1. Instruct a mother on cleanliness of her self and her family.</p>	<ul style="list-style-type: none"> <li>- general hygiene measures</li> <li>- safe water</li> <li>- proper handling of food</li> <li>- prevention.</li> </ul>	<p>Lecture Discussions Demonstrations</p>	<p>Demonstration, Explanation on the importance of boiling water, washing hands before meals and after visiting toilet.</p>	<p>Soap, Water.</p>
<p>2. Demonstrate good sanitary practices on her own environment.</p>	<p>2.1. Explain to mothers how to prevent the spread of diseases.</p>	<ul style="list-style-type: none"> <li>- prevention of diseases by use of pit latrine</li> <li>- refuse pits</li> <li>- filling of cracks where bugs enter.</li> <li>- sweeping</li> <li>- separate houses for animals</li> </ul>	<p>Lecture Discussion field trips</p>	<p>Explanation of the importance of having toilet and refuse pits and proper care and sweeping of the house surroundings.</p>	

2/2

INTERSECTORAL CO-OPERATION

GENERAL OBJECTIVE: The TBA will appreciate the existence and role of other P.H.C. workers in her community and be able to work hand in hand with them.

SPECIFIC OBJECTIVES	SUB-OBJECTIVES	CONTENT	METHOD	LEARNING EXPERIENCE	VISUAL AIDS
<p>The TBAs will be able to:</p> <p>1. Identify her role in the health team and her relation to other primary health care worker.</p> <p>General Objective</p> <p>The TBA should be able to advise members on the prevention of HIV infection and control of AIDS.</p> <p>The TBA should be able to explain HIV:AIDS. She should know the mode of transmission.</p>	<p>1.1. Understand the duties of others.</p> <p>1.2. Utilize the health resources for referral</p> <p>Identify people at high risk.</p> <p>Know the importance of prevention of infection.</p>	<p>- duties of PHCC, CHW FHN, PHNs, etc</p> <p>- Health centres in hospitals CHW</p> <p>15-45 Years occupational risk Social Risk etc.</p> <p>Sterilizing by boiling methods.</p>	<p>Lecture and Field trip, Discussion.</p> <p>Lecture Discussion.</p> <p>Lecture Discussion Demonstration.</p>	<p>Explanation of the duties of health team</p> <p>TBA explains the high risk groups</p> <p>Sterilizing by boiling</p>	<p>Scissor bowls real instruments e.t.c.</p>