

**Proposal for a Health Facility Assessment in Eritrea**

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## ACRONYMS

ARI	Acute Lower Respiratory Tract Infections
BASICS	Basic Support for Institutionalizing Child Survival
DHS	Demographic and Health Survey
EPLF	Eritrean Peoples Liberation Front
MOH	Ministry of Health
NGO	Non-governmental Organization
ORS	Oral Rehydration Salts or Oral Rehydration Solution
TT-1, TT-3	Tetanus Toxoid (dose 1, dose 3)
UNICEF	United Nations Childrens Fund
USAID	United States Agency for International Development
WHO	World Health Organization

## EXECUTIVE SUMMARY

A rapid health facility survey was planned with the MOH in Eritrea between April 24 and May 5, 1994. Survey objectives, methodology, and sampling design were finalized and a survey instrument was developed. The assessment is designed to obtain information on the quality of case management for the common causes of childhood morbidity and mortality in Eritrea and to build local capacity to collect, interpret and use survey data to manage and plan public health programs. This information will be used to plan the primary health care strategy in Eritrea, including the development of a primary health care training strategy. During this visit, the survey instrument was pre-tested in outpatient health clinics around Asmara and a final timetable and budget for planning and implementation were finalized. The health facility survey will be conducted between June 14 and June 30, 1995.

## BACKGROUND

### Epidemiology and demographics

The three primary causes of morbidity and mortality of children less than five years of age in Eritrea are acute lower respiratory tract infections, malaria, and diarrheal diseases (MOH routine surveillance data, Health Profile of Eritrea, 1993). Together, these three diseases comprise almost 50 percent of all visits to outpatient facilities by young children. The quality of routine surveillance data is uncertain, since the completeness of reporting is unknown and since standard case-definitions are not used. In addition, the reported cases represent only those cases which reach the health system; it is likely that cases and deaths are under-reported. Mortality and fertility rates are not known with any certainty since a vital registration system is not operating routinely in the country and since reliable community-based studies have never been performed. A demographic and health survey (DHS) is planned for the end of 1995. Current figures used by the MOH describe the infant mortality rate as 135/1000 live births, the under five mortality rate as 161-203/1000, and the maternal mortality rate as 700/100,000 live births. The total fertility rate is estimated at 5.8 and the overall adult literacy rate at 37 percent.

A national census has never been conducted in Eritrea and current population estimates are based on a national referendum conducted in 1993. In 1993, the MOH estimated the total population to be 3.2 million (MOH, Strategic Plan Document, 1994). The population in many areas is unstable since large numbers of refugees are returning from Sudan to Eritrea. The lack of good age- and sex-specific census data for each province makes the calculation of rates difficult and unreliable.

Based on population estimates and routine vaccination reports it is estimated that the proportion of all children less than one year of age who were fully immunized in 1993 was 12 percent, with considerable regional variation ranging from 2 percent in the province of Gash Setit to 42 percent in the province of Asmara. A vaccination coverage survey has never been performed in Eritrea, but is planned in collaboration with WHO and UNICEF in May 1995. Vaccination drop-out

rates, estimated from routine administrative vaccination reports in 1993, indicate that almost 40 percent of children drop out between BCG and measles and that 73 percent of women drop out between TT-1 and TT-3 (national immunization and cold-chain review, State of Eritrea, May 1994, Gordon Larsen.)

A community-based nutrition survey was conducted by the MOH in early 1995, but results are not yet available. Data from health centers conducting routine growth monitoring in 1993 indicate that 40 percent of children less than five years of age were below the 80th percentile of weight for height. The prevalence of clinical goiter is believed to be as high as 55 percent in some areas, suggesting that iodine deficiency is a problem (MOH, Strategic Plan Document, 1994.)

### The health care structure

The health care system in Eritrea is a three-tier system comprising a primary level (community health workers, traditional birth attendants, health stations), a secondary level (health centers and provincial hospitals), and a tertiary level (referral and specialized hospitals.) It is estimated that of the 2500 villages in Eritrea, only 46 percent have access to health services (MOH, strategic planning document, 1994.) A number of health facilities were destroyed during the prolonged war with Ethiopia, and the quality of remaining facilities is suspected to be low. It is estimated that there are 20 hospitals, 35 health centers and 130 health stations in Eritrea operated by both the MOH and other governmental and non-governmental organizations (Health Information and Research Unit, MOH, Jan 1994). The current health structure was developed during the war with Ethiopia and is a fusion of a number of components: the EPLF military medical service, the EPLF civilian medical service established in areas under EPLF control, the Ethiopian medical service operating in areas under Ethiopian control, non-governmental and mission services, and private health services. The current structure of the MOH both centrally and peripherally has been summarized elsewhere (Institutional Capabilities and Needs Assessment, Al Neill, USAID/BASICS). The system is partially decentralized, with provincial medical officers being responsible for some training and supervisory activities.

Hospitals are primarily staffed by doctors (six years medical training) and registered nurses (3-1/2 years training). Health centers and health stations may be staffed by a number of different health workers including registered nurses, midwives (one year training), nurse midwives (nursing training plus one year), health assistants (one year training), war surgeons (nurses with an additional six months of field surgical training), advanced dressers (health assistants with an additional two years experience) and barefoot doctors (community practitioners with 3-six months field training). Staffing patterns are variable and the MOH suspects that the numbers of staff available are inadequate in a number of areas.

Peripheral health workers are trained in the management of common childhood diseases, vaccination techniques and the use of a health register, but they are not trained using standard case management protocols nor are they given standard practice guidelines or standard case

definitions for reportable diseases. There are currently no national policies or practice guidelines for the management of diarrheal diseases, pneumonia, malaria, or malnutrition. How health workers approach the assessment and classification of sick children in areas where laboratory facilities are not available is unknown. Discussions with nurses trained by the MOH and who have worked in health centers indicate that ORS is the primary recommended treatment for diarrhea. Lafa, a common home-liquid composed of boiled water, flour, sugar, and salt, is recommended in areas where ORS is not available. Bloody diarrhea is usually treated with metronidazole. The primary drug for the treatment of pneumonia is penicillin and all cases of pneumonia are hospitalized. The primary treatment for suspected malaria is chloroquine. In peripheral areas, registered nurses and health assistants are able to prescribe and administer basic medications.

#### Primary Health Care strategy

The MOH in Eritrea has identified primary health care as a key component of its strategic plan for improving the health status of the population (MOH, strategic plan document, 1994). Five programs have been established for implementing primary health care activities:

- a) Universal child immunization
- b) Diarrhea/acute lower respiratory tract infections/malaria control
- c) Safe motherhood and perinatal health promotion
- d) Maternal and child nutrition
- e) Community-based services

It is hoped that all of these programs will be implemented or supported by health facilities. Health facilities will ultimately provide a package of services including immunization, medical, antenatal and growth monitoring clinics. A number of key strategies have been identified as important for implementing primary health services, including the development of a health information system, a comprehensive pre-service and in-service training program, a public health education strategy, and a financing plan. A facility assessment is seen as a critical first step in the development of improved primary health care services since there is currently no information available on the case management performance of health workers, their training needs or the barriers to their effective functioning.

#### **PROPOSED METHODOLOGY FOR A HEALTH FACILITY ASSESSMENT**

Planning for a rapid health facility assessment was undertaken between April 24 and May 5, 1995 by the USAID/BASICS project in collaboration with the Ministry of Health in Eritrea. Between April 24-28, survey objectives, methodology and sampling design were discussed and a draft survey instrument was completed. Between May 1-5, the survey was translated into Tigrinya, back-translated, and pre-tested in outpatient clinics around Asmara. A final timetable

and budget for survey planning and implementation were completed by May 5, 1995. A list of principal persons contacted is included in Appendix 1.

## **1. OBJECTIVES**

The objectives of the proposed health facility assessment are as follows:

1. To determine:
  - a) current knowledge and practices of health care workers at outpatient clinics regarding the assessment and management of sick children and women of childbearing age;
  - b) the barriers to effective case management practices; and
  - c) the adequacy of training and supervision of health workers.
2. To use information obtained on case management practices, training, supervision, and barriers to public health practice to:
  - a) prioritize and plan improvements in outpatient health facilities at all levels, including staffing, clinic organization, equipment requirements, drug and material supplies, and communication;
  - b) improve and develop pre-service and in-service training for health care workers in the outpatient clinic setting; and
  - c) improve and develop a strategy for supervising and monitoring health worker performance.
3. To train provincial health care workers in survey techniques, collection and analysis of survey data, and the use of data to improve the quality of case management in outpatient health facilities.

## **2. TIMING AND CONDUCT OF THE SURVEY**

The wet season in Eritrea extends from July to September. During this season the condition of the roads makes travel difficult in many parts of the country. Ideally, therefore, the facility survey should begin before the month of July. A review of routine MOH surveillance data between June and October indicates that the peak incidence of malaria is in the month of October in all provinces, with the highest number of cases from the western lowlands. The incidence of

acute lower respiratory tract infections and diarrheal diseases remains relatively constant during this period. Since this survey will sample children less than five years of age attending outpatient clinics with suspected malaria, diarrhea, or ARI, it is important that clinics see enough cases to provide an adequate sample. On balance, it was believed that an adequate number of cases would be seen during the month of June.

When planning the conduct of the survey, the following criteria were used:

1. **The survey should be rapid.** Data collection will be conducted over a period of six days (Monday-Saturday.) A shorter duration will reduce costs and will reduce the time that health workers are away from their posts.
2. **Surveyors should be involved in analysis and interpretation of the results.** Health workers at all levels are more likely to understand and to use the results if they are involved in the analysis, as well as collection, of data.
3. **Results should be provided in a timely fashion to all MOH departments in Asmara as well as to health workers in all provinces.** Results from this evaluation should be used by trainers and supervisors to assist with the development of training and supervision activities.
4. **The survey should collect practical information on case management practices for a number of different childhood diseases and maternal health as well as information on materials, supplies, and the condition of health facilities.** Information should be useful for improving the management of mothers and children at outpatient health facilities. Knowledge and practices of health workers as well as the availability of materials and supplies and the staffing and organization of the clinic will be important.

Outpatient clinic hours are usually 8:00-12:00. It is proposed that survey visits be conducted during the morning session and that surveyors travel to the next health facility in the afternoon.

### 3. SAMPLING

Eritrea is divided into ten provinces or regions. For the purposes of the survey, the country was divided into four areas which are representative of the geographic, ethnic, and demographic characteristics of the country. The four selected areas are as follows:

**Area 1:** Gash Setit (representative of the western lowland provinces with a dry, hot climate, border areas, several tribal groups, and with remote and isolated populations.)

- Area 2:** Asmara (representative of an urban setting.)
- Area 3:** Hamasien, Seraye, AkeleGuzai (representative of the central highland provinces with higher population density, closer to population centers.)
- Area 4:** Denkalia (representative of the eastern lowlands and the coastal areas.)

Within each of these sampling areas, the sampling frame consisted of all hospitals, health centers and health stations. A complete list of facilities was obtained and verified from the Health Information and Research Unit of the MOH. In each area, one hospital, one health center and four health stations were randomly selected using random digit tables. Health stations represent 75 percent of all health facilities in all regions, so sampling was based on their proportional representation. In addition, one health center and one hospital were randomly selected in each area. It was possible to select only three health facilities in the Denkalia area due to logistical constraints; many facilities are remote and very difficult to reach by car. The final sample by sampling region is listed in Appendix 2.

Since sampling was stratified by area, and since only six facilities can be visited in each area, it will not be possible to obtain a sample of sufficient size to have statistical power. It will not be possible, therefore, to compare the results from different areas statistically, nor can we be sure of the precision of the final results. However, the results will still be a representative measure of all health facilities.

The sampling design is a modified cluster sampling design. Children under five years of age coming to a single health facility represent a cluster. The validity and reliability of the results will be increased with the number of children seen. For this survey, **all children presenting to the health facility during the period of observation whose mothers describe them as having fever/malaria, cough/difficulty breathing/pneumonia, or diarrhea will be included in the sample.** It is estimated that a minimum of five children will meet these criteria at each health facility. The minimum sample size will therefore be 30 for each sample area, for a total sample size of 120.

#### 4. SURVEY INSTRUMENTS

The survey instruments are designed to obtain information on key aspects of the knowledge and practices of health care workers and of mothers leaving the health facility. In addition, information will be obtained on the facility itself, including the availability of materials and supplies. The survey will assess important aspects of the case management of sick children but does not require that "standard case management" training has been conducted in the past.

Four survey instruments will be used at each outpatient health facility:

1. **Observation of how a health worker manages the sick child, including:**
  - What a health worker asks the caretaker
  - Some aspects of how a health worker examines the child
  - What assessment the health worker makes
  - What treatment is selected and given
  - What advice the health worker gives the caretaker about home care
  
2. **Interview of health personnel regarding knowledge and practices of case management of sick children, including:**
  - What the health worker asks about and looks for in a sick child
  - Treatment given by the health care worker
  - Advice given by the health worker to the mother
  - What training and supervision are available for health workers
  
3. **Exit interview with the caretaker of the child as (s)he leaves the health facility, including:**
  - What the caretaker knows about managing the child's illness at home
  - What the caretaker knows about mixing and using ORS
  - What the caretaker knows about administering medications to the child
  - Whether the mother understands the signs of severe illness
  
4. **Assessment of facilities and supplies, including:**
  - Physical space and other supports for the outpatient clinic
  - The availability of equipment and supplies for managing and treating sick children
  - The availability of health education materials
  - The availability of complete disease and immunization registers

The survey will be administered in Tegrigna, the national language. All questionnaires were translated into Tegrigna and then back-translated to verify the accuracy of the translation. Questionnaires were field-tested at health stations in the province of Hamasien. In some areas, the caretakers of children may not speak Tegrigna and in this case, local interpreters or health workers at the facility will be asked to act as interpreters for the exit interview. Copies of the final questionnaires are included in Appendix 4.

## 5. SURVEY COORDINATION AND SURVEY TEAMS

The survey will require a survey coordinator, a survey manager, and one survey team for each study area.

### **Survey coordinator**

The survey coordinator will be Dr. Mismay Ghebrihiwet. His responsibilities will include: reviewing the survey protocol, ensuring that all administrative arrangements have been made, and assisting with supervision of the survey.

### **Survey manager**

The survey manager will be Mr. Teklai Stephanos. His responsibilities will include: recruiting surveyors for the survey teams, ensuring that vehicles are available for the survey, ensuring that field arrangements are made for survey teams, obtaining rooms for training of surveyors and data analysis, procuring materials, copying survey questionnaires and managing the field budget.

### **Survey teams**

One survey team is required for each study area. Each team will be composed of a supervisor and two surveyors. Supervisors for each area are as follows:

- Area 1:** Mr. Awerworki Berhe
- Area 2:** Mr. Tesfa Michael
- Area 3:** Dr. John Murray
- Area 4:** Mr. Teklai Stephanos

Surveyors have not yet been selected. The following criteria will be used for selecting potential surveyors:

- a) should have a medical background and work in outpatient health facilities at the provincial level;
- b) should be able to speak, read and write both Tigrigna and English;
- c) should be able to be away from their posts for 19 days; and
- d) will be returning to work in the provinces and will have an opportunity to use the skills and knowledge obtained from the survey.

At each health facility, the supervisor will be responsible for introducing the team and explaining the purpose of the visit. During the clinic visit, the supervisor will identify children who meet the case definition for entry into the survey and give an identification card to the mothers of these children to ensure that they are followed in the clinic. In addition, the supervisor will conduct the facility review section of the survey. One surveyor will be stationed in the consulting room and

will conduct the health worker observation component of the survey; at the end of the clinic this surveyor will also conduct the health worker interview. The second surveyor will conduct exit interviews with caretakers as they leave the clinic with their child. The supervisor will monitor the performance of the surveyors regularly to ensure that questionnaires are being completed correctly; errors or incomplete questionnaires will be corrected in the health facility. At the end of the day, the supervisor will review all questionnaires for completeness and accuracy. Completed questionnaires will be coded for data entry by supervisors.

Training of survey teams will be conducted over four days before the beginning of field activities and will involve a review of survey methodology, data collection instruments and conduct of the field activities. Training will involve group activities, role plays and practice sessions at local outpatient health clinics. Training materials and a program for training activities will be completed by USAID/BASICS.

## 6. DATA ANALYSIS AND USE OF SURVEY INFORMATION

Questionnaires will be returned to Asmara and questionnaire data will be entered into EPIINFO (version 6.0) software by MOH personnel with data entry experience. Data analysis will be conducted by survey teams under the guidance of an epidemiologist with EPIINFO and survey experience. Key information will be summarized as tables and graphs. The following key indicators will be generated for each sample area.

### Key indicators

- a) *Proportion of facilities with at least one health worker trained in the last six months.*
- b) *Proportion of health facilities that have received at least one supervisory visit in the last six months.*
- c) *Proportion of facilities with up to date immunization and disease registers.*
- d) *Proportion of health facilities which have not experienced stock-outs in the last month.*
- e) *Proportion of children given appropriate antibiotics.*
- f) *Proportion of children seen needing a vaccination who receive a vaccination.*
- g) *Proportion of mothers seen needing a vaccination who receive a vaccination.*
- h) *Proportion of mothers given at least one key message for the management of their child in the home.*
- i) *Proportion of mothers with correct knowledge of how to mix and administer ORS.*

- j) *Proportion of mothers with correct knowledge of at least one key message for the home management of their child.*
- k) *Proportion of mothers that understand at least one sign of when to seek care for their child.*
- l) *Proportion of health workers with correct knowledge of at least one sign of when to refer a child to a hospital.*

### **General information**

In addition to key indicators, other general information will be available from the survey including:

- a) The staffing, scheduling and infrastructure of health facilities, and the availability of essential equipment, disease registers, and immunization cards.
- b) The availability of essential drugs, ORS, and vaccines and the number of expired medications.
- c) Case management practices of health workers, including history taking, assessment of the mother and child's vaccination status, and how health workers communicate to mothers.
- d) The most important barriers to the effective functioning of health facilities as perceived by health workers.
- e) The most important barriers to attending health facilities and mothers' knowledge regarding the management of childhood diseases in the home.

Key indicators and other information will be summarized and discussed with survey teams. The use of survey information to improve the quality of all health services will be discussed, with an emphasis on how each participant will use the information in their own areas. Findings will then be presented by the survey team to a larger group of representatives from divisions of the MOH and other organizations. How this information will be used by all levels of the health care system will be further discussed; it may be possible for health workers or supervisors to address some barriers to effective management of sick children directly, while other barriers, such as the availability of materials and supplies, may require action at the provincial and central levels. Final copies of the survey results will be distributed to participants who will be responsible for sharing the findings with health workers in their own regions.

## 7. **TIMELINE**

A suggested timeline of activities follows. Estimated material, copying, per diem and transportation requirements are summarized in Appendix 3.

### **MAY, 1995**

- a) Complete translation of questionnaires into Tegrigna: USAID/BASICS, Asmara
- b) Format and type translated questionnaires: USAID/BASICS, Asmara
- c) Complete schedule and materials for surveyor training: USAID/BASICS
- d) Write EPIINFO data entry program for survey questionnaires: USAID/BASICS
- e) Contact and recruit surveyors for the survey: Teklai Stephanos, MOH
- f) Finalize per diem rates for surveyors and supervisors and mechanism for purchasing materials and supplies: Teklai Stephanos, MOH and Al Neill, USAID/BASICS, Asmara
- g) Make arrangements for survey vehicles: Teklai Stephanos, MOH
- h) Arrange rooms for surveyor training, data analysis and final meeting: Teklai Stephanos, MOH and Al Neill, USAID/BASICS

### **JUNE, 1995**

#### **Monday 5-Tuesday 13**

- a) Purchase supplies and paper: Teklai Stephanos, MOH and John Murray, USAID/BASICS
- b) Copy questionnaires and surveyor training materials: John Murray and Al Neill, USAID/BASICS
- c) Complete final arrangements with surveyors, and procurement of vehicles: Teklai Stephanos, MOH

#### **Wednesday 14-Saturday 17**

Surveyor training: Supervisors, MOH and John Murray, USAID/BASICS

**Monday 19-Saturday 24**

Survey field work: Survey teams, MOH and USAID/BASICS

**Monday 26-Thursday 29**

- a) Data entry and analysis: Survey teams, MOH and USAID/BASICS
- b) Discussion and interpretation of results: Survey teams, MOH and USAID/BASICS
- c) Completion of final survey report: Survey teams, MOH and USAID/BASICS

**Friday 30**

Meeting with MOH, NGOs, and other interested parties to present and discuss survey findings: Survey teams and USAID/BASICS

8. LOCAL BUDGET (see Appendix 3 for a breakdown of budget items)

ITEM	COST (Birr)
Materials and supplies	1,800
Paper	1,000
Copying	10,000
Refreshments	600
Personnel:	
Drivers	1,600
Surveyors	11,400
Supervisors	7,600
Data entry/analysis	4,200
Interpreters	200
Vehicles	Provided by MOH
	23,000 (provisional cost)
Fuel	800
<b>Total costs</b>	<b><u>39,200 Birr</u></b>
	<b><u>+23,000 provisional</u></b>

**APPENDICES**

**APPENDIX 1**

## Appendix 1

### Principal persons met

#### MOH in Eritrea

Dr. Afeworki Abraham, Director of Health Care Services  
Dr. Mismay Ghebrihiwet, Head of Primary Health Care Services  
Dr. Sennay Kifleyesus, Director of Planning and Evaluation  
Dr. Tesfaldet Woldeghiorhis, Head of Health Information and Research Unit  
Dr. Eyob Tekle, Geographic planning  
Dr. Debruzion Berlie, Head of the Communicable Disease Unit  
Dr. Kidane Noldeyesus, Head of the Pharmacy  
Dr. Ghebrenegus Negash, Health Information and Research Unit  
Mr. Samuel Goitom, Statistics clerk, Health Information and Research Unit  
Mr. Teklai Stephanos, Head of the Community Health Services Unit  
Mr. Afewerki Berhe, Registered Nurse  
Mr. Tesfa Michael, Registered Nurse  
Mr. Filli SaidFilli, EPI program manager  
Dr. Fessanaye Selilu, Head of the Malaria Control Unit

#### UNICEF

Dr. Debressai Haile, Project Officer  
Dr. Turham Saleh, Planning and evaluation

#### SAVE THE CHILDREN (UK)

Mr. Anthony Thompson, Chief of Party  
Mr. Temesghen Araya, Project Officer

#### UNHCR

Ms. Lois Purdham, Senior Program Officer

#### USAID

Ms. Pam Delargy, HPN Officer  
Ms. Patricia Weinberg, Training Officer, MSH  
Mr. Sushil Kumar, Consultant, DHS surveys

**APPENDIX 2**

## Appendix 2

### Final sample of health facilities: Eritrea health facility assessment

#### Area 1 (Gash setit)

Hospital: Tseseney

Health Center: Tokombia

Health stations: Goligi  
Haykota  
Shambuko  
Kuluku

#### Area 2 (Asmara)

Hospital: Mekanehiwel

Health center: Akria

Health stations: Hazhaz  
Akria  
Zobasaba  
Edagaarbi

#### Area 3 (Hamassien, Seraye, AkeleGuzai)

Hospital: Senafe

Health center: Seregeka

Health stations: Adi Guroto  
Segeneitz  
Kutmowilie  
Embaderho

#### Area 4 (Denkalia)

Health centers: Ghelalo  
Tio

Health station: Enghel

**APPENDIX 3**

### Appendix 3

Eritrea health facility assessment; Estimated supplies, copying, per diem and transportation costs. It is assumed that 4 survey teams of 3 individuals will be required for a total of 19 days (4 days in Asmara for training, 8 days for field work, and 5 days for data analysis and report writing and 2 days traveling time).

#### Materials and Supplies

12 clipboards  
24 ball-point pens, and pencils  
12 pencil sharpeners  
12 erasers  
12 folders for carrying questionnaires

Blankets and linen for 8 persons (MOH to provide)  
Kerosine for cooking: 10 litres  
Water containers (20L): x2  
First aid kits:x4  
Malaria prophylaxis: 15 days for 8 persons (mefloquine)

Paper: Total survey pages=40; estimated interviews conducted=240  
Estimated pages required=9,600

Total practice survey pages=40; estimated practice interviews=12  
Estimated pages required=480

Surveyor training; total estimated pages=40 Copies=12  
Estimated pages required=480

**Total estimated pages=11,000**

#### Copying:

Assume a total of 10,000 pages required

#### Refreshments:

Assume morning and afternoon refreshments for 12 people for 9 days

**Personnel:**

4 drivers for a total of 8 days  
8 surveyors for a total of 19 days  
3 supervisors for a total of 19 days  
4 data entry/computer personnel for 14 days  
1 external epidemiologist for 28 days  
1 external computer consultant for of 14 days  
Interpreters 6 days

**Vehicles:**

4 vehicles for 8 days: provided by the Ministry of Health

**Fuel:**

Gash Setit and Denkalia:	400 litres required for 8 days
Seraye, Hamasien and AkeleGuzai:	100 litres required for 8 days
Asmara:	20 litres required for 8 days

**APPENDIX 4**

State of Eritrea Health Facility Assessment: Ministry of Health, Eritrea: USAID/BASICS

Exit Interview--Sick Child

Province _____	Childs age (months) _____	Date ___/___/___
Facility Name _____		Facility type _____
Interviewer No. _____		ID No. _____

Greet the woman and tell her you would like to ask some questions about her visit to the health center today.

- Where do you live?       City                       Town  
 Suburb                       Village  
 Camp
- What form of transportation did you use to come here today? (Choose principal form of transportation)  
 Walked               Camel               Donkey               Taxi  
 Bus                       Private car  
 Other:(specify) \_\_\_\_\_
- How long did it take you to get here today? \_\_\_\_\_ minutes
- Did you have any problems coming here today. . . . . Y      N  
**IF YES, what was the primary problem?**  
 Takes too long to get here  
 Had to find someone to look after the children  
 Had to miss work  
 No money for transport  
 Hours are inconvenient  
 Other:(specify) \_\_\_\_\_
- Did you take your child anywhere before coming to the health facility? Y      N  
**IF YES, where did you take them:(tick all that apply)**  
 Another health center               Hospital  
 Traditional healer               Pharmacy/drug-seller  
 community health worker               Other:(specify) \_\_\_\_\_
- How long was it before your child got sick and your visit to the health center today?  
 Same day                       Number of days                       Don't know

7. DOES THE CHILD HAVE DIARRHEA? Y N

If NO, go to question 13

**If YES:**

8. Did you do anything to treat the diarrhea at home?..... Y N  
IF YES, what did you do? (Tick all that apply)

- Gave ORS
- Gave Lafa
- Herbs/traditional medicine
- Other treatment: (specify) \_\_\_\_\_

9. Have you ever heard of ORS for diarrhea?..... Y N

If NO, go to question 13

**IF YES, why do people give ORS to children with diarrhea?**

- To prevent dehydration
- To stop diarrhea
- Other:(specify) \_\_\_\_\_
- Doesn't know

10. Have you ever been shown how to prepare ORS?..... Y N

11. How much water is used to prepare ORS

- Correct(3 beer bottles or 1 litre)
- Incorrect
- Doesn't know

12. How much ORS do you put into 1 litre of water?

- Correct (1 sachet)
- Incorrect
- Doesn't know

13. Does the child have FEVER or MALARIA Y N

If NO, go to question 16

**If YES:**

14. Did you do anything to treat the fever at home?..... Y N

**If YES, what did you do: (Tick all that apply)**

- Gave paracetamol       Gave chloroquine/other antimalarial  
 Gave aspirin           Gave antibiotics  
 Gave tepid bath         Gave herbs/traditional medicine  
 Remove the child's clothing  
 Other:(specify)\_\_\_\_\_

15. What did the health worker say was wrong with the child?..... Y N

**(Tick all that apply)**

- Malaria  
 Pneumonia  
 Measles  
 Nothing/doesn't know  
 Other:(specify)\_\_\_\_\_

16. Does the child have:  
COUGH or DIFFICULTY BREATHING or PNEUMONIA?.. Y N

If NO, go to question 19

17. Did you do anything to treat the child at home?..... Y N

**If YES, what did you do?(Tick all that apply)**

- Gave paracetamol       Gave antibiotics  
 Gave aspirin           Gave herbs/traditional medicine  
 Gave cough medicine  
 Applied mentholatum  
 Other:(specify)\_\_\_\_\_

18. What did the health worker say was wrong with the child?

**(Tick all that apply)**

- Cold or allergy  
 Pneumonia  
 Bronchitis  
 Measles  
 Nothing/doesn't know  
 Other:(specify)\_\_\_\_\_

19. Did the health worker give you any medicines at the clinic today? Y N

**If NO, go to question 20**

**If YES, complete the table below:**

**For any ORAL medicines that the mother mentions, fill in the information in the table below by asking:**

**HOW MUCH medicine will you give the child EACH TIME?**

**HOW MANY TIMES will you give it to the child EACH DAY**

**HOW MANY DAYS will you give the medicine to the child?**

Medicine	How much each time?	How many Times/day?	How many days?
Chloroquine tabs			
Chloroquine syrup			
Antibiotic tabs			
Antibiotic syrup			
Paracetamol tabs			
Paracetamol syrup			
Aspirin tabs			
Aspirin syrup			
ORS			
Antidiarrheal			
Cough mixture			
Vitamin			

20. What did the health worker tell you to do for the child when you return home? (Tick all that apply)

Wasn't told anything/doesn't know

Give ORS     Give Lafa     Give more fluids     Give fluids after each stool

Give fluids after child vomits     Continue feeding or breastfeeding the child

Give tepid bath     Give antimalarial     Give paracetamol/aspirin

Complete course of medications

Bring the child back if he/she doesn't get better

Other:(specify) \_\_\_\_\_

29

21. Did your child receive an immunization today?..... Y N
22. How did you learn when and where to come for immunization? (Tick all that apply)
- Doctor/nurse/midwife     Community health worker  
 Community volunteer     Radio  
 Poster     Television  
 Neighbor or friend     Health education class  
 Other:(specify)\_\_\_\_\_
23. Where do you normally take your child for immunizations? (Tick all that apply)
- this clinic     another clinic  
 mobile clinic     Never immunized before
24. Has the health worker ever told you which diseases would be prevented by the immunizations you or your child have received? (Tick all that apply)
- Wasn't told     Measles  
 Diphtheria     Tuberculosis  
 Tetanus     Polio  
 Whooping cough     Doesn't know  
 Other:(specify)\_\_\_\_\_
25. Did the health worker tell you what might happen as a side effect after the immunization?  
..... Y N  
**If YES, what were you told? (Tick all that apply)**
- Fever     Pain at injection site  
 Irritability     Swelling     Other:(specify)\_\_\_\_\_
26. Have you or your child ever come to this clinic to be vaccinated and been turned away for any reason?  
Y N
- IF YES, what was the reason? (Tick all that apply)**
- Immunization session canceled  
 Immunization session stopped before the mother arrived  
 Child was ill  
 Clinic had run out of vaccine or supplies  
 Not enough staff to give vaccinations  
 Other:(specify)\_\_\_\_\_
27. How many vaccination visits does a child need in the first year of life to complete the series of vaccinations?\_\_\_\_\_



31. Do you have your own vaccination card?

yes       No       Lost       Never received       Left at home

**IF YES, copy the mothers tetanus toxoid vaccinations in the table below. If the mother's TT doses are recorded on the child's vaccination card, copy them here also.**

IMMUNIZATION			
TT-1	Received	Y	N
TT-2	Received	Y	N
TT-3	Received	Y	N
TT-4	Received	Y	N
TT-5	Received	Y	N

32. Did you receive a tetanus vaccination:

- Today  
 Referred for vaccination another day  
 Was not given or referred for tetanus vaccination

#### END OF INTERVIEW

Thank the woman for answering your questions and ask her if she has any questions.

Be sure that she knows how to prepare ORS for a child with diarrhea, when to return for vaccination and how to take the prescribed medications.



- |                                    |   |   |             |
|------------------------------------|---|---|-------------|
| Thermometer inside? .....          | Y | N | Temp: _____ |
| Temperature chart? .....           | Y | N |             |
| Freeze-watch indicator? .....      | Y | N |             |
| No. of days during the last month: |   |   |             |
| Temperature recorded _____         |   |   |             |
| Temperature above 8C _____         |   |   |             |
| Temperature below 0C _____         |   |   |             |
| 15. Frozen cold packs? .....       | Y | N |             |
| 16. Cold boxes? .....              | Y | N |             |
| Condition: _____ Good              |   |   |             |
| _____ Fair                         |   |   |             |
| _____ Poor                         |   |   |             |

Are the following medicines in stock?

- |   |   |   | Quantity        |
|---|---|---|-----------------|
| 17. Chloroquine tablets. ....             | Y | N | N _____ tabs    |
| 18. Chloroquine syrup. ....               | Y | N | N _____ ml      |
| 19. Chloroquine injectable. ....          | Y | N | N _____ amp     |
| 20. Cotrimoxazole tablets. ....           | Y | N | N _____ tabs    |
| 21. Cotrimoxazole syrup. ....             | Y | N | N _____ bottles |
| 22. Penicillin tablets. ....              | Y | N | N _____ tabs    |
| 23. Penicillin injectable. ....           | Y | N | N _____ vials   |
| 24. Ampicillin tablets. ....              | Y | N | N _____ tabs    |
| 25. Ampicillin syrup. ....                | Y | N | N _____ bottles |
| 26. ORS. ....                             | Y | N | N _____ sachets |
| 27. Metronidazole tablets. ....           | Y | N | N _____ tabs    |
| 28. Vitamin A capsules. ....              | Y | N | N _____ caps    |
| 29. Tetracycline eye ointment. ...        | Y | N | N _____ tubes   |
| 30. Iron tablets. ....                    | Y | N | N _____ tabs    |
| 31. Iron syrup. ....                      | Y | N | N _____ ml      |
| 32. Oral contraceptives. ....             | Y | N | N _____ cycles  |
| 33. Condoms. ....                         | Y | N | N _____ units   |
| 34. Are expired drugs in the clinic. .... | Y | N |                 |
| IF YES, which ones _____                  |   |   |                 |

Are the following vaccines in stock?

- |  |   |   |               |
|--|---|---|---------------|
| 35. OPV. ....                                | Y | N | N _____ Doses |
| 36. DPT. ....                                | Y | N | N _____ Doses |
| 37. BCG. ....                                | Y | N | N _____ Doses |
| 38. Measles. ....                            | Y | N | N _____ Doses |
| 39. Tetanus Toxoid (TT). ....                | Y | N | N _____ Doses |
| 40. Are expired vaccines in the fridge? ..   | Y | N |               |
| IF YES, which ones _____                     |   |   |               |
| 41. Are frozen vials of DPT or TT in fridge? | Y | N |               |

**Documentation and record keeping**

Are the following items present in the clinic?

- |     |   |   |   |
|-----|---|---|---|
| 42. | Immunization register. . . . .            | Y | N |
|     | If YES, is it up to date?. . . . .        | Y | N |
| 43. | A stock of vaccination cards. . . . .     | Y | N |
| 44. | A stock of TT cards. . . . .              | Y | N |
| 45. | Notifiable disease report forms. . . .    | Y | N |
| 46. | Is a patient register kept. . . . .       | Y | N |
|     | If YES, is it up to date. . . . .         | Y | N |
| 47. | No. of patents seen in last month _____   |   |   |
| 48. | Average No. of patents seen per day _____ |   |   |
| 49. | Are immunization tally sheets kept. . .   | Y | N |

**END OF EQUIPMENT AND SUPPLY CHECKLIST**





20. What does your supervisor do to keep your technical skills up to date? (Tick all that apply)

- Workshops
- Performance feedback
- Training sessions
- Other (specify) \_\_\_\_\_

21. Do you have to submit any reports such as the number of patients seen, or the number of doses of vaccine administered?..... Y N

**If NO, go to question 24**

**IF YES, ask the TYPE of report, HOW OFTEN and if the reports are UP TO DATE?**

Type of report	How often/year	Up to date?	
_____	_____	Y	N
_____	_____	Y	N
_____	_____	Y	N

22. How do you use the information collected in these reports to help you with your job?

- Ordering stock       Assessing targets
- Doesn't use info.       Doesn't know
- Other:(specify) \_\_\_\_\_

23. What type of feedback do you get from these reports?

- None       Oral discussion
- Written report       Other (specify) \_\_\_\_\_

24. What are the most difficult problems that you face in doing your job? (Tick all that apply)

- Lack of training
- Mothers don't bring children to clinic
- Staff shortages
- Lack of supplies and/or stock
- Lack of supervision
- Lack of feedback on performance
- Inadequate transport
- Other:(specify) \_\_\_\_\_

25. Have you discussed these problems with your supervisor?..... Y N

26. How many training sessions have you received in the last 6 months \_\_\_\_  
How many training sessions have you received in the last 12 months? \_\_\_\_

Apart from yourself, how many health workers working in this facility have received training in the last:  
6 months? \_\_\_\_  
12 months? \_\_\_\_

27. If training was received, what was it in \_\_\_\_\_

Did your last training involve clinical practice? . . . . Y N

28. In this clinic, at what ages do you give: (age in MONTHS)

	First	Second	Third	Fourth
DPT				
Polio				
BCG				
Measles				

29. To whom do you give tetanus toxoid? (Tick all that apply)

- Women of childbearing age (15-49) who come for care themselves
- Women of childbearing age who bring their children for immunizations or treatment
- Don't know

30. What days are the following immunizations given?  
(circle days for each vaccine)

	M	T	W	T	F	Sa	Number of immunization days/week
Measles							—
BCG							—
DPT							—
Polio							—
TT							—

31. Do you have an antenatal clinic? . . . . . Y N

IF YES, on what days is the clinic held (circle days)

	M	T	W	T	F	Sa	Number of clinic days/week
							—

IF NO, why are clinics not held? (Tick all that apply)

- No training
- No staff
- No space available
- No supplies
- People do not want this service
- Don't know

32. Please tell me all the things you would do for a child with fever in this clinic (tick all responses mentioned)

<input type="checkbox"/> Determine temperature	<input type="checkbox"/> Instruct mother to give tepid bath at home
<input type="checkbox"/> Give paracetamol	<input type="checkbox"/> Tell mother to bring the child back if worse
<input type="checkbox"/> Give tepid bath in clinic	<input type="checkbox"/> Assess immunization status
<input type="checkbox"/> Give chloroquine injection	<input type="checkbox"/> Immunize the child if needed
<input type="checkbox"/> Give chloroquine syrup or tablets	<input type="checkbox"/> Refer to another facility if very ill
<input type="checkbox"/> Admit to hospital or health center	<input type="checkbox"/> Give antibiotic injection
<input type="checkbox"/> Give antibiotic syrup or tablets	<input type="checkbox"/> Other(specify)_____

33. Please tell me the things you would do to treat a child with diarrhea in this clinic. (tick all responses mentioned)

Weigh the child on admission

Give ORS

Give Lafa

Instruct the mother to give ORS at home

Instruct the mother to give lafa at home

Instruct the mother to continue feeding the child

Instruct the mother to bring the child back if worse

Weigh the child at discharge

Assess immunization status

Give an anti-diarrheal medicine

Immunize the child if needed

Instruct the mother to give more fluids

Admit to hospital or health center

Other:(specify)\_\_\_\_\_

34. Please tell me all the things you would do to treat a child with pneumonia in this clinic? (tick all responses mentioned)

Give the child an IM antibiotic

Give the child an oral antibiotic

Admit to hospital or health center

Treat the child at home and see every day

Instruct the mother to bring the child back if worse

Instruct the mother to give more fluids

Instruct the mother to continue feeding the child

Assess immunization status

Immunize the child if needed

Refer to another facility if very ill

Other (specify)\_\_\_\_\_

35. Please tell me the signs that would make you refer a child to a hospital? (tick all that apply)

- Child is drowsy/abnormally sleepy/unconscious
- Child has had convulsions
- Child is not eating or drinking
- Child has not responded to usual treatment
- Child looks very unwell
- Child has a very high fever
- Other:(specify) \_\_\_\_\_

36. Have you ever wanted to refer a child to hospital but been unable to do so?

..... Y N  
 If YES, why could you not refer the child?(Tick all that apply)

- Hospital too far
- No transport available
- No fuel available
- Mother/parents refused to go
- Parents didn't have enough money
- Other (specify) \_\_\_\_\_

37. If a ten month old child comes to the clinic who is hot to the touch, has diarrhea, and has received no immunizations, what would you do? (tick all responses mentioned)

- Give BCG                       Give DPT-1
- Give polio-1                   Give measles
- Assess and treat the fever
- Assess and treat the diarrhea
- Tell the mother to return for immunizations when the child is well
- Other:(specify) \_\_\_\_\_

**END OF THE HEALTH WORKER INTERVIEW**

**Thank the health worker for his/her cooperation and answer any questions that he/she may have about the correct recommendations for immunizations or management of sick children.**



**Does the health worker ask for:**

21. The child's immunization card. . . . . Y N  
**If NO, go to question 22**  
 If YES, does the child have card. . . . . Y N

If the child has card: Is the child referred

- Today  Another day  Not referred

If child has NO immunization card, does health worker:

- Criticize the mother. . . . . Y N  
 Ask mother to return with card . . . . Y N  
 Refuse to vaccinate child. . . . . Y N  
 Vaccinate child and give another card. . . Y N  
 Vaccinate child and not give new card. . Y N  
 Vaccinate and tell mother to bring card  
 next time. . . . . Y N

If the child is not vaccinated what reason does the health worker give:

- Child is ill  Vaccine is given another day  
 No vaccine  Child is up to date  
 No reason given  Other (specify) \_\_\_\_\_

**Does the health worker ask for:**

22. The mother's vaccination card. . . . . Y N  
**If NO, go to question 23**  
 If YES, does mother have card. . . . . Y N  
**If she does NOT have card does the health worker:**  
 Ask mother number of doses of  
 TT received? . . . . . Y N

**Does the health worker:**

23. Refer mother for immunization  
 Today  Another day  Not referred

24. **Does the mother have another child with her in  
 addition to the one coming for care? . . . . . Y N**

**If NO, go to question 25**

**IF YES, does the health worker:**

- Ask for the immunization card of any other child  
 accompanying the mother and child? . . . . Y N

- Refer the accompanying child  
 for immunization? . . . . . Y N

Examination**Does the health worker examine the child's:**

25.	Ears.....	Y	N
26.	Throat.....	Y	N
27.	Chest.....	Y	N
	Count respiratory rate.....	Y	N
	Stethoscope.....	Y	N
28.	Abdomen by palpation.....	Y	N
29.	Skin turgor.....	Y	N

Diagnosis and treatment**Does the health worker diagnose the child as having:**

30.	Diarrhea/gastroenteritis.....	Y	N
31.	Dehydration.....	Y	N
	<b>If YES, is it</b> __Mild            __Moderate		
	__Severe            __Not Stated		
32.	Dysentery/bloody diarrhea.....	Y	N
33.	Cold/allergy.....	Y	N
34.	Pneumonia.....	Y	N
35.	Malaria.....	Y	N
36.	Fever, other cause.....	Y	N
37.	Measles.....	Y	N
38.	Skin condition.....	Y	N
39.	Other.....	Y	N
40.	Does not make a diagnosis.....	Y	N

**What does the health worker administer or prescribe for the child  
(circle ALL that apply)**

	<u>Administer</u>		<u>Prescribe</u>	
41.	Chloroquine injection.....	Y	N	
42.	Chloroquine tablets/syrup....	Y	N	Y    N
43.	Paracetamol.....	Y	N	Y    N
44.	Aspirin.....	Y	N	Y    N
45.	Tepid bath.....	Y	N	Y    N
46.	Antibiotic injection.....	Y	N	
47.	Antibiotic tablets/syrup....	Y	N	Y    N
48.	Cough medicine	Y	N	Y    N
49.	Vitamin A or vitamins.....	Y	N	Y    N
50.	ORS.....	Y	N	Y    N
51.	Lafa.....	Y	N	Y    N
52.	Antimotility/antidiarrheal... .	Y	N	Y    N
53.	Metronidazole tablet or syrup..	Y	N	Y    N
54.	Weaning food.....	Y	N	Y    N
55.	Tablet or syrup, unknown type..	Y	N	Y    N
56.	Injection, unknown type..	Y	N	Y    N
57.	None....	Y	N	Y    N

Does the health worker explain:

- |     |  |   |   |
|-----|--|---|---|
| 58. | How to administer medications. . .         | Y | N |
| 59. | The need to:                               |   |   |
| -   | Complete treatment. . . . .                | Y | N |
| -   | Give more fluids than usual. . . .         | Y | N |
| -   | Give fluids after each diarrhea episode. . | Y | N |
| -   | Give fluids after each vomit. . . . .      | Y | N |
| -   | Continue breastfeeding the child. . . .    | Y | N |
| -   | Continue feeding the child. . . . .        | Y | N |
| -   | Give paracetamol or aspirin. . . . .       | Y | N |
| -   | Give a tepid bath. . . . .                 | Y | N |
| -   | Return for next antibiotic dose. . . . .   | Y | N |
| -   | Return if the child gets worse. . . . .    | Y | N |

Is at least one of these messages checked?	Y	N
--	---	---

**If ORS is given or prescribed, does the health worker:**

- |     |   |   |   |
|-----|---|---|---|
| 60. | <u>Explain</u> how to prepare ORS. . . . .                | Y | N |
| 61. | <u>Demonstrate</u> how to prepare ORS. . . . .            | Y | N |
| 62. | Ask the mother to demonstrate how to prepare ORS. . . . . | Y | N |

**Does the health worker:**

- |     |  |   |   |
|-----|--|---|---|
| 63. | Ask the mother questions to see if she has understood. . . . . | Y | N |
| 64. | Ask the mother if she has any questions. . . . .               | Y | N |
| 65. | Criticize mother or show disapproval. . . . .                  | Y | N |
| 66. | Send the mother to education class. . . . .                    | Y | N |

**CHECK THE TIME OF THE INTERVIEW AS THE MOTHER LEAVES:**

TIME: \_\_\_\_\_

DURATION OF INTERVIEW: \_\_\_\_\_ minutes

**END OF HEALTH WORKER OBSERVATION**

4/5