

MULTIPLE INDICATOR

CLUSTER SURVEY

(MICS)

FAMILY HEALTH DEPARTMENT

MINISTRY OF HEALTH

ETHIOPIA

JUNE 1996

ACRONYMS

ARI	Acute Respiratory Infections
BF	Breast Feeding
BFIG	Breast Feeding Information Group
BFHI	Baby Friendly Hospital Initiative
CDDP	Control of Diarrhoeal Diseases Control Programme
CHT	Child health team
CPR	Comprehensive Programme Review
CSA	Central statistics Office
CYFWO	Children, Youth and Family welfare Organization
EPI	Expanded Programme on Immunization
FDRE	Federal Democratic Republic of Ethiopia
FHD	Family Health Department
FPR	Focus Programme Review
GOE	Government of Ethiopia
IDD	Iodine Deficiency Disorders
IEC	Information, Education and Communication
IMR	Infant Mortality Rate
LB	Live Birth
MDG	Mid Decade Goals
MICS	Multiple indicator Cluster Survey
MMR	Maternal Mortality Rate
MOH	Ministry Of Health
MPO	Master Plan of Operation
NCDDP	National Control of Diarrhoeal Diseases Control Programme
NGO	Non Governmental Organizations
NPA	National Programme of Action
OGA	Other Governmental Organizations
ORT	Oral Rehydration Therapy
ORS	Oral Rehydration Salt

PHC	Primary Health care
PPS	Probability proportionate to Size
SIDA	Swedish International Development Authority
TB	Total Birth
TGE	Transitional Government of Ethiopia
U5MR	Under 5 Mortality Rate
UNICEF	United Nations Children Fund
VAD	Vitamin A Deficiency
WHO	World Health Organization
WSC	World Summit For Children

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Multi-Indicator Household Survey, Ethiopia 1995 Ministry
of Health

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EXECUTIVE SUMMARY

This report summarizes the findings from a survey carried out in June 1995. It provides a baseline data to Mid Decade Goals /MDGs/ and World Summit Goals/WSGs/. Immunization coverage as measured by BCG, DPT3 and measles antigens coverage; ORT use rates, and consumption of iodized salt as essential intervention for the control of IDD were assessed in Multiple Indicators Cluster Survey/MICS/. In addition, mothers/caretakers knowledge when to seek care for ARI, status of vitamin A supplementation and breast feeding prevalence were also included in this survey.

The three out of the four MDGs which the government have had accepted as compared with the finding is shown in the following Table.

INDICATORS	MDGs	FINDINGS
IMMUNIZATION COVERAGE		
DPT3	80%	44.7%
OPV3	80%	44.8%
MEASLES	80%	37.5%
ORT PROMOTION		
ORT USE /ORS & RHF/	80%	95.2%
ORT USE /INCREASED FLUID/	80%	27.8%
ORT USE /INCREASED FLUID PLUS CONTINUED FEEDING/	80%	8.8%
UNIVERSAL SALT IODINATION /USI/		
CONSUMPTION OF IODIZED SALT	COUNTRY WIDE	0.2%

The findings from the survey have indicated that the mid-decade goals for immunization coverage and USI were not achieved. ORT use /ORS and RHF (Recommended Home Fluids)/ rate was the only indicator surpassed the MDGs; while ORT use(increased fluid intake) and ORT (increased fluid intake plus continued feeding) use were not reached.

Therefore, the outcome of this survey has shown the great tasks awaiting us towards fulfilling the targets of MDGs and WSC goals within the remaining years to come.

INTRODUCTION

Government of Ethiopia has ratified the convention on the "Right of Child" and adopted the goals of the World Summit of children on December 9 1991. In 1994, the government has also committed itself to the Dakar consensus by accepting four mid decade goals and drawn its own National Program of action which seeks the place of the welfare of children as the center of development.

These goals are:

1. To raise immunization coverage of all antigens from the present coverage to 80%
2. To increase ORT use from the current level to 80%.
3. Universal salt iodination.
4. Eradication of Guinea-worm (Dracunculiasis/).

Given the paucity of national base line data for the status of Mid Decade Goals, and to monitor the strategy and implementation during the process as well as the progress is urgently required. To provide data for on going programme activities and to up date the child health programmes indicators have necessitated to launch the Multiple Indicator Cluster Survey/MICS/. The need to assess programme activities in the new decentralization system in the country is another stimulus for conducting the MICS.

Eventually the outcome of this survey is believed to bring a new impetus by reminding the great tasks awaiting to all concerned to carry out the activities successfully towards fulfilling the targets of MDGs and WSC goals of this decade.

To this effect, Family Health Department of Ministry of Health in collaboration with UNICEF have conducted the MICS, on June 1995.

OBJECTIVES

GENERAL OBJECTIVES

- . To measure the status of Mid Decade goals and WSC goals in Ethiopia.
- . To compare current findings with the MDGs in respect of EPI/ORT and salt Iodination status.
- . To update major programme indicators of the y child health programs (EPI, CDD & ARI).
- . To monitor progress of child health programs mainly EPI, CDD & ARI.
- . To provide baseline data for the micro-nutrient deficiency control intervention mainly Vit.A and IDD.

SPECIFIC OBJECTIVES

1. EXPANDED PROGRAMME ON IMMUNIZATION

- . To measure immunization coverage in children under five years of age.

2. NATIONAL CONTROL OF DIARRHOEAL DISEASES PROGRAMME

- . To measure the frequency of mothers/caretakers using ORT when diarrhoea occur.
- . To determine the incidence of diarrhoea in children under the age of five.

3. NATIONAL CONTROL OF ACUTE RESPIRATORY INFECTIONS
PROGRAMME

. To assess the knowledge of mothers/caretakers when
to seek care for ARI.

. To determine the incidence of cough/cold (ARI) in
under the age of five.

4. CHILDHOOD NUTRITION AND MICRO-NUTRIENT DEFICIENCY
CONTROL PROGRAMMES

. To describe the pattern of breast feeding.

. To assess the status of Vit. A supplementation,
fortified food as well the knowledge of mothers or
caretakers about Vit.A.

. To determine the status of consumption of iodized
salt.

GOALS AND INDICATORS MONITORED IN THE MICS

These are World Summit of Children Goals (year 2000) and Mid Decade Goals assessed in the MICS, June 1995.

- Goal 1: Evaluation of Immunization coverage of six antigen of Expanded Programme on Immunization to 80% or more in all countries.
- Goal 5: Virtual elimination of Vitamin A deficiency
- Goal 6: Universal Iodination of salt in Iodine deficiency disorders/IDD/affected countries.
- Goal 7: Achievement of 80% ORT/increased fluids and continued feeding as part of the programme to control of Diarrhoeal Diseases.
- Goal 16. (WSc) Empowerment of all women to breast feed their children exclusively for 4-6 months, and to continue breast feeding with complementary food, well in to the second year.
- Goal 24 (WSc) Reduction by one-third in the deaths due to acute respiratory infections in children under the age five.

SURVEY DESIGN AND METHODS

SURVEY DESIGN: A cross sectional house hold survey was designed to achieve the study objectives. "Multi-stage, stratified" Clusters based on Probability Proportionate to Size (PPS) sampling techniques was employed to select the 150 clusters throughout the country. Thirty house holds from each cluster that made a total of 4,500 households were enrolled in the survey.

DURATION OF THE SURVEY: The survey was conducted from June 25 and ended in July 10/1995.

STUDY POPULATION: All under five children and their mothers or caretakers or house hold members who live in the identified cluster were the study population.

SAMPLING PROCEDURE: Identification of 150 clusters spread across the country for studying national level indicators allowed estimation of rate at the level of 95% confidence interval. These clusters were stratified in to two strata as rural and urban.

120 rural and 30 urban were identified.

These clusters were identified in four sampling stages.

1. Central level: Identification of clusters in the Regions;
2. Regional level: Selection of clusters in the Zones;
3. Zonal level: Identification of clusters in the Woredas;

4. Woreda level: community level of selection of clusters; were made using PPS sampling techniques.

Rural cluster selection: Estimated population of rural villages and/or peasant associations was obtained from local Woreda administration or Health department offices. Then clusters were selected using the same sampling procedures.

Urban clusters: Urban Dwellers Associations/Kebele/ are the smallest sampling units in the urban/per urban sampling schemes. Relevant and demographic information was collected from the Woreda offices and selection of clusters were made applying the same techniques.

SURVEY INSTRUMENT AND MATERIALS USED

Questionnaire Design: The questionnaires/modules were fully adopted with minor modification from the guidelines.

These modules were divided in to three components.

1. House Hold Module - This includes
 - . House Hold Information panel;
 - . Mother(s) and children listing form;
 - . Salt Iodination Module
2. Mother's Modules - Three parts
 - . Vitamin A module ;
 - . Acute Respiratory illness module;
 - . Breast feeding modules.

3. Children's Module

- . Diarrhoeal Disease module;
- . Acute respiratory infection module;
- . Vitamin A module:
- . Immunization module:

Guideline that deals with techniques on how to handle interview and fill the questionnaires was developed. This hand book used both during the training and field work as a guide.

DATA COLLECTION: Eleven core-team members, eleven regional coordinators, sixty supervisors and 150 interviewers were involved in the survey.

TRAINING: Five days training was given to the supervisors and surveyors.

DATA ANALYSIS: Data were entered and analyzed using EpiInfo 6.0.

Figures were calculated separately for rural clusters (cluster numbers 001 to 120) and for urban clusters (cluster numbers 121 to 150). Estimated weighted national figures were calculated assuming the following population distribution: rural = 85%, urban = 15%.

RESULTS

I. STATUS OF IMMUNIZATION COVERAGE OF SIX ANTIGEN OF EXPANDED PROGRAMME ON IMMUNIZATION TO 80 PERCENT OR MORE (MDG NUMBER 1)

The following Table summarizes the findings of immunization coverage of children age 12 to 23 months obtained from card and card plus history as compared with MDG No. 1. These are children born at July 15/85 to July 14/86 Ethiopian calendar (July 22/93 to July 21/94 G.C). This is the coverage of 1986 in the Ethiopian fiscal year. However, regular immunization reports are compiled using Gregorian calendar.

Weighted National estimates children age 1 year (12-23 months), by antigens and source compared with MDG No.1. MICS, June 1995, Ethiopia.

Total number of children = 1004
 Weighted percent with a card: 53.5%
 Weighted percent with a BCG scar: 58.9%

	MIDG	by card	by card + history
BCG:	80%	44.7%	64.6%
DPT3:	80%	42.8%	57.4%
OPV3:	80%	42.5%	56.5%
Measles:	80%	38.4%	54.4%

Although the survey findings only showed the 1995 first and second quarters, the likelihood to achieve the first MDG seems very ambitious. Out of the 62 Zones only 7 (11%) achieved DPT3 coverage 80% and over in the first six months of 1995. However, immunization coverage trends are encouraging with a consistent upward trend nationally for all antigens.

This success has been achieved through expansion of static and out reach services, a major increase in the availability of equipments, vaccines, large scale training of health staff, social mobilization. The survey findings has shown the need of further efforts and redirection of programme in order to achieve the targeted goal.

RECOMMENDATIONS:

1. Increasing accessibility to immunization services through expansion of basic health facility infrastructure, opening of new EPI static sites and conducting of many out reach immunization sessions.
2. Procure adequate cold chain equipment, injection materials and vaccines, transport, and others necessary supplies timely and regularly.
3. In order to reduce the high drop out rates; proper registry system should be introduced for tracing in each health facilities. and develop a strategy such as establishing a community network to assist in tracing of defaulters.
4. Missed opportunities should be avoided by promoting the routine checking of the immunization card with every visit to any health facilities and by providing immunization services every working day.

5. Supplemental Immunization strategies, high risk approaches or mopping up campaigns or racking strategies in special areas where there is extremely low coverage should be initiated and planned together in accompany with routine immunization campaign in order to have high coverage and make it sustainable as well as to achieve disease reduction target.

6. Increasing high level EPI advocacy is essential at both national and regional levels to ensure political commitments towards achieving high immunization coverage and diseases reduction goals.

7. Public awareness through intensive social mobilization and health education should be widely implemented to ensure participation of the public in EPI activities.

8. Immunization coverage should be monitored, analyzed in order to identify areas with low coverage or high drop outs and therefore, appropriate actions could be taken subsequently by the concerned level.

9. Quality assurance methods should be introduced routinely and used to improve the efficiency and quality of immunization activities at each health service level.

II. UNIVERSAL IODINATION OF SALT /USI/ IN IODINE DEFICIENCY DISORDERS /IDD/ AFFECTED COUNTIES (MDG No. 6).

Status with achieving goal.

Finding of the survey.

Result of the test of salt available in the households. MICS, June 1995, Ethiopia.

Test out come	% (n = 4,383)
Iodized salt	0.2% (9)
Not Iodized salt	96.7% (4227)
Salt not tested	1.4% (61)
No salt at home	1.7% (74)
No response	0.3% (11)

Endemic goiter prevalence is high as 66% in the high lands with mean prevalence of 26%. In view of this fact the government of Ethiopia has been committed for the USI.

The finding of the survey have clearly shown that the consumption of Iodized salt in this country is almost in existent.

Important initiatives that have been taken by the government of Ethiopia:

i) agreement has been signed with the Eriterian government in production of Iodized salt for the consumption of the two nations. To this effect, machines have been installed in the big salt production unit in Assab Port and inaugurated recently;

ii) in collaboration with UNICEF in land salt iodination on the process;

iii) National IDD Day have been celebrated in October 30 1995, where the Prime Minister has addressed the magnitude of the problem and the initiatives taken by the government;

iv) Iodine salt usage legislation is on the final stage to be endorsed;

v) IDD control programme is an integral part of micro nutrient deficiency control programme in child health team of MoH;

- . control strategies have been developed;
- . IEC materials production is on process;
- . implementation at regional levels is on process.

Therefore, considering the activities that have been carried out and the ongoing activities and if complemented with the strong IEC efforts in order to mobilize the huge consumer; then Ethiopia shall track this MDG in few years of time.

III. ACHIEVEMENT OF 80% USAGE OF ORT (INCREASED FLUIDS AND CONTINUED FEEDING) AS PART OF THE PROGRAMME TO CONTROL OF DIARRHOEAL DISEASES (MDG NUMBER 7)

Status of ORT usage:

NCCDDP indicators in children under the age of five years. MICS, June 1995, Ethiopia.

List of Indicators	MDG	Finding
ORT use(ORS/recommended home fluids)	80%	95.2%
ORT Use (Increased fluid intake)	80%	27.5%
ORT Use (Increased fluid intake and continued feeding)	80%	8.8%

ORS and recommended home fluid usage (ORT use) only surpassed the mid decade goals. Since the NCCDDP during the last decade advocates mainly about the recommended home fluids as shown on the National Policy of Diarrhoeal Diseases Control Programme.

ORT use(increased fluid intake) as well as ORT (increased fluid intake plus continued feeding) are the two most recent indicators used in the programme monitoring list of indicators. Continued feeding rate was found to be relatively high 40%.

The main reasons that contributes for the low ORT usages (increased fluid intake plus continued feeding) could possible be the lack of effective communication strategies of the programme at all levels. In addition, there is no full time responsible programme manager or responsible body for such activities at all levels.

Social mobilization, national and sub national sensitization workshops were carried out in the previous years. However, these activities were not properly planned or not monitored progressively, these undertakings could not bring the expected out put. Therefore, if tracking of these targets are desired in the few years to come; strong challenge is put in front of the program that deserves immediate actions.

OTHERS PROGRAM INDICATORS MEASURED:

1. Incidence of diarrhoeal diseases in terms of two weeks prevalence of diarrhoea in children under the age of five. Incidence in terms of episodes/child/year was 3.7 (non adjusted to season variation). When compared with the previous (4.8 episodes/child/year);the current incidence is low. The possible explanation could be due to methodological difference. There were different observations made about this indicator in different reports.

2. CDD Health facility Survey

Pertinent findings of the measured indicators.

Indicators	%
Supervisors trained in case management and supervisory skills	17
Health workers responsible for CM trained in CM	27
Health facilities with trained health workers	35
Health facilities with functional ORT corners	24
Children with diarrhoea correctly assessed (plan A, B, C)	31
Children with diarrhoea correctly rehydrated (plan B, C)	7
Children with diarrhoea correctly advised (plan A)	14
Children with diarrhoea correctly managed (plan A, B, C)	12
Children with suspected dysentery treated with recommended AB	30

The main survey findings were summarized as follows:

1. The overall standard case management of children below five years of age with diarrhoea was lower than expected but still acceptable.
 - . children presenting at the facilities with diarrhoea were usually correctly assessed, although only few health workers performed systematic and complete clinical examination and assessed child nutritional status;
 - . only a limited number of dehydrated children were correctly rehydrated due to the health worker's difficulties to calculate the correct amount of fluids to administer and in what period of time;
 - . the majority of caretakers were advised on the importance of giving more fluids and continued feeding, however many health workers were unable to advise correctly mothers about the danger signs indicating a need to seek medical help;
 - . the treatment given to children with bloody diarrhoea was found to be acceptable, however, survey findings showed an over-prescription of metronidazole and an irrational use of laboratory facilities.

2. Almost all the children observed with diarrhoea were given ORS and anti diarrhoeal were not available and not prescribed. This a great achievement of the NCDDP. Unfortunately, many caretakers received incomplete instructions about ORS use and preparation.
3. Knowledge of caretakers regarding the three rules of case management and how to prepare and administer ORS solution was found to be high. However, these caretakers could not be considered as a representative sample of caretakers from the five Regions surveyed.
4. The influence of effective training including hands-on practice was often reflected in improved diarrhoea case management among trained versus untrained personnel. Survey findings helped to identify weaknesses in health worker's knowledge and practice to be stressed in further training activities.
5. The frequency and quality of health worker supervision was very poor and could explain the lack of effect of supervision on the quality of diarrhoea case management.
6. ORS and recommended antibiotics were widely available, however not on a regular basis, especially at peripheral level.

7. More than half of the health facilities visited had functioning ORT corners
8. Many facilities had CDD case management charts and some health education materials, but sometimes old and out of date materials.
9. Many facilities had registers for monthly attendance of children (all reasons and/or specific for diarrhoea), and were used to send their monthly reports to the Zonal or Regional Health Bureaux'.

RECOMMENDATIONS

1. To increase accessibility to the general health services by means of expansion of health care facilities are initial steps in the increasing of access to effective case management.
2. CDDP should be strengthened at all levels. Full time programme manager at the central and at the regional level is important to resume the programme implementation.
3. Effective training including communication skills should remain a corner stone of the NCDDP
4. Information, education and communication materials as posters, leaflets and other materials should be developed and distributed to the regions, zones and woreda levels.

5. Financial and technical support to the programme should be secured. Government in put and external resources must be made available in order to enhance all programme component activities.
6. Sensitization workshops among the different professional association, NGO communities, religious leaders should be continued and intensified. Follow ups as part of monitoring should be instituted.
7. Improving the quality of services by means of provision integrated health services, procurement of ORS and recommended antibiotic, health education should be rendered in the ORT corners of each facilities.
8. Regular supervision of the trained personnel by the appropriate personnel should be practiced at all levels. Trained personnel should be assigned in the ORT corners in order to manage cases and advice mothers correctly.

III. RATIFICATION OF THE CONVENTION ON THE RIGHT OF A CHILD (MDG No. 10).

Status with respect to the goal.

The past decade has witnessed unprecedented world-wide surge of interest regarding the protection and development of children. The drive reached a crowding climax in the UN convention on the rights of the Child (1989). Yet all declaration of intent, including the monumental UN Convention, shall remain symbolic unless the concerned peoples and governments take concrete actions for their implementation.

In order to facilitate the implementation of this convention, ratification of this Convention was the initial step undertaken by the government of Ethiopia on December 9 1991. A national committee have been established comprising of involved government and non government agencies. Ministry of Health is represented by the child health team leader. This committee is presided by Children, Youth and Family Welfare Organization (CYFWO). The committee has translated the convention in to Amharic language and distributed to the regions.

The purposes for translating the convention in to Amharic are:

1. To implement the provision of the convention to the states that state Parties shall undertake to make the principles and the provisions of the Convention widely known, by appropriate and active means to adults and children.
2. To familiarize organizations concerned with the well being of children with the Convention and make them aware of the Rights of the child.
3. To make aware the public about the rights of children and there by promote their good upbringing.

To this effect, the committee has developed a National Plan of Action taking the goals of the convention as a target to be achieved by the year 2000.

Efforts to achieve the goals must be qualified and the commitment of other agencies should be indispensable. The National committee should strengthen itself. The same committee should be established in all different States, Zones and Woredas. The committees at the State levels and below should be accountable to the State counsels.

IV. OTHER WSC AND MID DECADE GOALS INCLUDED IN THE MICS.

1. VIRTUAL ELIMINATION OF VITAMIN A DEFICIENCY (MDG No. 6)

An assessment of Vit. A control initiatives was made through measuring of the proportion of the population/families and children reached by the programme.

Children under the age of five who have Vit.A supplementation, fafa/famix and those who had diet of Vit.A. reach food stuffs MICS, June 1995.

Indicators	% (n= 3,537)
Children received Vit. A caps	9.5% (337)
Children who had fafa/famix	9.4% (331)
Mothers who have heard the programme message (n= 4,165)	
have heard message programme message	21.3% (887)
Never heard	71.0% (
Do not know	7.7% (321)

Finding of the survey have shown that only 9.5% of children received Vit.A supplementation and 9.4% have had eaten fafa/famix (Vit A.fortified products)in the previous week. Only 21% of mothers have heard foods that are important for sight and help to prevent blindness.

Vita.A deficiency control as part of the micro nutrient deficiency control programme started to be implemented on national scale recently. Guidelines was developed and distributed to the regions and zones.

This year different doses of Vit A. capsules have been distributed to all regions. Regional workshop and training have been planned.

EPI Plus Vit.A have been practiced during training starting two years back. However, the supply of Vit.A was not adequate and therefore, could not be implemented as expected. A strong effort is capitalized by the programme to administer Vit.A during measles vaccine administration. This should be supplemented by provision training of the health workers as well as intensive communication activities to promote the programme.

3. EMPOWERMENT OF ALL WOMEN TO BREAST FED THEIR CHILDREN EXCLUSIVELY FOR 4-6 MONTHS, AND TO CONTINUE BREAST FEEDING WITH COMPLEMENTARY FOOD, WELL IN TO THE SECOND YEAR: (WSC GOAL 16)

Summary of the findings:

Breast feeding indicators by residence. MICS, June 1995, Ethiopia.

INDICATOR	Rural %	Urban %	Total ¹ %
Ever breast fed	81.8	71.8	80.3
Continued Breast Feeding	79.4	64.3	77.1
Bottle Feeding rate	15.7	23.2	16.9

¹ Weighted national estimates.

Eighty percent of the children were reported to have breast in their life. Continued Breast feeding rate up to 12 months was 77%. Bottle feeding rate was found to be 17%.

The rate of exclusive breast feeding is not measured in this survey. One recent study have reported the this rate have been declined in the urban areas as 32% in Addis Ababa. Continued breast feeding rate as high as 77% is better than many countries. On the other hand, the rate of bottle feeding as high as 17% should alert the health authorities to devise a strategy to protect the tradition of breast feeding.

Public education, role models of the maternity facilities, advising of mothers by the health professionals are the key interventions that have been practiced before. BFIG/Breast Feeding Information Group/ composed of different sectors that was established before 13 years; is now completely out of trace. The breast feeding codes is not yet endorsed. Baby friendly hospital Initiatives /BFHI/ did not start to be functional due to various reasons.

Efforts should be made to revive the previous initiatives. BFHI should be expanded to the regions and start to be implemented. Various type of training should be given to the health workers. BFIG at national and regional levels should be established. Women Department of different sectors should be involved in this initiation.

**3. ACUTE RESPIRATORY TRACT INFECTION CONTROL PROGRAMME
REDUCTION BY ONE-THIRD IN THE DEATHS DUE TO ACUTE
RESPIRATORY INFECTIONS IN CHILDREN UNDER THE AGE FIVE
(WSC GOAL 24).**

Summary of the findings:

Two weeks prevalence and caretakers knowledge of when to seek care for ARI, MICS, June 1995.

Indicators	% (3,537)
Two weeks ARI prevalence	24.7 (874)
Episodes/child year	4.7
<u>Caretakers knowledge when to seek care for ARI % (4,165)</u>	
Is breathing fast	5.7 (237)
Has difficulty breathing	18.5 (770)
Caretakers who consider fever a reason for care seeking	62.9 (2,621)

The incidence in terms episodes/child /year is 4.7 (non adjusted for seasonal variations).

Mothers or caretakers who have mentioned key signs as fast breathing and difficult breathing were 5.7% and 18.5% respectively.

Caretakers who consider fever as a reason for care seeking were 62.9%.

The fact that the lower recognition of mothers to these key signs shows the programme weakness in effective communication activities. Standard case management training is only given to the peripheral health workers. Cases management training for physicians and or nurses who are treating children in many health units did not have the chance to be trained since the last three years. The main reason is lack of support from partners. As a result of these the quality of CM in many of the health facilities is questionable.

RECOMMENDATIONS

1. To increase accessibility to standard case management effective training should cover all categories of health workers.
2. Training courses should include communication skills on how to teach mothers when to seek medical care for pneumonia.
3. ARI programme should be strengthen at all levels. Full time programme manager at the central and at the regional level is important to resume the programme implementation.

4. Information, education and communication materials as posters, lifelets and other materials should be developed and distributed to the regions, zones and woreda levels.
5. Programme financial, technical, and support should be secured as far no partners do show any definite interest to support the programme currently.
6. Improving the quality of services by means of provision integrated health services, in under five clinics.
7. Regular supervision of the trained personnel by the appropriate personnel should be practiced at all levels.

INTRODUCTION

GENERAL

One and half billion children will be born in the decade of 1990s (1). The given worldwide economic conditions, quality of the environment in which they are growing up and the care required for their social and development; are inadequate by any number of criteria. These problems destined them to be born in to poverty that threatened their chances for optimal human growth and development (2).

Since 1990, about 60m. (i.e. 12 million every year) died before their fifth birthday. Forty two million were killed by diarrhoea, pneumonia, measles, malaria and nutrition. Unless action is taken now, an even larger number of lives will be lost before the year 2000 (3).

The global struggle for human kind faces major challenges toward improving the health of children and women. The "1989 convention on the Rights of Children" has shown the first global commitment to the needs of children. Then, the 1990 "World Summit of Children" (WSC) set a goal for the reduction of childhood mortality in 50% by the year 2000. As many as 164 countries of the world have shown their commitment by signing declaration and Plan of Action for Children (4).

In the first two years of experience, after 1990, some of the goal for the year 2000 appeared to be for more ambitious. The 1992 international conference held in Dakar on "Assistance to African Children" developed thirteen intermediate goals called Mid Decade Goals/MDG/. These goals are a set of targets with measurable indicators, that all countries need to achieve by the end of 1995 as a stepping stones towards the goals for the year 2000 (4).

Governments which signed this declaration and Plan of Action for children are also committed to monitor progress towards the goals and objectives for the year 2000. The WSC Plan of Action calls each country to establish appropriate mechanisms for regular and timely collection, analysis and publication of data required to monitor social indicators related to the well being of children.

The Government of Ethiopia has ratified the convention on the "Right of Child" and adopted the goals of the World Summit of children in 1991 (5). In 1994, the government has also committed itself to the Dakar consensus by accepting four mid decade goals and drawn its National Program of action which seeks the place of the welfare of children as the center of development (6).

Given the paucity of national base line data for the status of Mid Decade Goals, and to monitor the strategy and implementation during the process as well as the progress is urgently required. To provide data for on going programme activities and to up date the child health programmes indicators have necessitated to launch the Multiple Indicator Cluster Survey/MICS/. The need to assess programme activities in the new decentralization system in the country is another stimulus for conducting the MICS. Eventually the outcome of this survey is believed to bring a new impetus by reminding the great tasks awaiting to all concerned to carry out the activities successfully towards fulfilling the targets of WSC and MDG goals of this decade. To this effect, Family Health Department of Ministry of Health in collaboration with UNICEF have conducted the MICS, on June 1995.

COUNTRY PROFILE

BACKGROUND INFORMATION

Ethiopia is located in the horn of Africa with a land area coverage 1,087,816.44 square k. meter. The country is the 8th largest and the 3rd heavily populated country. It is a land of great physical diversity with altitude, and weather as low land, temperate (Weyena Dega) and highland (Dega). The whole country is divided into nine Federal States and two special administrative councils, 73 Zones and 529 Woredas. Urban dweller associations and peasant associations are the smallest community administrative structures (7).

The population is estimated about 55,000,000 of which more than 85% lives in rural areas. The population density is about 37 persons/km. There are nearly 70 languages and 200 dialects spoken, of which Amharic, Oromipha and Tigrigna are spoken by the majorities. The population growth rate is 3.1% and the population doubling time is about two decades (7).

Ethiopian Economy is predominantly agrarian with agricultural product as the major part of gross national production. The principal exports from this sector of economy are coffee, oil seeds, skin and hides.

Land Communication: There is about 4000 km. asphalt and about 15,000 km long all weather roads, 778 km railway lines linking the capital Addis to the Republic of Djibouti.

The health status of the population is found to be poor by any number health indicator measurements. The distribution Health Facilities : Hospitals 72, Health Centers 151 and Health Stations 2087. There are 1,466 Medical doctors, 3,496 Nurses and 13,337 Health assistants in the health system (7).

Selected demographic indicators (7):

Crude Birth Rate	46.1/1000 pop.
Crude Death Rate	15.2/1000 pop.
Infant Mortality rate	105/1000 LB
Childhood mortality rate (1-4)	159/1000 LB
Under 5 population	18.5%
Life Expectancy at birth	52 yrs.
General fertility rate	188 birth/1000
	Child bearing /15-49/ age
Population growth rate	3.1%

HEALTH PROBLEMS AND STATUS CHILDREN IN ETHIOPIA

Children and Mothers constitute the vast majority. Children under one, two and five years of age constitute 3.5 %, 6.15% and 18% respectively of the population (7). The health status of mothers and children is characterized by high fertility and mortality, severe morbidity with low provision and utilization of health services. Under five child death represents nearly 50 % of all deaths. About 60 % of these deaths occur during the first year of life (8).

The major causes of morbidity and mortality in children are communicable diseases and malnutrition. Among the communicable diseases: Acute Respiratory Infections (ARI), Diarrhoeal Diseases (DDs), vaccine preventable diseases and malaria are the main causes for the high death tolls and severe morbidity of children. Others such as parasitic and skin infections are among the commonest causes of morbidity while malnutrition of all kinds is a common denominator.

Acute respiratory infections are among the top leading causes of death in children under 5 years of age. From the monthly morbidity reports of the health facilities in the country, it was found that 20 - 25 % of all cases comprise of ARI (9).

Pneumonia claims the lives of young children quickly. The onset of symptoms and the risk of death is greatest for infants under two months old. Thus, it is clear that ARI is a real threat to the health/life of children in this country and therefore, is a problem that cannot be ignored in any strategy of child survival.

In taking the one year morbidity report of ARI (1990 - 1991) a total of 150,000 children were seen for ARI out of which 6,258 were pneumonia cases. Only 9 % of all children are taken to the care providers (9). Medical costs for the treatment of ARI cases constitute the largest of all. Therefore, appropriate use and regular distribution of antibiotics to health facilities needs serious consideration.

Various health facilities and community based studies have shown that diarrhoeal diseases are the major contributors of morbidity and mortality especially in children under the age of five.

Diarrhoeal diseases accounts for 300,000 children under 3 years of age deaths per year or nearly half of all deaths in children under five years of age (10).

Infant and child mortality attributable to diarrhoeal diseases in children under 5 by regions ranges from 4-17/1000 children with an average of approximately 9.2/1000 with 46% diarrhoeal death ratio. Current estimates of the period prevalence (defined as its occurrence preceding 2 weeks) range from 10-40 %. Based on these figures and the average duration between episodes, children under five years of age experience about five episodes/ child/ year, or up to 50 million cases annually nation wide. The same survey also showed as ORS use rate 22 % and non treatment rate 64 % (11).

This estimation is consistent with the health statistics reported from the health institutions which indicate persistently that diarrhoeal diseases to be the first or second causes of morbidity in children (after ARI) (11).

The six childhood diseases preventable by immunization (measles, pertussis, neonatal tetanus, poliomyelitis, tuberculosis and diphtheria) are responsible for a considerable proportion of the high morbidity, mortality and disability of Ethiopian children.

Measles could be the number one killer among the vaccine prevalent diseases because of the crowding, high prevalent of malnutrition and frequent epidemic outbreaks of the disease in children under the age five. There is no community based study of case fatality rate. However, it could be as high as 15 to 20 per cent when it occurs in epidemics. Under normal circumstance mortality might be estimated at 3 to 5 % (12).

Neonatal tetanus is highly prevalent as most deliveries are unprotected and take place at home. A community based study showed a mortality rate of 6.7 per 1000 live births accounting for 40 % of all neonatal deaths in the community. It may not be much different in the other parts of the country (13).

Pertussis is the other common cause of mortality and morbidity in children under the age of five. The control of pertussis will significantly contributes in the reduction of morbidity from malnutrition and acute respiratory infection.

Poliomyelitis is one of the crippling condition in early childhood. Surveys in the community and school children revealed high prevalence of the disease.

A prevalence study of residual paralysis in 25,692 school children in Addis Ababa reported a poliomyelitis prevalence rate of 2.7/1000 and an estimated incidence of 7.8/100000 population (14).

Ethiopia, one of the least developed nations in the world has the worst level of malnutrition. Five million children (46.9%) of under fives are malnourished as measured by weight. About seven million (64%) are with chronic malnutrition (stunted). About 8% of those children are also with acute malnutrition (wasting). One percent of children age 6 months to 3 years suffer with kwashiorkor and another 4% of the same age group are classified as cases of marasmus. The prevalence of low birth weight babies which is also considered as an indirect indicator of maternal malnutrition is about 13-17% in the country (15). As hospital records indicate, deaths of children due to malnutrition is found to be high in the list (16,17).

The situation in the urban areas is not also better than this since the majority of urban households use more than 80 % of household income covers only 73 % of their daily caloric requirements (16).

Micronutrient such as Vitamin A deficiency is estimated to affect 1 million children in the country (18). It is the commonest cause of irreversible loss of sight in the children. Its deficiency decreases resistance to infection by lowering immune reactions.

According to the national goiter survey conducted in Ethiopia, the prevalence ranges from 0.4%-66.3% in different communities with mean prevalence 25.1%. On the basis of this study about 37,000 cretins have been estimated to be present in this country (15). There is no figures about other iodine deficiency disorders. in view of this fact the government of Ethiopia has been committed for the USI.

In Ethiopia malnutrition is mostly the result of complex interactive and synergistic factors, usually due to inadequate food availability at house hold level, ignorance and infection. Food availability at house hold level, and control of communicable diseases and attitudinal changes of the community, specially mothers, are the most crucial elements in combating the malnutrition problem in the country.

Breast feeding is one of the component of the Ethiopian tradition or culture. However different studies have shown that there is a decline in breast feeding especially in the urban areas. A recent study has shown that the prevalence of exclusive breast feeding up to the age 4-6 months is 32% in Addis Ababa (19). It is estimated that the prevalence of exclusive breast feeding will not be better than the rural areas due to the introduction of other things than breast milk. Therefore, the need to support, promotion as well as protection of breast feeding as practice deserves high consideration at present.

THE STATUS OF CHILD HEALTH PROGRAMS

The government of Ethiopia has long been recognized the enormous social and economic costs of childhood morbidity and mortality; and has among other actions ratified the convention on the right of child and pledged itself to implement it.

The current health of policy of the country is based on decentralization, democratization of the health system with devaluation of power to the regions. Preventive and curative strategies especially to those who are needy, mothers and children which constitute the large majority, and to those who are unserved and under served are the top priority given on the national health agenda.

The health system of the country is established based on decentralization; where as duties and responsibilities are delegated to Regions, Zones. The duties and Responsibilities of the Ministry of Health at the central level include: setting national targets, drawing appropriate strategies and monitor the implementation of national health programs (18).

Regional health bureaux are responsible for planning, implementing and monitoring activities in their respective region in order to meet the national objectives and targets and promote child survival.

Cognizant to the seriousness of the health problems of the children, MOH has established Expanded Programme on Immunization and Control of Diarrhoeal Diseases Programmes in 1980 and 1983 respectively. National control of Acute Respiratory Infection Control Programme in 1990. All child health programs are organized within one Team under Family Health Department at all levels in the health system.

The major partner of the programs are UNICEF and WHO. UNICEF donates all vaccines and gives logistic support including operational cost for EPI and supports other child health programs. WHO supports the programs by providing material and technical assistance.

The presumed goal of EPI when established was to increase EPI coverage by 10% each year so as to reach 100% coverage by 1990. However, progress in actual immunization coverage has been slower, only 3.4% of the children under 2 years, the target group at that time, completed the third round of DPT.

The Accelerated child Health Development programme (ACHD), introduced in 1986, led to an increase in immunization coverage from 7% in 1986 to 26% in 1989 and 59% in 1990 (20).

In order to evaluate the progress made toward Universal child Immunization (UCI), WHO and UNICEF supported a nation wide coverage survey that was carried out in November 1990 in all accessible areas of the country (20). Although the target 75% for the year 1990 coverage was not fully achieved, the survey clearly indicated that progress has been made. However, the coverage data for most of 1989 and 1990 constitutes over estimates because of the reduction or near cessation of EPI activities in Tigray, Wollo, Gondar and Wollega during the later part of the civil war.

The immunization activities during 1991 and 1992, and beginning 1993 was dramatically reduced due to various problems and started to recuperate in the mid 1993. The immunization coverage for all antigens (mid 1994) was BCG 50% DPT3, 37%, OPV, 36% measles 29% and TT₂ 16% the service is given in 1500 static 5000 outreach which is greater in number compared to 1990 (21).

Regarding NCDDP and ARI, although the programme achievement has been noted, ORT use was only 25% and ORS use was only 22% and ORS access was persistently less than the access to the general health service.

The main problems in the provision of child health services are low geographic coverage or poor accessibility and under utilization of the existing health services. Only 38% of the population has access to the general health services. About 20% of the population uses the services. The inadequacy of infrastructure, shortage of trained manpower, scarcity of drugs and medical equipments; all threatened both the quality and the quantity of the health services rendered to mothers and children. As a result of these, there are high rates of missed opportunities and defaulters, poor community participation to wards the few delivered health services.

OBJECTIVES

GENERAL OBJECTIVES

- . To measure the status of Mid Decade goals and WSC goals in Ethiopia.
- . To compare current findings with the MDGs in respect of EPI/ORT and salt Iodization status.
- . To update major programme indicators of the child health programs (EPI, CDD & ARI).
- . To monitor progress of child health programs mainly EPI, CDD & ARI.
- . To provide baseline data for the micro-nutrient deficiency control intervention mainly Vit.A and IDD.

SPECIFIC OBJECTIVES

1. EXPANDED PROGRAMME ON IMMUNIZATION
 - . To measure immunization coverage in children under five years of age.
2. NATIONAL CONTROL OF DIARRHOEAL DISEASES PROGRAMME
 - . To measure the frequency of mothers/caretakers using ORT when diarrhoea occur.
 - . To determine the incidence of diarrhoea in children under the age of five.

3. NATIONAL CONTROL OF ACUTE RESPIRATORY INFECTIONS
PROGRAMME

- . To assess the knowledge of mothers/caretakers when to seek care for ARI.
- . To determine the incidence of cough/cold (ARI) in under the age of five.

4. CHILDHOOD NUTRITION AND MICRO-NUTRIENT DEFICIENCY
CONTROL PROGRAMMES

- . To describe the pattern of breast feeding.
- . To assess the status of Vit. A supplementation, fortified food as well the knowledge of mothers/caretakers about Vit.A.
- . To determine the status of consumption of iodized salt.

GOALS AND INDICATORS MONITORED IN THE MICS

Below are the lists of the WSC (year 2000) and MDGs goals and Indicators assessed by MICS, June 1995.

Goal 1: Evaluation of Immunization coverage of six antigen of Expanded Programme on Immunization to 80% or more in all countries.

Indicators:- DPT 1-3 Immunization
- Measles Immunization
- Polio 1-3 Immunization
- BCG Immunization

Goal 6: Universal Iodization of salt in Iodine deficiency disorders/IDD/affected countries.

Indicator:- Proportion of house holds consuming adequately iodized salt in the whole country.

Goal 7: Achievement of 80% ORT/increased fluids and continued feeding as part of the programme to control of Diarrhoeal Diseases.

Indicators:-

1. Proportion of all diarrhoeal episode in children under 5 years of age treated with ORS and/or recommended home fluids;

2. ORT use (increased fluid intake): Proportion of diarrhoea episodes in under-five treated with ORT (increased fluids);

3. ORT use (increased fluids and continued feeding): Proportion of diarrhoea episodes in under-five treated with ORT (increased fluids plus continued feeding).

4. Two week prevalence of diarrhoea

OTHERS WSC AND MDGS GOALS AND INDICATORS INCLUDED IN THE MICS

Goal 5 Virtual elimination of Vitamin A deficiency.

Indicators:

1. To measure the proportion of the population/families and children reached by the programme through measuring.

2. The proportion of children who have received Vit. A supplementation

3. Proportion of households with fortified food product which is given to children in those households.

4. The proportion of mothers who have heard the programme message and put the message in to practice (by assisting the proportion of children who eat the target food)

Goal 16. (WSc) Empowerment of all women to breast fed their children exclusively for 4-6 months, and to continue breast feeding with complementary food, well in to the second year:-

Indicator:

1. Continues breast feeding at 1 year proportion of children under 12 months who are breast feeding.

2. Bottle feeding rate - proportion infants less than 12 months receiving any food or drink from bottles (current status).

3. Ever-breast fed rate: Proportion of infants less than 12 months who have ever been breast fed.
Goal 24 (WSc) Reduction by one third in the deaths due to acute respiratory infections in children under the age five.

Indicator:

1. Proportion of mothers (caretakers) of children under five years who know the signs (fast/difficult breathing) which indicate that a child with a cough/cold must be taken to appropriate health provider.

2. Two weeks prevalence of ARI

SURVEY DESIGN AND METHODS

SURVEY DESIGN:- A cross sectional house hold survey was designed to achieve the study objectives. "Multi-stage, stratified" Clusters based on Probability Proportionate to Size (PPS) sampling techniques was employed to select the 150 clusters throughout the country. Thirty house holds from each cluster that made a total of 4,500 households were covered.

DURATION OF THE SURVEY: The survey was conducted from June 25 and ended in July 10/1995.

POPULATION

1 SOURCE POPULATION: The nation of Ethiopia lived in all regions were the source of the study population.

2 STUDY POPULATION: All under five children and their mothers or caretakers or house hold members who live in the identified cluster were the study population. A total of 4,500 house holds from the 150 selected clusters all over the country were covered in this survey.

SAMPLING PROCEDURE: Identification of 150 clusters spread across the country for studying national level indicators allowed estimation of rate with a proportion of 5%.

This design is adequate to provide baseline estimates at the level of 95% confidence interval in order to measure changes occurring across time (4). These clusters were stratified in to two strata as rural and urban. 120 rural and 30 urban were identified. The bases for this distribution is the experience learned from the previous national survey (Table 1).

**Table 1: Number of selected clusters, by region.
Multiple Indicator Survey, Ethiopia, 1995**

Region	Rural clusters Nos.	Urban clusters Nos.
1. Tigray	8 (1-8)	1 (121)
2. Afar	2 (9-10)	
3. Amhara	32 (11-42)	4 (122-125)
4. Oromiya	40 (43-82)	4 (126-129)
5. Somali	6 (83-88)	1 (130)
6. Benshangul	2 (89-90)	
7. SEPAR	26 (91-116)	
12. Gambella	2 (117-118)	
13. Hararyi	1 (119)	
14. Addis Ababa		19 (132-150)
15. Dire Dawa	1 (120)	1 (131)
Total:	120 clusters	30 clusters

The clusters were identified in four sampling stages. (see Annex B)

1. Central level: The country is divided to 9 regional states and two special administrative states. The population of each region is a projection based on the 1984 census. The distribution of both urban and rural clusters in regions was made at the central level. Probability, proportional to size sampling techniques was employed at all levels.

2. Regional level: Selection of clusters in Zones was made in the same procedures.

3. Zonal level: Identification of clusters at Woreda level was made following the same methods.

4. Woreda level: Selection of clusters at the community level.

4.1. Rural cluster selection: Estimated population of rural villages and/or peasant associations was obtained from local Woreda administration or Health department offices. Then clusters were selected using PPS techniques.

4.2. Urban clusters: Urban Dwellers Associations/Kebele/ are the smallest sampling units in the urban/per urban sampling schemes. Relevant and demographic information was collected from the Woreda offices and selection of clusters were made using the same techniques.

Identification of the first house hold:-

Rural clusters: There is not house hold listing or house numbers identification in the rural set up. A central location in the village such as market areas, churches, mosque, schools, etc. was selected. The direction in which the first household would appear was randomly selected.

Direction was selected randomly by spinning a bottle or flopping of coins in order to decide which directions to move. The house hold nearest to this direction was selected as the first household. Identification of the next house hold was made following a path the connects, to the roads so as to avoid households living away from the main roads. In some scattered areas the assistance of the local guides were used.

Urban clusters: Since there is household or house registry systems mostly exists, a random member form 1 to the highest in the list was selected. The household number corresponding to the random number was then selected. The next house hold visited was the one with the closest door.

EXCLUSION CRITERIA: Areas that lies in deputy boundaries and security unstable areas were excluded. In addition to this, remote areas took more than 3 hours off roads walking distance were defined as "in-accessible" areas and were excluded from the initial sampling frame. This was made at the Woreda levels.

SURVEY INSTRUMENT AND MATERIALS USED

Questionnaire Design: The questionnaires/Modules were fully adopted with minor modification from the guidelines. These modules were divided in to three components.

1. House Hold Module - This includes
 - . House Hold Information panel which is used for recording house hold specific information
 - . Mother(s) and children listing form - Which is used to register mother or caretakers and their children for whom they are responsible.
 - . Salt Iodization Module

2. Mother's Modules - Three parts

- . Vitamin A module - refers to the knowledge and practice of mothers/caretakers.
- . Acute Respiratory illness module - Deals with mothers knowledge about when to bring their children to the health worker.
- . Breast feeding modules: measures the prevalence of breast feeding as well as bottle feeding in children under the age 12 months.

3. Children's Module

- . Diarrhoeal module - Measures two weeks prevalence of diarrhoea and use of ORT/ORS during these episodes.
- . Acute respiratory infection module measures the prevalence of ARI in the preceding two weeks.
- . Vitamin A module: measures the frequency of Vit A supplementation in the target age group. It is also design to indicate the frequency of children having a Vit. A reach food in their diet.
- . Immunization module: indicates the immunization status of children under the age of five. Special emphasis is given to children age 12- 23 months so as to measure the coverage of the previous year.

Questionnaires were translated in to Amharic to be used by the interviewers during interview in order to make communication easier with the respondents. Verbal translation in to local languages were made in some cases by the interviewers.

The adopted questionnaires were not pretested with the assumption that the questionnaires were standard and being employed several times in many countries including Ethiopia.

Guideline that deals with techniques on how to handle interview and fill the questionnaires was developed and used as a hand book both during the training as well as the field work.

- Others as conversion tables, cluster control sheets, lists of clusters were used during the survey
- Vitamin A capsules, packets of Fafa/Famix, sachets of ORS were used to demonstrate for mother Iodin kit was used to test the salt.

DATA COLLECTION: Eleven core-team members from the center, eleven regional coordinators, sixty supervisors and 150 interviewers were mobilized during the survey.

1 Core-Team Members: are members of the ad-hoc committee composed of FHD/MOH, UNICEF & WHO that was established for this purpose. This committee has worked from the inception up to the end of this survey.

2 Regional coordinators: are people assigned by the regional health Bureaux. Their main responsibilities was to assist in cluster identification and coordinate logistics in their respective regions.

3 Supervisors/Interviewers: are health workers who were not involved mainly in the provision of immunization activities. These were selected by the Regional bureaux from zones/woredas.

TRAINING OF SUPERVISORS AND INTERVIEWERS

A training manual/guideline was developed. The training was given by the core team members in the respected regions. It was a five days training together with field tests. Responsibilities and duties of personnel were given with the guidelines.

DATA ANALYSIS

Data were entered and analyzed using EpiInfo 6.0 Statistical software package.

Data were collected on distinct questionnaires depending on whether the questions were related to the household, to the mother, or to the child. Similarly, data were entered in separate data files corresponding to the separate questionnaires.

When possible, figures were calculated separately for rural clusters (cluster numbers 001 to 120) and for urban clusters (cluster numbers 121 to 150). Estimated weighted national figures were calculated assuming the following distribution: rural population = 85%, urban population = 15%.

In some sections, it was not possible to stratify the analysis by rural, urban clusters, and crude (unweighted) national figures are reported. The proportion of urban clusters in the survey represented 20% of the total sample. However, the proportion of population living in urban areas is estimated as 15% of the total population. Therefore, the national figures are slightly biased towards results from urban areas, due to a 5% over sampling of urban areas. The error introduced in national figures is marginal (less than 2%), even for variables with large differences between urban and rural areas.

Analysis of selected indicators:

Immunization coverage validity criteria:

Valid DPT1: after 6 weeks of age.

Valid OPV1: after 6 weeks of age.

Valid interval between DPT/OPV doses: at least 4 weeks.

Valid measles: after 36 weeks of age.

Converting 2- week diarrhoea prevalence to 2 week incidence: (22)

$$I_{14} = P_{14} \times \frac{14}{14+d}$$

I_{14} = 2- week diarrhoeal Incidence

P_{14} = 2-week diarrhoeal prevalence rate

d = Average duration of diarrhoeal episode; 7 days

Estimating Annual incidence rate from two weeks prevalence:

$$I_y = \frac{I_{14}}{P_{14} \times 26}$$

I_y = Annual Incidence of diarrhoea.

Converting 2- week ARI prevalence to 2 week incidence:

$$I_{14} = P_{14} \times \frac{14}{14+d}$$

I_{14} = 2- week ARI Incidence

P_{14} = 2-week ARI prevalence rate

d = Average duration of ARI episodes = 7 days

Estimating Annual incidence rate from two weeks prevalence:

$$I_y = \frac{I_{14}}{P_{14} \times 26}$$

I_y = Annual Incidence of diarrhoea.

RESULTS

1. SUMMARY OF THE HOUSE HOLD INFORMATION

1.1 Description of the House holds covered by the survey.

Out of the total 4,500 house holds sampled to be surveyed; 97.4 (4,383) house holds were covered. Respondent rate was higher in rural 97.8% (n =3519) than urban 96% (n =864). Seventy nine percent of the surveyed house hold were having children under the age of five, while the remaining 21% have no children (Table 2).

1.2 Age and sex distribution of children under the age of five.

Table 3. Shows the age and sex distribution of the sampled under five population. A total number of 4,604 children under the age of five were covered by the survey. Eighty percent of the children were form the rural areas. Infants (0-11 months or under one year of age) consists of 25% and 12-23 months 24%. More than 50% of the children are male with sex ratio =M:F = 1.55 :1.

Table 2. Number of households surveyed and the distribution under five children among the households by residence. MICS, June 1995, Ethiopia.

	Rural n (%)	Urban n (%)	Total n (%)
Households surveyed:	3519 (97.8)	864 (96.4)	4383 (97.4)
Number of households with living children aged <5 years:			
0 child <5	838 (23.8)	102 (11.8)	940 (21.4)
1 child <5	1768 (50.2)	607 (70.3)	2375 (54.2)
2 children <5	831 (23.6)	150 (17.4)	981 (22.4)
3 children <5	77 (2.2)	4 (0.5)	81 (1.8)
4 children <5	5 (0.1)	1 (0.1)	6 (0.1)
5 children <5	0 (0.0)	0 (0.0)	0 (0.0)
Total:	3519 (100%)	864 (100%)	4383 (100%)

Table 3. Age and sex distribution under five children by residence. MICS, June 1995, Ethiopia

	Rural n (%)	Urban n (%)	Total n (%)
<i>Number of living children aged <5 years, by age:</i>			
<1 year (0-11months):	935 (25.4)	216 (23.4)	1170 (25.4)
1 year (12-23months):	860 (23.3)	206 (22.3)	1090 (23.7)
2 years (24-35months):	729 (19.8)	170 (18.4)	923 (20.0)
3 years (36-47months):	610 (16.6)	172 (18.6)	798 (17.3)
4 years (48-59months):	547 (14.9)	159 (17.2)	723 (15.7)
Number of living children aged <5 years, by sex:			
Male	1974 (53.6)	500 (54.2)	2474 (53.7)
Female	1707 (46.4)	423 (45.8)	2130 (46.3)
Total	3981 (100)	923 (100)	4604 (100)

IMMUNIZATION COVERAGE

A total of 3,331 children age 12-59 months were assessed for their immunization status. Table 4 presents the weighted national estimates of immunization coverage by card and age. BCG, DPT3 and Measles coverage in children age 12-23 were 44.7%, 42.8% & 38.4% respectively fully immunized in this age group were 33.5%. The coverage has been found to be very low compare to the African continent average and global developing countries average. The 1994 coverage for Africa for BCG, DPT3, OPV3 and measles was 69%, 53%, 54% and 54% respectively. The same average coverage for the developing countries is 87%, 80%, 81% and 78% (23).

Drop out rates are useful indicators of the failures of the immunization services at certain points. The DPT 1 to measles drop outs rates identifies a group of children that had already made contact with their immunization providers once after birth. The drop out rate of DPT1 to measles in children age 12-23 months was 19.8%. The DPT1 to DPT3 drop out rate in this age group was 10.6%. Since DPT1 to DPT3 drop out rate indicates the short case hold ability of immunization services (only about three months); still the range is above the acceptable level. A down ward of drop out rate can be appreciated when DPT1 to measles drop out rates of children age 48-59 (46.9%) and 36-47 months (43.5 %) are compared with children age 12- 23 months (19.8%). However, this rate is almost two folds more than the acceptable range i,e 10%. Therefore, monitoring of defaulters (drop out rates) at all levels in the routine reporting system must be initiated. If high drop out rate is found in an area, appropriate actions could be devised.

Table 5 shows the immunization coverage of children age 12-23 months by source. There were 1004 children age 12-23 enrolled in the study. Weighted percent with a card: 53.5% and weighted percent with a BCG scar: 58.9% Weighted estimated coverage by antigen: BCG 65%, DPT3/OPV3 57% and measles 54% were reported according to card plus history. Fully immunized children were 51% based on the information of the same source.

Among the 1,004 children age one; 791 were rural and 213 urban clusters. Immunization coverage rural versus urban for the different antigen such as BCG, DPT3/OPV3 and measles were 45% & 46% , 42% & 46%, 38% & 43% respectively. BCG scar 57% for the rural while 70% for urban. The defaulter rate as expressed by DPT1/ measles 20.5% were seen in rural set up while this indicator is 17.6% in the urban set up (Table 6).

When immunization coverage of children age 12-23 months based on the two sources (card and card + history); was compared with MDG the minimum deficit in achieving the goal is 35-42%. This invariably shows the need for a strong effort to achieve the MDGs in relation to indicators 1.1 - 1.3 (Table 7).

The four years coverage findings from the survey are compared with the routine coverage reports. A positive trend could be realized in both cases. Except 1992, the survey finding is lower than the routine report value. The explanation could be the deference in time frame used in the survey and routine report. July to June is used in the survey while routine reports are used January to December (Table 8).

The other possible reason the contributed under reporting of some reporting sites probably due to unfavorable circumstances during the early phase of decentralization. Nevertheless, the disparity is relatively smaller as the immunization event is recent. This has been found to be directly related with the availability of the by the respondent. Therefore, the element of recall bias can not be ruled out. In addition to this, when immunization is validated by card and age i.e by card before one year the deference in value becomes minimal (Table 7, and see also Annex___).

RECOMMENDATIONS:

1. Increasing accessibility to immunization services:
 - . Effort to increase accessibility to the general health services by means of expansion of health care facilities are crucial steps in the increasing of immunization coverage.
 - . Opening of new static sites in the existing health facilities as well as in the newly constructed health centers that are the nucleus to the new Primary Health Care Units (PHCU).
 - . Increasing outreach immunization services as much as possible should be initiated. The undeserved rural communities should be targeted and reached by outreach integrated primary health care services as well as immunization services.
 - . Procure adequate cold chain equipment, injection materials and vaccines, transport, and others necessary supplies timely and regularly.
 - . A proper registry system should be introduced for tracing immunization defaulters in each health facilities. and develop a strategy such as establishing a community network to assist in tracing of defaulters.

- . Missed opportunities should be avoided by promoting the routine checking of the immunization card with every visit to any health facilities and by providing immunization services every working day.
 - . Supplemental Immunization strategies, high risk approaches or mopping up campaigns or racking strategies in special areas where there is extremely low coverage should be initiated and planned together in accompany with routine immunization campaign in order to have high coverage and make it sustainable as well as to achieve disease reduction target.
 - . A functional referral system should be established for immunizations by non-immunization facilities such as private practitioners, some specialized hospitals etc, opportunities for immunizations should be also created by offering special immunization sessions.
2. Increasing high level EPI advocacy is essential at both national and regional levels to ensure political commitments towards achieving high immunization coverage and diseases reduction goals.
 3. Public awareness through intensive social mobilization and health education should be widely implemented to ensure participation of the public in EPI activities.
 - . All governmental and non- governmental sectors should be involved.
 - . IEC materials in different languages and idioms should be developed in order to augment the public understanding about the usefulness of immunization services.

4. Creation of an accessible, client friendly services is a crucial important steps and should be achieved by integration of services, social mobilization, education and training and research.
5. Immunization coverage should be monitored, analyzed in order to identify areas with low coverage or high drop outs and therefore, appropriate actions could be taken subsequently by the concerned level.
6. Quality assurance methods should be introduced routinely and used to improve the efficiency and quality of immunization activities at each health service level.

Table 4. Summary of Weighted national estimates, by card, by age. MICS, June 1995, Ethiopia.

	1 year 12-23 months	2 years 24-35 months	3 years 36-47 months	4 years 48-59 months
BCG:	44.7%	42.2%	35.4%	22.8%
DPT3:	42.8%	36.9%	31.6%	19.4%
OPV3:	42.5%	36.8%	32.2%	19.4%
Measles:	38.4%	33.0%	20.0%	11.7%
Fully immunized	33.5%	29.0%	18.3%	10.1%
Drop out rates				
DPT1/Measles	19.8%	23.4%	43.5%	46.9%
DPT1/DPT3	10.6%	14.5%	10.6%	15.2%

Table 5. Weighted National estimates children age 1 year (12-23 months), by antigen and source. MICS, June 1995, Ethiopia.

Total number of children = 1004 (791 rural + 213 urban)
 Weighted percent with a card: 53.5%
 Weighted percent with a BCG scar: 58.9%

	by card	by card + history
BCG:	44.7%	64.6%
DPT3:	42.8%	57.4%
OPV3:	42.5%	56.5%
Measles:	38.4%	54.4%
Fully immun.:	33.5%	51.3%

Table 6. Weighted National estimates children age 1 year (12-23 months), by antigen, card and residency. MICS, June 1995, Ethiopia.

Total number of children 791 rural and 213 urban = 1004

Antigen	Rural (n=791)	Urban (n=213)	Total (n=1004)
BCG:	44.5%	45.5%	44.7%
DPT3:	42.2%	46.0%	42.8%
OPV3:	41.8%	46.5%	42.5%
Measles:	37.5%	43.2%	38.4%
BCG Scar	57.5%	69.6%	58.9%
Fully immun.	33.6%	32.9%	33.5%
Defaulters			
DPT1/Measles	20.5%	17.1%	19.8%
DPT1/DPT3	10.6%	11.7%	10.6%

Table 7. Weighted National estimates children age 1 year (12-23 months), by antigens and source compared with MDG No.1. MICS, June 1995, Ethiopia.

Total number of children = 1004 (791 rural + 213 urban)

Weighted percent with a card: 53.5%

Weighted percent with a BCG scar: 58.9%

(card)	MIDG	card	+ history	Difference
BCG:	80%	44.7%	64.6%	35.3%
DPT3:	80%	42.8%	57.4%	37.2%
OPV3:	80%	42.5%	56.5%	37.5%
Measles:	80%	38.4%	54.4%	41.6%

Table 8 Compares the immunization coverage results form the survey and the routine reports from 1991 - 1994.

	1991		1992		1993		1994	
WITH CARD	27.1%		38.6%		48.4%		53.5%	
ANTIGEN	MICS	R.R	MICS	R.R	MICS	R.R	MICS	R.
BCG	22.8%	29%	35.4%	22%	42.2%	46%	44.7%	50
DPT3	19.4%	21%	34.9%	13%	36.9%	28%	42.8%	37
OPV3	19.4%	21%	32.2%	13%	36.8%	28%	42.5%	36
Measles	11.7%	17%	20.0%	12%	33.0%	22%	38.0%	29

3. DIARRHOEAL DISEASES CONTROL PROGRAMME INDICATORS MEASURED IN MICS.

A total of 3,537 children under the age of five and their mothers/caretakers were covered for the NCDDP indicators. Table 9 reveals the measured indicators. Out of the 3,537 children, 18.7% (662) were reported to have diarrhoea in the preceding two weeks. This is 3.7 episodes/child/year/ (non adjusted to seasonal variation). The incidence of diarrhoea as expressed by episodes is lower in this study when compared to the previous 4.8 episodes /child /year. The possible explanations could be:

i) methodological difference in the determination of this indicator. Median incidence have been employed in the previous study. This was taken from the same surveys done in different regions /country range: min. 2.3, max. 6.7/. However, when the percentage of occurrence is considered the 18.7% was higher which was 16.2% in the previous study /country range: min 10.7%, max. 26.2%/;

ii) the current rate is not adjusted for seasonal variation because lack of substantial data the could represent a particular area. At the same time, data which could be use for adjustment possibly affect the rate in either ways. Hence, unless a strong system is established and reports are regular and timely flow adjustment figures ought not be employed;

Therefore, the variation in the incidence might be implicated due to the methodological difference employed to determine this indicator.

ORT use /i,e used recommended home fluids during the episodes/ is 73%. ORT use (increased fluid intake i,e pre 1993 definition) rate is 27.5%. However, ORT use (increased fluid intake and continued feeding; post 1993 definition) is only 8.8%. ORS packet solution use rate in this survey is 26%. Forty percent of the cases have been fed about the same or more during their illness (i,e Continued feeding).

In the previews MMT survey ORT use rate was only 25% and the ORS use was 22%. The fact that higher ORT/RHF/ use rate finding does show the programme communication strategies have been implemented successfully. This has been shown in the recent health facility survey that mothers/care takers who were correctly advised was 14%. The extreme low finding of the ORT/increased fluid intake and continued feeding as 8.8% does show the poor quality of the message that was given for the mothers/caretakers. Therefore, the need to tailoring a proper message using various channels should be the priority agenda in the design of communication strategy of the programme.

The low use of ORS might be explained by the shift i,e higher use of RHF and/or could be scarcity of ORS during the survey. ORS packet usually available in the health facilities not always throughout the year. This observations have been taken during annual review meetings with the regional health bureaux. The National programme should facilitate the regular availability of ORS by means of rational allocation of the free denoted ORS and by encouraging regions to determine their proper need and purchase locally production. At the sometime measures should be taken to promote the locally production capacity of EPHARM.

Among the listed fluids, breast milk, 58.6% water alone 43.4% and water with feeding 41.8% were the most widely used fluids during diarrhoea. Food based fluids as cereal based gruels, soup and dairy products were also used regularly, 36% and 28.6% respectively. In 26.3% of the diarrhoea cases ORS packet have been reported to be used.

Alicha injera fitfit (mashed local bread made from teff/maize stable food of the country) and cereal or root base porridge were the commonest food given to children with diarrhoea 40.8% and 40.5% respectively (Table 9).

RECOMMENDATIONS

1. To increase accessibility to the general health services by means of expansion of health care facilities are initial steps in the increasing of access to effective case management.
2. CDDP should be strengthened at all levels. Full time programme manager at the central and at the regional level is important to resume the programme implementation.
3. Effective training including hands on practice should remain a corner stone of the NCDDP
 - . Training activities should cover all categories of health workers.
 - . Trainees should have the opportunity to assess as many cases as possible.
 - . Training courses should include communication skills on how to advice mothers particularly on the three rules of home case management.
4. Information, education and communication materials as posters, leaflets and other materials should be developed and distributed to the regions, zones and woreda levels.

5. Financial and technical support to the programme should be secured. Government in put and external resources must be made available in order to enhance all programme component activities. ORT promotion project of UNICEF is the only asset that has contributed a lot in supplying of ORS and giving financial supports to the peripheral training.
6. Sensitization workshops among the different professional association, NGO communities, religious leaders should be continued and intensified. Follow ups as part of monitoring should be instituted.
7. Revision of the NCDDP policy declaration: The document should enlist all the available recommended home fluids that are common in the local areas. Therefore, adaptation of the document shall facilitate dissemination of information among the health professionals as well as the literate community.
8. Improving the quality of services by means of provision integrated health services, procurement of ORS and recommended antibiotic, health education should be rendered in the ORT corners of each facilities.
9. Regular supervision of the trained personnel by the appropriate personnel should be practiced at all levels. Trained personnel should be assigned in the ORT corners in order to manage cases and advice mothers correctly.

Table 9. NCDDP indicators in children under the age of five years. MICS, June 1995, Ethiopia.

List of Indicators	n (%)
Two weeks Prevalence of Diarrhoea	662 (18.7%)
Episodes of Diarrhoea/child/year	3.7
ORT use	630 (95.2%)
- ORT Use (Increased fluid intake)	182 (27.5%)
- ORT Use (Increased fluid intake and continued feeding)	58 (8.8%)
ORS packet solution:	174 (26.3%)
Continued feeding	292 (40.1%)

Table 10. Type of fluid and food given to children under the age of five years with diarrhoea. MICS, June 1995, Ethiopia.

Type of fluid/food	n (%)
Breast milk:	388 (58.6%)
Cereal gruel, roots gruel, soup:	242 (36.6%)
Other (Rice water, fruit juice):	148 (22.4%)
Other milk or formula:	189 (28.5%)
Water with feeding:	277 (41.8%)
Water alone:	163 (24.6%)
Unacceptable fluids <u>only</u> :	4 (0.6%)
Cereal gruel, roots gruel, soup:	268 (40.5%)
Mashed injera, alecha, fitfit:	270 (40.8%)
Fruits (banana, orange, papaya):	130 (19.6%)
Other foods (potato, sweet potato etc.):	98 (14.8%)

4. ACUTE RESPIRATORY TRACT INFECTIONS CONTROL PROGRAMME

Out of the 3,537 children under the age of five that have been assessed for the two weeks prevalence of Cough/Cold 24.7% have reported that they have had or still have cough or cold. The non seasonal adjusted incidence rate as expressed by episodes/child /year is 4.7.

4,165 mothers or caretakers were interviewed for the care seeking in ARI needing assessment (ANI) from appropriate providers. Mothers or caretakers who have mentioned key signs as fast breathing and difficult breathing were 5.7% and 18.5% respectively. Caretakers who consider fever as a reason for care seeking were 62.9% (Table 11).

The fact that the lower recognition of mothers to these key signs shows the programme weakness in effective communication activities. Standard case management training is only given to the peripheral health workers. Cases management training for fastens and or nurses who are treating children in many health units did not have the chance to be trained since the last three years. The main reason is lack of support from partners. As a result of these the quality of CM in many of the health facilities is questionable.

RECOMMENDATIONS

1. To increase accessibility to standard case management effective training should cover all categories of health workers.
2. Training courses should include communication skills on how to teach mothers when to seek medical care for pneumonia.
3. ARI programme should be strengthened at all levels. Full time programme manager at the central and at the regional level is important to resume the programme implementation.
4. Information, education and communication materials as posters, lifelets and other materials should be developed and distributed to the regions, zones and woreda levels.
5. Programme financial, technical, and support should be secured as far no partners do show any definite interest to support the programme currently.
6. Improving the quality of services by means of provision integrated health services, in under five clinics.
7. Regular supervision of the trained personnel by the appropriate personnel should be practiced at all levels.

Table 11 Two weeks prevalence and caretakers knowledge of when to seek care for ARI, MICS, June 1995.

Indicators	% (3,537)
Two weeks ARI prevalence	24.7 (874)
Episodes/child year	4.7
<u>Caretakers knowledge when to seek care for ARI % (4,165)</u>	
Has blocked nose	10.1 (421)
Has trouble sleeping/eating	8.2 (343)
Is breathing fast	5.7 (237)
Has difficulty breathing	18.5 (770)
Is ill for a long time	7.5 (312)
Others	23.0 (957)
Do not know	7.5 (311)
Caretakers who consider fever a reason for care seeking	62.9 (2,621)

VITAMIN A MODULE

A total of 3, 537 children under the age of five were involved in the assessment of Vitamin A capsule supplementation, and having Vitamin A reach food in their diet. Table 12 summarize the findings. About 10% children were supplied with Vit.A capsules and 9.4% have had eaten Fafa and or Famix (Vit.A fortified products) during the previous week. Among the listed Vit.A reach green vegetables, the Ethiopian cabbage 33.4% tomato 16.7% and carrots 11.6% have been reported to have such type of food stuff in their diet in the last week.

4,165 mother/caretaker have been asked about their knowledge and practice about Vit.A . Twenty one percent only have heard message about Vit.A. Among the green vegetables mothers do give cabbage and carrot 18.1 and 17.5% respectively to their children. Fafa and Famix was available only in the 1.3% of the house holds (Table 13)

Table 13 Children under the age of five who have Vit.A supplementation, fafa/famix and those who had diet of Vit.A. reach food stuffs MICs, June 1995.

Indicators	% (n= 3,537)
Children received Vit. A caps	9.5% (337)
Children who had fafa/famix	9.4% (331)
Children who had Vit.A reach food stuffs	
Ethiopian Cabbage	33.5% (1,185)
Tomato	16.5% (592)
Carrot	11.6% (411)

Table 14 Proportion of mothers/house holds who have heard the programme message of house holds with fortified products.

Indicators	% (n=4,165)
Mothers who have	
Heard message promoting foods	21.3% (887)
Never heard	71.0 (2957)
Do not know	7.7% (321)
Mothers who mentioned the following foods	
Ethiopian cabbage	18.4% (766)
Tomato	7.5% (311)
Carrot	17.5% (727)
Others responses	56.7% (2361)
Mothers who have fafa/famix in the house	
Yes seen	4.3% (180)
Yes, not seen	4.0% (165)
No	91.7% (3820)

Baby friendly hospital Initiatives /BFHI/ did not start to be functional due to various reasons.

Efforts should be made to revive the previous initiatives. BFHI should be expanded to the regions and start to be implemented. Various type of training should be given to the health workers. BFIG at national and regional levels should be established. Women Department of different sectors should be involved in this initiation.

BREAST FEEDING MODULE

1,545 children of age 0-12 months were enrolled in the assessment of their Breast feeding status in this survey. Eighty percent of the children were reported to have breast in their life. Continued Breast feeding rate up to 12 months was 77%. Bottle feeding rate is 25.2%. Bottle feeding rate was found to be 17% (Table 14).

Among the breast fed children, mothers used to give plain water 46.5%, powdered milk 26.4% and solid or mushy food 22.5%. Almost 41% of children under age 1 received only Breast milk in the precious twenty four hours (Table 15).

Eighty percent of the children were reported to have breast in their life. Continued Breast feeding rate up to 12 months is 77%. Bottle feeding rate is 25.2%. Bottle feeding rate was found to be 17%.

The rate of exclusive breast feeding is not measured in this survey. One recent study have reported the this rate have been declined in the urban areas as 32% in Addis Ababa. Continued breast feeding rate as high as 77% is better than many countries. Ont he other hand, the rate of bottle feeding as high as 17% should alert the health authorities should devise a strategy to protect the traditional of breast feeding.

Public education, role models of the maternity facilities, advising of mothers by the health professionals are the key interventions that have been practiced before. BFIG/Breast Feeding Information Group/ composed of different sectors that was established before 13 years; is now completely out of trace. The breast feeding codes is not yet endorsed.

Table 15. Breast feeding indicators and list of fluids and food received in the previous 24 hours by residence. MICS, June 1995, Ethiopia.

INDICATOR	Rural % (n= 1226)	Urban % (n= 319)	Total ¹ % (n= 1545)
Ever breast fed	81.8 (1003)	71.8 (229)	80.3 (1212)
Continued Breast Feeding	79.4 (974)	64.3 (205)	77.1 (1179)
Bottle Feeding rate	15.7 (192)	23.2 (74)	16.9 (266)
<u>Among still breast fed, since yesterday, number who received</u>			
	% (n= 974)	% (n= 205)	% (n= 1179)
Vitamin, supplement	6.5 (63)	16.1 (33)	7.9 (96)
plain water	44.1 (430)	60.0 (123)	46.5 (553)
sweet water, juice.	14.1 (117)	38.5 (79)	17.8 (196)
ORS	6.4 (62)	7.3 (15)	6.5 (77)
Tinned, powder milk	25.2 (245)	33.2 (68)	26.4 (313)
Solid or mushy food	20.4 (199)	34.6 (71)	22.5 (270)
Other	5.3 (52)	7.3 (15)	5.6 (77)
ONLY breast milk	43.3 (422)	26.8 (55)	40.8 (477)
Total = weighted percents = (rural x .85) + (urban x .15)			

SALT IODIZATION

Out of the 4,383 house holds surveyed only 0.2% was found to use an iodized salt. Almost 99% uses a granular/house or coarse/type of salt in their house holds (Table 16).

Table 15. Result of the test and the type of salt available in the households. MICS, June 1995, Ethiopia.

Test out come	% (n = 4,383)
Iodized salt	0.2% (9)
Not Iodized salt	96.7% (4227)
Salt not tested	1.4% (61)
No salt at home	1.7% (74)
No response	0.3% (11)
Type of salt	
Salt in bag with seal	0.5% (2)
Granular (loose or coarse)	98.7% (4313)
Salt in blocks	0.7% (31)
Others	0.1% (3)
No salt seen	0.5% (20)
No response	0.3% (11)

According to the national goiter survey conducted in Ethiopia, the prevalence ranges from 0.4%-66.3% in different communities with mean prevalence 25.1%. On the basis of this study about 37,000 cretins have been estimated to be present in this country. There is no figures about other iodine deficiency disorders. in view of this fact the government of Ethiopia has been committed for the USI.

The finding of the survey have clearly shown that the consumption of Iodized salt in this country is almost in existent.

The survey has also shown that the granular /loose or coarse / is the most common type of salt widely used in the households (98.7%).

Important initiatives that have been taken by the government of Ethiopia:

i) agreement has been signed with the Eriterian government in production of Iodized salt for the consumption of the two nations. To this effect, machines have been installed in the big salt production unit in Assab Port and inaugurated recently;

ii) in collaboration with UNICEF in land salt iodization on the process;

iii) National IDD Day have been celebrated in October 30 1995, where the Prime Minster has addressed the magnitude of the problem and the initiatives taken by the government;

iv) Iodine salt usage legislation is on the final stage to be endorsed;

v) IDD control programme is an integral part of micro nutrient deficiency control programme in child health team of MoH;

- . control strategies have been developed;
- . IEC materials production is on process;

. implementation at regional levels is on process.

Therefore, considering the activities that have been carried out and the ongoing activities and if complemented with the strong IEC efforts in order to mobilize the huge consumer; then Ethiopia shall track this MDG in few years of time.

ANNEX A. IMMUNIZATION COVERAGE OF CHILDREN, BY AGE

1. IMMUNIZATION COVERAGE OF CHILDREN, BY AGE

Immunization Coverage of Children aged 1 year (12-23 months)

(Born between 15/10/85 and 14/10/86, Ethiopian Calendar)

RURAL CLUSTERS (clusters no. 001 to 120)

Total number of children = 791 (100.0%)

Children with a card = 415 (52.5%)

Children with a BCG scar = 455 (57.5%)

Coverage by antigen:

	by card before 1 year valid doses		by card before 1 year		by card		by card + history	
BCG:	340	43.0%	340	43.0%	352	44.5%	499	63.1%
DPT1:	290	36.7%	355	44.9%	373	47.2%	497	62.8%
DPT2:	289	36.5%	319	40.3%	354	44.8%	464	58.7%
DPT3:	236	29.8%	293	37.0%	334	42.2%	441	55.8%
OPV1:	289	36.5%	340	43.0%	370	46.8%	493	62.3%
OPV2:	268	33.9%	313	39.6%	351	44.4%	462	58.4%
OPV3:	236	29.8%	280	35.4%	331	41.8%	435	55.0%
Measles:	186	23.5%	230	29.1%	297	37.5%	416	52.6%
Fully immun.:	88	11.1%	174	22.0%	266	33.6%	395	49.9%

URBAN CLUSTERS (clusters no. 121 to 150)

Total number of children = 213 (100.0%)

Children with a card = 127 (59.6%)

Children with a BCG scar = 143 (67.1%)

Coverage by antigen:

	by card before 1 year valid doses		by card before 1 year		by card		by card + history	
BCG:	97	45.5%	97	45.5%	97	45.5%	156	73.2%
DPT1:	97	45.5%	107	50.2%	111	52.1%	155	72.8%
DPT2:	84	39.4%	93	43.7%	100	46.9%	143	67.1%
DPT3:	82	38.5%	92	43.2%	98	46.0%	141	66.2%
OPV1:	95	44.6%	105	49.3%	109	51.2%	154	72.3%
OPV2:	84	39.4%	96	45.1%	102	47.9%	145	68.1%
OPV3:	80	37.6%	90	42.3%	99	46.5%	138	64.8%
Measles:	69	32.4%	75	35.2%	92	43.2%	138	64.8%
Fully immun.:	35	16.4%	56	26.3%	70	32.9%	126	59.2%

Immunization Coverage of Children aged 2 years (24-35 months)
 (Born between 15/10/84 and 14/10/85, Ethiopian Calendar)

RURAL CLUSTERS (clusters no. 001 to 120)

Total number of children = 735 (100.0%)

Children with a card = 348 (47.3%)

Children with a BCG scar = 426 (58.0%)

Coverage by antigen:

	by card before 1 year valid doses		by card before 1 year		by card		by card + history	
BCG:	273	37.1%	273	37.1%	312	42.4%	481	65.4%
DPT1:	248	33.7%	270	36.7%	317	43.1%	478	65.0%
DPT2:	210	28.6%	239	32.5%	298	40.5%	448	61.0%
DPT3:	149	20.3%	195	26.5%	271	36.9%	413	56.2%
OPV1:	238	32.4%	258	35.1%	314	42.7%	473	64.4%
OPV2:	193	26.3%	233	31.7%	296	40.3%	445	60.5%
OPV3:	149	20.3%	196	26.7%	272	37.0%	413	56.2%
Measles:	123	16.7%	161	21.9%	244	33.2%	404	55.0%
Fully immun.:	53	7.2%	119	16.2%	216	29.4%	373	50.7%

URBAN CLUSTERS (clusters no. 121 to 150)

Total number of children = 166 (100.0%)

Children with a card = 91 (54.8%)

Children with a BCG scar = 110 (66.3%)

Coverage by antigen:

	by card before 1 year valid doses		by card before 1 year		by card		by card + history	
BCG:	62	37.3%	62	37.3%	68	41.0%	120	72.3%
DPT1:	56	33.7%	61	36.7%	71	42.8%	119	71.7%
DPT2:	54	32.5%	58	34.9%	65	39.2%	113	68.1%
DPT3:	43	25.9%	55	33.1%	61	36.7%	109	65.7%
OPV1:	55	33.1%	59	35.5%	68	41.0%	116	69.9%
OPV2:	55	33.1%	60	36.1%	66	39.8%	114	68.7%
OPV3:	48	28.9%	54	32.5%	59	35.5%	109	65.7%
Measles:	33	19.9%	41	24.7%	53	31.9%	104	62.7%
Fully immun.:	17	10.2%	38	22.9%	47	28.3%	98	59.0%

Immunization Coverage of Children aged 3 years (36-47 months)
 (Born between 15/10/83 and 14/10/84, Ethiopian Calendar)

RURAL CLUSTERS (clusters no. 001 to 120)

Total number of children = 595 (100.0%)

Children with a card = 217 (36.5%)

Children with a BCG scar = 327 (55.0%)

Coverage by antigen:

	by card before 1 year valid doses		by card before 1 year		by card		by card + history	
BCG:	147	24.7%	147	24.7%	209	35.1%	354	59.5%
DPT1:	126	21.2%	146	24.5%	208	35.0%	351	59.0%
DPT2:	108	18.2%	127	21.3%	195	32.8%	333	56.0%
DPT3:	95	16.0%	110	18.5%	186	31.3%	318	53.4%
OPV1:	121	20.3%	139	23.4%	205	34.5%	343	57.6%
OPV2:	98	16.5%	118	19.8%	194	32.6%	331	55.6%
OPV3:	89	15.0%	108	18.2%	188	31.6%	315	52.9%
Measles:	21	3.5%	25	4.2%	112	18.8%	305	51.3%
Fully immun.:	10	1.7%	19	3.2%	102	17.1%	289	48.6%

URBAN CLUSTERS (clusters no. 121 to 150)

Total number of children = 177 (100.0%)

Children with a card = 89 (50.3%)

Children with a BCG scar = 112 (63.3%)

Coverage by antigen:

	by card before 1 year valid doses		by card before 1 year		by card		by card + history	
BCG:	60	33.9%	60	33.9%	66	37.3%	126	71.2%
DPT1:	58	32.8%	60	33.9%	67	37.9%	124	70.1%
DPT2:	49	27.7%	53	29.9%	62	35.0%	118	66.7%
DPT3:	42	23.7%	46	26.0%	59	33.3%	114	64.4%
OPV1:	55	31.1%	57	32.2%	66	37.3%	121	68.4%
OPV2:	46	26.0%	53	29.9%	62	35.0%	117	66.1%
OPV3:	46	26.0%	51	28.8%	63	35.6%	113	63.8%
Measles:	28	15.8%	32	18.1%	47	26.6%	110	62.1%
Fully immun.:	19	10.7%	27	15.3%	44	24.9%	105	59.3%

Immunization Coverage of Children aged 4 years (48-59 months)
(Born between 15/10/82 and 14/10/83, Ethiopian Calendar)

RURAL CLUSTERS (clusters no. 001 to 120)

Total number of children = 511 (100.0%)

Children with a card = 126 (24.7%)

Children with a BCG scar = 224 (43.8%)

Coverage by antigen:

	by card before 1 year valid doses		by card before 1 year		by card		by card + history	
BCG:	75	14.7%	75	14.7%	113	22.1%	249	48.7%
DPT1:	59	11.5%	74	14.5%	113	22.1%	245	47.9%
DPT2:	62	12.1%	67	13.1%	106	20.7%	232	45.4%
DPT3:	45	8.8%	57	11.2%	96	18.8%	220	43.1%
OPV1:	55	10.8%	68	13.3%	111	21.7%	242	47.4%
OPV2:	57	11.2%	65	12.7%	105	20.5%	230	45.0%
OPV3:	43	8.4%	58	11.4%	96	18.8%	216	42.3%
Measles:	10	2.0%	13	2.5%	54	10.6%	217	42.5%
Fully immun.:	6	1.2%	9	1.8%	46	9.0%	207	40.5%

URBAN CLUSTERS (clusters no. 121 to 150)

Total number of children = 143 (100.0%)

Children with a card = 58 (40.6%)

Children with a BCG scar = 91 (63.6%)

Coverage by antigen:

	by card before 1 year valid doses		by card before 1 year		by card		by card + history	
BCG:	31	21.7%	31	21.7%	38	26.6%	101	70.6%
DPT1:	31	21.7%	33	23.1%	39	27.3%	101	70.6%
DPT2:	27	18.9%	30	21.0%	34	23.8%	95	66.4%
DPT3:	21	14.7%	29	20.3%	33	23.1%	94	65.7%
OPV1:	30	21.0%	32	22.4%	39	27.3%	101	70.6%
OPV2:	26	18.2%	30	21.0%	36	25.2%	97	67.8%
OPV3:	23	16.1%	27	18.9%	33	23.1%	92	64.3%
Measles:	15	10.5%	16	11.2%	26	18.2%	91	63.6%
Fully immun.:	8	5.6%	15	10.5%	23	16.1%	86	60.1%

WEIGHTED NATIONAL ESTIMATES (all clusters)

Weighing assumption:

Rural population = 85% of total population

Urban population = 15% of total population

Children aged 1 year (12-23 months):

Total number of children = 1004 (791 rural + 213 urban)

Weighted percent with a card: 53.5%

Weighted percent with a BCG scar: 58.9%

Weighted estimated coverage by antigen:

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	by card before 1 year valid doses	by card before 1 year	by card	by card + history
BCG:	43.4%	43.4%	44.7%	64.6%
DPT1:	38.0%	45.7%	47.9%	64.3%
DPT2:	36.9%	40.8%	45.1%	60.0%
DPT3:	31.1%	37.9%	42.8%	57.4%
OPV1:	37.7%	43.9%	47.5%	63.8%
OPV2:	34.7%	40.4%	44.9%	59.9%
OPV3:	31.0%	36.4%	42.5%	56.5%
Measles:	24.8%	30.0%	38.4%	54.4%
Fully immun.:	11.9%	22.6%	33.5%	51.3%

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Children aged 2 years (24-35 months):

Total number of children = 901 (735 rural + 166 urban)

Weighted percent with a card: 48.4%

Weighted percent with a BCG scar: 59.2%

Weighted estimated coverage by antigen:

	by card before 1 year valid doses	by card before 1 year	by card	by card + history
BCG:	37.1%	37.1%	42.2%	66.4%
DPT1:	33.7%	36.7%	43.1%	66.0%
DPT2:	29.2%	32.9%	40.3%	62.1%
DPT3:	21.1%	27.5%	36.9%	57.6%
OPV1:	32.5%	35.2%	42.4%	65.2%
OPV2:	27.3%	32.4%	40.2%	61.7%
OPV3:	21.6%	27.6%	36.8%	57.6%
Measles:	17.2%	22.3%	33.0%	56.2%
Fully immun.	7.7%	17.2%	29.0%	51.9%

Children aged 3 years (36-47 months):

Total number of children = 772 (595 rural + 177 urban)

Weighted percent with a card: 38.6%

Weighted percent with a BCG scar: 56.2%

Weighted estimated coverage by antigen:

	by card before 1 year valid doses	by card before 1 year	by card	by card + history
BCG:	26.1%	26.1%	35.4%	61.3%
DPT1:	22.9%	25.9%	35.4%	60.7%
DPT2:	19.6%	22.6%	33.1%	57.6%
DPT3:	17.2%	19.6%	31.6%	55.1%
OPV1:	21.9%	24.7%	34.9%	59.2%
OPV2:	17.9%	21.3%	33.0%	57.2%
OPV3:	16.7%	19.8%	32.2%	54.5%
Measles:	5.3%	6.3%	20.0%	52.9%
Fully immun.:	3.1%	5.0%	18.3%	50.2%

Children aged 4 years (48-59 months):

Total number of children = 654 (511 rural + 143 urban)

Weighted percent with a card: 27.1%

Weighted percent with a BCG scar: 46.8%

Weighted estimated coverage by antigen:

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	by card before 1 year valid doses	by card before 1 year	by card	by card + history
BCG:	15.8%	15.8%	22.8%	52.0%
DPT1:	12.9%	15.8%	22.9%	51.3%
DPT2:	13.1%	14.3%	21.2%	48.6%
DPT3:	9.7%	12.6%	19.4%	46.5%
OPV1:	12.3%	14.7%	22.5%	50.9%
OPV2:	12.2%	13.9%	21.2%	48.4%
OPV3:	9.6%	12.5%	19.4%	45.6%
Measles:	3.3%	3.8%	11.7%	45.7%
Fully immun.:	1.9%	3.1%	10.1%	43.4%

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SUMMARY OF WEIGHTED NATIONAL ESTIMATES, BY CARD, BY AGE

	age=1 year 12-23 months	age=2 years 24-35 months	age=3 years 36-47 months	age=4 years 48-59 months
BCG:	44.7%	42.2%	35.4%	22.8%
DPT1:	47.9%	43.1%	35.4%	22.9%
DPT2:	45.1%	40.3%	33.1%	21.2%
DPT3:	42.8%	36.9%	31.6%	19.4%
OPV1:	47.5%	42.4%	34.9%	22.5%
OPV2:	44.9%	40.2%	33.0%	21.2%
OPV3:	42.5%	36.8%	32.2%	19.4%
Measles:	38.4%	33.0%	20.0%	11.7%
Fully immun.:	33.5%	29.0%	18.3%	10.1%

SUMMARY OF COVERAGE ESTIMATES, BY CARD, BY AGE

Rural clusters:

	age=1 year 12-23 months	age=2 years 24-35 months	age=3 years 36-47 months	age=4 years 48-59 months
BCG:	44.5%	42.4%	35.1%	22.1%
DPT3:	42.8%	36.9%	31.3%	18.8%
OPV3:	42.2%	37.0%	31.6%	18.8%
Measles:	37.5%	33.2%	18.8%	10.6%
Full imm.:	33.6%	29.4%	17.1%	9.0%

Urban clusters:

	age=1 year 12-23 months	age=2 years 24-35 months	age=3 years 36-47 months	age=4 years 48-59 months
BCG:	45.5%	41.0%	37.3%	26.6%
DPT3:	46.0%	36.7%	33.3%	23.1%
OPV3:	46.5%	35.5%	35.6%	23.1%
Measles:	43.2%	31.9%	26.6%	18.2%
Full imm.:	32.9%	28.3%	24.9%	16.1%

Weighted national estimates:

	age=1 year 12-23 months	age=2 years 24-35 months	age=3 years 36-47 months	age=4 years 48-59 months
BCG:	44.7%	42.2%	35.4%	22.8%
DPT3:	42.8%	36.9%	31.6%	19.4%
OPV3:	42.5%	36.8%	32.2%	19.4%
Measles:	38.4%	33.0%	20.0%	11.7%
Full imm.:	33.5%	29.0%	18.3%	10.1%

Drop-out rate DPT1-DPT3, children aged 1 year (12-23 months), by card:

Rural clusters: 10.6%
 Urban clusters: 11.7%
 National estimate: 10.6%

Drop-out rate DPT1-Measles, children aged 1 year (12-23 months), by card:

Rural clusters: 20.5%
 Urban clusters: 17.1%
 National estimate: 19.8%

Annex B.

6. ACUTE RESPIRATORY INFECTION

RURAL CLUSTERS (clusters no. 001 to 120)

Number of mothers in analysis = 3327 (100.0%)

Number of mothers mentioning the following symptoms (what signs or symptoms would lead you to take your child to a health provider):

When he/she: A. has a blocked nose	=	357 (10.7%)
B. has trouble sleeping/eating	=	258 (7.8%)
C. has a fever	=	2033 (61.1%)
D. is breathing fast	=	209 (6.3%)
E. has difficulty breathing	=	611 (18.4%)
F. is ill for a long time	=	286 (8.6%)
G. other	=	721 (21.7%)
H. don't know	=	254 (7.6%)

URBAN CLUSTERS (clusters no. 121 to 150)

Number of mothers in analysis = 838 (100.0%)

Number of mothers mentioning the following symptoms (what signs or symptoms would lead you to take your child to a health provider):

When he/she: A. has a blocked nose	=	64 (7.6%)
B. has trouble sleeping/eating	=	83 (9.9%)
C. has a fever	=	588 (70.2%)
D. is breathing fast	=	28 (3.3%)
E. has difficulty breathing	=	159 (19.0%)
F. is ill for a long time	=	26 (3.1%)
G. other	=	236 (28.2%)
H. don't know	=	57 (6.8%)

All clusters:

Number of children with an Acute Respiratory Infection episode in the last 2 weeks:

Children aged <5 years in analysis =	3537 (100.0%)
Children with ARI episode =	874 (24.7%)

ANNEX C.

7. VITAMIN A, questions to mothers

RURAL CLUSTERS (clusters no. 001 to 120)

Number of mothers in analysis = 3327 (100.0%)

Mothers who have heard messages which promote Vitamin A-rich foods:

Yes =	493 (14.8%)
No =	2037 (61.2%)
Don't know =	282 (8.5%)

Mothers who can name Vitamin A-rich foods:

Food 1--Cabbage:	=	372 (11.2%)
Food 2--Tomato:	=	219 (6.6%)
Food 3--Carrot:	=	364 (10.9%)
Other responses	=	549 (16.5%)

Mothers with FAFA, FAMIX in the house:

Yes, seen =	88 (2.6%)
Yes, not seen =	107 (3.2%)
No =	2608 (78.4%)

URBAN CLUSTERS (clusters no. 121 to 150)

Number of mothers in analysis = 838 (100.0%)

Mothers who have heard messages which promote Vitamin A-rich foods:

Yes =	394 (47.0%)
No =	329 (39.3%)
Don't know =	39 (4.7%)

Mothers who can name Vitamin A-rich foods:

Food 1--Cabbage:	=	170 (20.3%)
Food 2--Tomato:	=	92 (11.0%)
Food 3--Carrot:	=	363 (43.3%)
Other responses	=	123 (14.7%)

Mothers with FAFA, FAMIX in the house:

Yes, seen =	92 (11.0%)
Yes, not seen =	58 (6.9%)
No =	616 (73.5%)

Vitamin A, questions related to children aged <5 years:

All clusters:

Children aged <5 years in analysis = 3525 (100.0%)

1. "Since last (day of the week), did (child name) eat FAFa or FAMIX?"

Yes:	331 (9.4%)
No:	3160 (89.6%)
Don't know:	34 (1.0%)

2. "Since last (day of the week), did (child name) eat any of the following foods?"

Food 1: Cabbage	1185 (33.4%)
Food 2: Tomato	592 (16.7%)
Food 3: Carrot	411 (11.6%)

3. Has (child name) ever received a Vitamin A capsule (supplement) like this one ?

Yes:	337 (9.6%)
No:	3051 (86.7%)
Don't know:	132 (4.7%)

ANNEX D.

9. SALT IODIZATION

	<u>Rural</u>	<u>Urban</u>	<u>Total</u>
Households in analysis=	3509	(100%)	863 (100%)
			4372 (100.0%)

Test outcome: Households with:

Iodized salt:	6 (0.2%)	3 (0.3%)	9 (0.2%)
Not Iodized salt:	3373 (96.1%)	854 (99.0%)	4227 (96.7%)
Salt not tested:	61 (1.7%)	0 (0.0%)	61 (1.4%)
No salt in home:	69 (2.0%)	5 (0.6%)	74 (1.7%)
No response:	0 (0.0%)	0 (0.0%)	0 (0.0%)

Type of salt: Households with:

Salt in bag w/ seal:	0 (0.0%)	2 (0.0%)	2 (0.0%)
Granular:	3457 (98.6%)	856 (99.2%)	4313 (98.7%)
Salt in blocks:	28 (0.8%)	3 (0.3%)	31 (0.7%)
Other:	3 (0.1%)	0 (0.0%)	3 (0.1%)
No salt seen:	19 (0.5%)	1 (0.1%)	20 (0.5%)
No response:	0 (0.0%)	0 (0.0%)	0 (0.0%)

ANNEX E.

Distribution of Urban Clusters
Multiple Indicator Survey, 1995

<u>Region</u>	<u>Town/Zone</u>	<u>Cluster</u>
1. Tigray	Mekele	1
3. Amhara	Debre Markos	2
	Gonder	3
	Debre Tabor	4
	Dessie	5
4. Oromiya	Goga Robe	6
	Jimma	7
	Nazareth	8
	Nekemte	9
5. Somali	Jijiga	10
15. Dire Dawa	Dire Dawa	11
14. Addis Ababa	Zone 1	12,13,14
	Zone 2	15,16,17,18
	Zone 3	19,20
	Zone 4	21,22,23,24,25
	Zone 5	26,27,28,29
	Zone 6	30

Distribution of Rural Clusters
Multiple Indicator Survey, 1995

<u>Region</u>	<u>Zone</u>	<u>Cluster</u>
1. Tigray	West Tigray	1,2
	Central Tigray	3,4
	East Tigray	5
	South Tigray	6,7,8
2. Afar	Assaita (Z1)	9
	Gewane (Z3)	10
3. Amhara	Gonder North	11,12,13,14,15
	Gonder South	16,17,18,19
	Wollo North	20,21,22
	Wollo South	23,24,25,26,27,28
	Gojjam West	29,30,31,32,33,34
	Gojjam East	35,36,37,38
	Shoa North	39,40,41,42

4. Oromiya	Arssi	43,44,45,46
	Bale	47,48,49
	Borena	50,51
	Shoa North	52,53
	Shoa East	54,55,56,57
	Shoa west	58,59,60,61,62
	Wellega East	63,64,65
	Wellega West	66,67,68,69
	Illubabor	70,71,72
	Jimma	73,74,75,76
	Hararge East	77,78,79,80
	Hararge West	81,82
	5. Somali	Shnille
Jijiga		85,86,87,88
6. Benshangul	Benshangul	89
	Asossa	90
7. SNNPRG	Kefficho	91
	Bench	92
	Sidamo	93,94,95,96
	Omo North	97,98,99,100,101,102
	Omo South	103
	Kembata	104,105,106
	Hadiya	107,108
	Guraghe	109,110,111,112
	Gedeo	113,114
	Yem	115
	Konso	116
12. Gambella	Gambella	117,118
13. Hararyi	Harar	119
15. Dire Dawa	Dire Dawa	120

ANNEX F.

MULTIPLE INDICATOR SURVEY CLUSTER QUESTIONNAIRE MODULES

COMPONENTS OF THIS QUESTIONNAIRE MODULES ARE:

1. CLUSTER CONTROL FORM
2. HOUSE HOLD MODULE
3. BREASTFEEDING MODULE
4. VITAMIN A MODULE
5. ACUTE RESPIRATORY ILLNESS MODULE
6. DIARRHOEAL MODULE
7. IMMUNIZATION MODULE
8. SALT IODIZATION MODULE

Introduction: "We are from Ministry of Health" and would like to ask all mothers or others who care for children some questions about the health and well-being of the children in this household. This information will help us improve the health and well-being of children. The questions will take only a few minutes."

1. CLUSTER CONTROL FORM.

1. Cluster number:	2. Household number:	3. Date of interview: dd/mm/yy. _/_/___
4. Interviewer No. _/_/___	Name of head of household:	Call-back necessary? Time: _/_/___
5. No. persons in household usually resident: _____	Material of dwelling floor: 1 wood/tile 2 planks/concrete 3 dirt/straw 4 other	Number of rooms in dwelling: _____
Data entry clerk no:	6. All forms completed? 1 Yes 0 No	8. Region:
	7. If not, why not? 1 Refusal 2 Not at home 3 HH not found/destroyed 4 other	9. 1. Rural 2. Urban

mother (A) ~~caregiver~~ ~~in the household~~ ~~write in the name of~~ the names (column 2), birth dates (column 3), their ages & sex (column 4,5) and whether children are alive or dead (column 6) of the children she cares for who live in the household, starting with the youngest child, who is listed on line number 1.1 (column 1). Stop listing when you reach a child over age 5.

Then ask: Are there any other children who live here, even if they are not at home now? (These may include children in school or at work.) IF YES, COMPLETE LISTING. Then, ask and record answers to questions as instructed in INSTRUCTIONS TO INTERVIEWERS.

2. HOUSE HOLD MODULE

Cluster No. _____ Household No. _____

Name of the Mother/Caretaker _____.

/If there is more than one Mother/Caretaker write all the names/

1. Line No.	2. Name of the Child	3. Day, Month, year of birth?						4. Age in years	5. Gender M = 1 F = 2	6. A B
		D	D	M	M	Y	Y			
TOTAL										

** Identify those children from the same mother in the case of children born from different mothers in the space provided of Mothers' name i.e using Line Nos.

3. BREASTFEEDING MODULE

This questionnaire is directed to all mothers who have children of 0 - 12 months of age.

Cluster No. _____ Household No. _____

MOTHER'S NAME. _____	
1. Has (NAME) ever been breast fed? Yes 1 No 0 DK 9	
<i>IF Q.1 = 0 OR 9, GO ON TO NEXT MODULE OR OPTIONAL Q. 4 OR Q. 5.</i>	
2. Is he/she still being breast fed? Yes 1 No 0 DK 9	
<i>IF Q.2 = 0 OR 9, GO ON TO NEXT MODULE, OR OPTIONAL Q. 4 OR Q.5.</i>	
3. Since this time yesterday, did he/she receive any of the following? <i>Prompt AND circle code for all items mentioned.</i>	
3A. Vitamin, mineral supplements or medicine	1
3B. Plain water	2
3C. Sweetened, flavored water or fruit juice or tea or infusion	3
3D. Oral rehydration solution (ORS)	4
3E. Tinned, powdered or fresh milk or infant formula	5
3F. Solid or semi-solid (mushy) food	6
3G. Other (<i>specify</i>)	7
3H. Received ONLY breast milk	8
3I. Don't know	9
	3A. 1 3B. 2 3C. 3 3D. 4 3E. 5 3F. 6 3G. 7 3H. 8 3I. 9
4. Since this time yesterday, has (NAME) been given anything to drink from a bottle with a nipple or teat? Yes 1 No 0 DK 9	
<i>For countries where breastfeeding durations are very short (less than 6 months):</i>	
5. If (NAME) is no longer breastfed, at what age was breast feeding stopped? _____ age in months	

4. VITAMIN A MODULE

Cluster No. _____ Household No. _____

A1.	Has (NAME) ever received a Vitamin A capsule (supplement) like this one? (SHOW CAPSULE or DISPENSER)				
	Yes	1	No	0	DK 9
IF Q.1 = 0 OR 9, GO ON TO NEXT MODULE.					
MODULE B [for countries with food fortification programme]:					
B1.	We would like to know if some food products are used in your household. Do you have [fortified food product] in the house? Would you show us?				
	Yes, seen	1	Yes, not seen	2	
	No	0	>> GO ON TO NEXT MODULE		
B2.	Since last (day of the week), did (NAME) eat (name of food fortified by programme)? [Show product package; PROMPT - used in cooking, stirred in drinks, etc?]				
	Yes	1	No	0	DK 9
MODULE C [for countries with dietary education programmes]:					
C1.	Have you heard any messages which promote certain foods that are important for sight and help prevent blindness [country-specific message]?				
	Yes	1	No	0	
	Don't know	9			
IF Q.1 = 0 OR 9, GO ON TO NEXT MODULE.					
C2.	Can you tell me what some of these foods are? Circle code if mentioned. Do NOT prompt. [List Vitamin-A rich foods country/region/season-specific]:				
	Food 1 (COUNTRY-SPECIFIC)	1			
	Food 2 (COUNTRY-SPECIFIC)	1			
	Other responses _____	2			
Since last (day of the week) did (NAME) eat any of the following foods? [List country/region/season-specific target Vitamin A food source]:					
C3.	Food 1 (COUNTRY-SPECIFIC)				
	Yes	1	No	0	DK 9
C4.	Food 2 (COUNTRY-SPECIFIC)				
	Yes	1	No	0	DK 9

Interviewer: Transfer line number of first child under 5 yrs. listed in the household schedule to the top of this page. Go through each questions with the mother. Fill in the number corresponding to the answer she gives in the box at the right of the answer. Complete a questionnaire for each child under age 5 in a similar manner, making sure all identifying information is filled in correctly, until all children under five have been covered.

5. ACUTE RESPIRATORY ILLNESS MODULE

Cluster No. _____ Household No. _____

1. Cough and cold are common illnesses. When your child is ill with a cough and/or cold, what signs or symptoms would lead you to take him/her to a [list appropriate health providers, *eg.*, clinic, community health worker, doctor] or other health provider?

DO NOT PROMPT.

Circle the number for each answer mentioned. More than one answer can be circled.

When he/she:

- 1A. - has a blocked nose
- 1B. - has trouble sleeping/eating
- 1C. - has a fever
- 1D. - is breathing fast
- 1E. - has difficulty breathing
- 1G. - other
- 1H. - don't know

—
—
—
—
—
—
—

7. IMMUNIZATION MODULE

This module is for living children less than five years. If child is dead, skip to next child.
 If card is present, copy dates. If no date for vaccination is recorded on the card, or if no card is available, ask mother if child received that vaccination and copy number for mother's response in space provided. Yes=1
 No=0 DK=9

Cluster No. ___

Household No. ___

Child	Line No. __	Line No. __	Line No. __	Line No. __				
Date Of Birth.	-- / -- / --	-- / -- / --	-- / -- / --	-- / -- / --				
Age	__ years	__ years	__ years	__ years				
yes 1 no 0 dk 9	yes no dk	date dd/mm/yy	yes no dk	date dd/mm/yy	yes no dk	date dd/mm/yy	yes no dk	date dd/mm/yy
Card								
BCG								
DPT1								
DPT2								
DPT3								
OPV1								
OPV2								
OPV3								
Measles								
BCGScar								

8. SALT IODIZATION MODULE

INTERVIEWER: We would like to check whether the salt used in your household is iodized. May we see a sample of the salt used to cook the main meal eaten by members of your household last night?

1. Record test outcome:	Iodized	1	
	Not iodized		2
	Not tested	3	
	No salt in home	9	
2. Record type of salt:	Salt in bag with seal	1	
	Granular (loose or coarse)	2	
	Salt in blocks		3
	Other _____	4	
	Not seen		9

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