THE STATUS OF WOMEN AND CHILDREN IN SIERRA LEONE

A HOUSEHOLD SURVEY REPORT (MICS-2)

undertaken by the

GOVERNMENT OF SIERRA LEONE

with technical and financial support from

UNICEF, UNFPA, UNHCR, ACTION AID, CCF, CHASL.

CENTRAL STATISTICS OFFICE
MINISTRY OF DEVELOPMENT AND ECONOMIC PLANNING

Foreword

It is with joy and satisfaction that my Ministry, in collaboration with our development partners, presents this national report for the 2000 Sierra Leone Multiple Indicator Cluster Survey (MICS2) – a nationally representative survey of households, women and children.

The 1990 World Summit for Children Plan of Action set end-decade goals for 2000. This Plan required national efforts by government and its partners to ensure a high quality of life for our children in all spheres of their development. The Plan also sought to improve the quality of the health and education of the children of Sierra Leone and increase their opportunity to develop their unique abilities. Achievement of this laudable plan was to be monitored and assessed through socio-economic indicators in the area of health, education, and child protection.

In preparing this report for Sierra Leone, the goals set for the World Summit for Children in 1990 were assessed and the present status of the socio-economic indicators that were recommended evaluated. The information generated in this report should therefore assist government and other development partners to plan for and develop meaningful development programmes that will ensure the survival, development, and protection of children in the coming decade.

Sierra Leone occupies an unenviable position as reflected in the 2000 Global Human Development Report. That report was based on data that—accurate as it may have been—was badly out-of-date. Information in this report should be regarded as an accurate presentation of the current situation in Sierra Leone, considering the comprehensive nature in which the survey was planned and implemented.

The Central Statistics Office (CSO) within the Ministry of Development and Economic Planning has been responsible for the collection, compilation and analysis of the data in this report. While CSO served as the technical arm of the ministry for the production of this report, administrative and technical support was provided by the MICS2 Task Force. The Task Force drew members from all ministries, UNICEF, UNFPA, UNHCR, FAO, CCF, Action Aid (S.L) and CHASL.

UNICEF provided extensive technical support to the production of this report through its external consultant and national field staff. Useful comments and suggestions were also received from our development partners who read the preliminary report. Nevertheless, the Ministry of Development and Economic Planning assumes full responsibility for the contents of this report.

Once again, I do believe that users of this document will find information that will help them plan and develop programmes and formulate policies for the advancement of women, children, and other vulnerable members of our society.

Kadi Sesay, Ph.D.
Minister of Development and Economic Planning

November, 2000

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The people of Sierra Leone are acknowledged for the time they spent providing information about themselves and the warm hospitality that they showed to data collection personnel.

The enumerators and supervisors are acknowledged for their dedication and hard work in the face of difficult and potentially dangerous conditions in the field.

The 2000 Sierra Leone Multiple Indicator Cluster Survey—2 (MICS2) received the backing of many institutions and their dedicated personnel. The following organizations are acknowledged for the financial, logistical and/or technical support that they provided to date to the MICS2 survey effort.

Government of Sierra Leone
Central Statistics Office
Ministry of Development and Economic Planning
Ministry of Health and Sanitation
Ministry of Information and Broadcasting
Ministry of Local Government and Rural Development
Ministry of Safety and Security
Ministry of Social Welfare, Gender and Children's Affairs
Ministry of Youth, Education and Sports

United Nations Agencies
UNICEF Sierra Leone
UNFPA
UNHCR

Non-governmental organizations
Action Aid - Sierra Leone
Christian Children's Fund
Christian Health Association of Sierra Leone

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List of Abbreviations

AFRC	Armed Forces Revolutionary Council
ARI	Acute Respiratory Infection
CCP	Commission for the Consolidation of Peace
CSO	Central Statistics Office
DPT	Diphtheria, Pertussis and Tetanus
EA	Enumeration Area
HIV	Human Immunodeficiency Virus
IDP	Internally Displace Person
IMCI	Integrated Management of Childhood Illnesses
IMR	Infant Mortality Rate
MICS2	Multiple Indicator Cluster Survey–2
MMR	Maternal Mortality Rate
NGO	Non-governmental Organization
NID	National Immunization Day
OPV	Oral Polio Vaccine
ORS	Oral Rehydration Solution
ORT	Oral Rehydration Therapy
RHF	Recommended Home Fluid
RUF	Revolutionary United Front
RUFP	Revolutionary United Front Party
SOWCR	State of the World's Children Report (UNICEF publication)
U5MR	Under-5 Mortality Rate
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commission For Refugees
UNICEF	United Nations Children's Fund
VAD	Vitamin A Deficiency
VAS	Vitamin A Supplementation
WHO	World Health Organization
WSC	World Summit for Children

Executive Summary

The 2000 Sierra Leone Multiple Indicator Cluster Survey—2 (MICS2) is a nationally representative survey of households, women, and children. The main objectives of the survey are to provide up-to-date information for assessing the situation of children and women in Sierra Leone at the end of the decade and to furnish data needed for monitoring progress toward goals established at the World Summit for Children and as a basis for future action.

Overall findings
- This report paints a portrait of a country in crisis. Following the publication of results from MICS2 surveys across the world, the rates of infant, under-five and maternal mortality in Sierra Leone will likely continue to be among the highest in the world. The values of many other indicators of health and educational status reported below clearly show the desperate social and living conditions faced by most Sierra Leoneans.
- The problems in Sierra Leone cut across sectors. Education, health, and child rights are all in need of urgent action.
- Problems in Sierra Leone can be acted upon and programs can achieve success. National immunization campaigns have achieved high coverage in the face of overwhelming logistical and political constraints. Communication programs have made their mark; caretakers have high knowledge levels regarding when to seek medical treatment for their children's illness, and many make use of oral rehydration solution when their children fall ill with diarrhea.
- The Northern region of Sierra Leone—decimated by the conflict of the past decade and off-limits to almost all aid initiatives—clearly stands out as the area of the republic in greatest need of support. The population of this region experiences the greatest morbidity, has the least access to resources, and has the lowest knowledge levels in the country.
- Discrepancies in the opportunities available to boys and girls do not appear to be pervasive in Sierra Leone for most issues. Roughly equal proportions of girls and boys attend schools, and treatment of disease does not vary by gender. Rural-urban divisions are apparent, however, with urban populations enjoying greater services and displaying greater knowledge on most issues as compared to rural populations.
- Many problems in Sierra Leone are regional in nature. Values for many indicators in Sierra Leone are in line with indicator levels in neighboring West African countries and in Sub-Saharan Africa as a whole.

Sample Characteristics
- 4021 out of 4207 households during data collection were found to be occupied and were successfully surveyed, yielding a household response rate of 97. In the interviewed households, 5750 eligible women (age 15-49) were identified. Of these, 4923 were successfully interviewed, yielding a response rate of 85.6 percent. In addition, 3060 children under age five were listed in the household questionnaires of surveyed households. Questionnaires were completed for 2764 of these children for a response rate of 90.3 percent.

Infant and Under-five Mortality
- The methodology used to calculate these indicators in this survey for Sierra Leone used an indirect technique to provide estimates for the infant mortality rate (IMR) and under-five mortality rate (U5MR) for 1998. The data suggest that the IMR was 170 per 1000 and the U5MR 286 per 1000 in 1998.

Education
- Forty-two percent of children of primary school age in Sierra Leone are attending primary school. School attendance in the North and East is lower than in the rest of the country at 28 and 35 percent, respectively. At the national level, there is little difference between male (44 percent) and female (40 percent) primary school attendance.
- Eighty-five percent of children who enter the first grade of primary school eventually reach grade five.
- Thirty percent of the population over age 15 years is literate. The percentage literate declines from 38 percent among those aged 15-24 years to 15 percent among the population aged 65 years and older.

Water and Sanitation
- Fifty-four percent of the population has access to safe drinking water—74 percent in urban areas and 46 percent in rural areas. The situation in the North with regard to this indicator is considerably worse than in other regions; only 30 percent of the population there gets its drinking water from a safe source.
- Sixty-three percent of the population of Sierra Leone is living in households with sanitary means of excreta disposal.

Child Malnutrition
- Twenty-seven percent of children under age five in Sierra Leone are underweight or too thin for their age. Thirty-four percent of children are stunted or too short for their age and ten percent are wasted or too thin for their height.

Breastfeeding
- Only 2 percent of children aged under four months are exclusively breastfed, an extremely low level. At age 6-9 months, 52 percent of children are receiving breast milk and solid or semi-solid foods. At age 20-23 months, 51 percent of children continue to breastfeed.

Salt Iodization
- Twenty-three percent of households in Sierra Leone have adequately (15+ PPM) iodized salt. The percentage of households with adequately iodized salt ranges from 5 percent in the North (where local mining of salt is prevalent) to 47 percent in the Eastern province (where no mining of salt occurs).

Vitamin A Supplementation
- Within the six months prior to the MICS, 58 percent of children aged 6-59 months received a high dose Vitamin A supplement. Approximately 2 percent did not receive a supplement in the last 6 months but did receive one prior to that time.
- The mother's level of education appears to be unrelated to the likelihood of Vitamin A supplementation.
- Somewhat surprisingly, Vitamin A supplementation coverage rates were lower in the South and Western regions—where access to health activities is thought to have been better in the last three years during the civil conflict—than in the East and Northern regions. This is most likely due to the Vitamin A supplementation activities that have been conducted during the last year as part of the National Immunization Day campaigns. Vigorous efforts by NGOs in the Eastern and Northern regions to provide preventive health care may also have played a part.
- Approximately 33 percent of mothers with a birth in the year before the MICS2 received a Vitamin A supplement within eight weeks of the birth.

Low Birth weight
- The technique used to estimate the percentage of infants that weigh less than 2500 grams at birth suggests that 52 percent of infants in Sierra Leone have low birth weight. This percentage is much higher than the average for Sub-Saharan Africa (15 percent) and is higher than the reported percentage[1] for every country in the world, including Bangladesh (50 percent).

Immunization Coverage
- Seventy-three percent of children aged 12-23 months received a BCG vaccination and the first dose of DPT was given to 68 percent. The percentage declines for subsequent doses of DPT to 59 percent for the second dose and 46 percent for the third dose.
- Similarly, 82 percent of children aged 12-23 months had received Polio 1 and this percentage declines to 61 percent by the third dose.
- Sixty-two percent of children aged 12-23 months had received measles vaccine.
- Only thirty-nine percent of children aged 12-23 months had currently received all eight recommended vaccinations.
- Vaccination coverage for male children is consistently about five percent higher than for female children for all antigens. Vaccination rates for children living in urban areas are 10-20% higher than for children living in rural areas, depending on the antigen.
- The neediest groups of children in Sierra Leone have the lowest coverage. Coverage rates measured in this survey were generally found to be moderately lower among traditionally underserved groups: girls, children living in rural areas, children living in areas of the country with limited access due to armed conflict (i.e., Northern and Eastern regions), and children of uneducated mothers.

Diarrhea
- Approximately eighty-six percent of children with diarrhea received one or more of the recommended home treatments (i.e., were treated with Oral Rehydration Solution or a Recommended Home Fluid).
- Only 28 percent of children with diarrhea received increased fluids and continued eating as recommended.

Acute Respiratory Infection
- Nine percent of under-five children had an acute respiratory infection in the two weeks prior to the survey. Approximately 50 percent of these children were taken to an appropriate health provider.

IMCI Initiative
- Among under-five children who were reported to have had diarrhea or some other illness in the two weeks preceding the MICS, 30 percent received increased fluids and continued eating as recommended under the IMCI program.
- Seventy-seven percent of mothers know at least two of the signs that suggest that a child should be taken immediately to a health facility.

Malaria
- Fifteen percent of under-five children in the Sierra Leone MICS2 slept under a bednet the night prior to the survey interview. However, only about ten percent of the bednets used were impregnated with insecticide.

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[1] The State of the World's Children 2000, UNICEF, 2000

- Approximately 66 percent of children with a fever in the two weeks prior to the MICS2 interview were given Paracetamol to treat the fever and 60 percent were given Chloroquine while only 4 percent were given Fansidar. A relatively large percentage of children (43 percent) were given some other medicine.

HIV/AIDS
- Only 54 percent of women aged 15-49 at the national level (18 percent in the North) have ever heard of HIV/AIDS.
- Twenty-one percent of women aged 15-49 know all three of the main ways to prevent HIV transmission – having only one uninfected sex partner, using a condom every time, and abstaining from sex.
- Nineteen percent of women correctly identified three misconceptions about HIV transmission – that HIV can be transmitted through supernatural means, that it can be transmitted through mosquito bites, and that a healthy looking person cannot be infected.
- Nine percent of women of reproductive age in Sierra Leone know a place to get tested for HIV and 2 percent have been tested.
- The percentage of women who have sufficient knowledge of HIV transmission and the percentage who know where to get tested for HIV increases with the level of education.

Contraception
- Current use of contraception (both modern and traditional) was reported by 4 percent of married or in union women. The only two methods with a significant level of use are the pill and injections. Seven percent of women who said that they were sexually active reported contraceptive use.

Prenatal Care
- Fifty-eight percent of women with recent births in Sierra Leone are protected against neonatal tetanus. The vast majority of these women received two or more doses of tetanus toxoid within the last three years.
- Eighty-five percent of women in Sierra Leone receive some type of prenatal care and 68 percent receive antenatal care from skilled personnel (doctor, nurse, midwife, auxiliary midwife).

Assistance at Delivery
- A doctor, nurse, or midwife delivered about 42 percent of births occurring in the year prior to the MICS2 survey. This percentage is highest in the Eastern region at 66 percent and lowest in the North at 22 percent.

Birth Registration
- The births of 47 percent of children aged less than five years in Sierra Leone have been registered. There are no significant variations in birth registration across gender or age categories. The birth registration breakdown across regions shows that 27, 50, 67 and 81 percent of children have been registered in the Northern, Eastern, Southern and Western regions, respectively.

Orphanhood and Living Arrangements of Children
- Overall, 61 percent of children aged 0-14 are living with both parents. Children who are not living with a biological parent comprise 16 percent and children who have one or both parents dead amount to 12 percent of all children aged 0-14.
- The situation of children in the Western Area differs from that of other children in Sierra Leone. In the Western Area, less than half of children live with both parents. Nineteen

percent of children live with their mother only although their father is alive and a relatively large proportion (21 percent) live with neither parent.

Child Labor
- About two percent of children aged 5-14 years engage in paid work. A very large percentage—48 percent—participates in unpaid work for someone other than a household member.
- Almost three in four children (74 percent) engage in domestic tasks, such as cooking, fetching water, and caring for other children, for less than four hours a day while 10 percent spend more than four hours a day on such tasks.

Maternal Mortality
- The maternal mortality ratio (MMR) was directly estimated in the MICS2. The MMR estimate was 1,800 (± 800) maternal deaths per 100,000 live births. This estimate is exactly equal to the working estimate that was used in Sierra Leone prior to the survey, suggesting that it is reasonably accurate.

Summary Indicators

World Summit for Children Indicators		
Under-five mortality rate	Probability of dying before reaching age five	286 per 1000
Infant mortality rate	Probability of dying before reaching age one	170 per 1000
Maternal mortality ratio	Ratio of maternal deaths to live births: reported per 100,000 live births	1,800 ± 800
Underweight prevalence	Percentage of under-fives who are too thin for their age	27.2 percent
Stunting prevalence	Percentage of under-fives who are too short for their age	33.9 percent
Wasting prevalence	Percentage of under-fives who are too thin for their height	9.8 percent
Use of safe drinking water	Percentage of population who use a safe drinking water source	54.0 percent
Use of sanitary means of excreta disposal	Percentage of population who use a sanitary means of excreta disposal	63.1 percent
Children reaching grade five	Percentage of children entering first grade of primary school who eventually reach grade five	84.7 percent
Net primary school attendance rate	Percentage of children of primary school age attending primary school	41.9 percent
Literacy rate	Percentage of population aged 15+ years who are able to read a letter or newspaper	29.6 percent
Antenatal care	Percentage of women aged 15-49 attended at least once during pregnancy by skilled personnel	68.0 percent
Contraceptive prevalence	Percentage of married women aged 15-49 who are using a modern contraceptive method	3.9 percent
Childbirth care	Percentage of births attended by skilled health personnel	41.7 percent
Birth weight below 2.5 kg.	Percentage of live births that weigh below 2500 grams	52.5 percent
Iodized salt consumption	Percentage of households consuming adequately iodized salt	23.4 percent
Children receiving Vitamin A supplementation	Percentage of children aged 6-59 months who have received a Vitamin A supplement in the last 6 months	58.2 percent
Mothers receiving Vitamin A supplementation	Percentage of mothers who received a Vitamin A supplement before infant was 8 weeks old	32.6 percent
Exclusive breastfeeding rate	Percentage of infants aged less than 4 months who are exclusively breastfed	2.4 percent
Timely complementary feeding rate	Percentage of infants aged 6-9 months who are receiving breast milk and complementary food	52.5 percent
Continued breastfeeding rate	Percentage of children aged 12-15 months and 20-23 months who are breastfeeding	85.0 percent (12-15) 51.3 percent (20-23)
DPT immunization coverage	Percentage of children aged 12-23 months currently immunized against diphtheria, pertussis and tetanus	45.5 percent
Measles immunization coverage	Percentage of children aged 12-23 months currently immunized against measles	61.7 percent

World Summit for Children Indicators		
Polio immunization coverage	Percentage of children aged 12-23 months currently immunized against polio	61.2 percent
Tuberculosis immunization coverage	Percentage of children aged 12-23 months currently immunized against tuberculosis	72.8 percent
Children protected against neonatal tetanus	Percentage of one year old children protected against neonatal tetanus through immunization of their mother	57.7 percent
ORT use	Percentage of under-five children who had diarrhea in the last 2 weeks who were treated with oral rehydration salts or an appropriate household solution	86.1 percent
Home management of diarrhea	Percentage of under-five children who had diarrhea in the last 2 weeks and received increased fluids and continued feeding during the episode	28.4 percent
Care seeking for acute respiratory infections	Percentage of under-five children who had ARI in the last 2 weeks and were taken to an appropriate health provider	50.2 percent
Preschool development	Percentage of children aged 36-59 months who are attending some form of organized early childhood education program	11.7 percent
Indicators for Monitoring Children's Rights		
Birth registration	Percentage of under-five children whose births are reported registered	46.8 percent
Children's living arrangements	Percentage of children aged 0-14 years in households not living with a biological parent	16.1 percent
Orphans in household	Percentage of children aged 0-14 years who are orphans living in households	2.4 percent
Child labor	Percentage of children aged 5-14 years who are currently working	71.6 percent
Indicators for Monitoring IMCI and Malaria		
Home management of illness	Percentage of under-five children reported ill during the last 2 weeks who received increased fluids and continued feeding	29.5 percent
Care seeking knowledge	Percentage of caretakers of under-five children who know at least 2 signs for seeking care immediately	77.2 percent
Bednets	Percentage of under-five children who sleep under an insecticide-impregnated bednet	1.5 percent
Malaria treatment	Percentage of under-five children who were ill with fever in the last 2 weeks who received anti-malarial drugs	60.9 percent
Indicators for Monitoring HIV/AIDS		
Knowledge of preventing HIV/AIDS	Percentage of women who correctly state the 3 main ways of avoiding HIV infection	21.1 percent
Knowledge of misconceptions of HIV/AIDS	Percentage of women who correctly identify 3 misconceptions about HIV/AIDS	19.0 percent
Knowledge of mother to child transmission of HIV	Percentage of women who correctly identify means of transmission of HIV from mother to child	26.9 percent
Attitude to people with HIV/AIDS	Percentage of women expressing a discriminatory attitude towards people with HIV/AIDS	23.4 percent
Women who know where to be tested for HIV	Percentage of women who know where to get a HIV test	9.2 percent
Women who have been tested for HIV	Percentage of women who have been tested for HIV	2.5 percent

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I. Introduction

Background of the MICS2 Survey

At the World Summit for Children held in New York in 1990, the government of Sierra Leone ("Government") pledged itself to a Declaration and Plan of Action for Children ("Plan"). The Government subsequently developed a National Program of Action for Children ("Program") in 1992. The Program envisaged that programmatic efforts in line with the Convention on Rights of the Child[2] (CRC) would be implemented, targeting the women and children of Sierra Leone. The Program, unfortunately, has only been partially implemented due to the internal conflict in Sierra Leone described below. The Government has, over the years, ensured the formulation and the implementation of policies and laws that are in harmony with provisions of the CRC.

The Plan also called for the establishment of mechanisms for monitoring progress toward the Program's goals and objectives (taken from the World Summit for Children (WSC) Goals that are to be achieved by the year 2000). Toward this end, UNICEF—in collaboration with other international organizations—has developed a core set of 75 indicators that measure specific aspects of the situation of children. A MICS survey was conducted in Sierra Leone in 1995 to measure progress at mid-decade, although the survey only covered the country's Western Area. In 1999 the Government—in collaboration with UNICEF, UNFPA and NGOs both international and local—made the decision to conduct a survey in 2000 to determine the degree to which the goals and objectives laid out in the Plan have been achieved in Sierra Leone. The Multiple Indicator Cluster Survey–2 (MICS2) was designed to measure a wide variety of key indicators that are associated with the goals set out in the Plan. This report presents results on the principal topics covered in the survey and on the WSC indicators.

The Central Statistics Office (CSO) of the Government conducted the MICS2 survey. Funding was provided by the UNICEF Sierra Leone Office, United Nations Population Fund (UNFPA), United Nations High Commission for Refugees (UNHCR), Action Aid - Sierra Leone, Christian Children's Fund, and the Christian Health Association of Sierra Leone. The total cost of the survey was $93,539 (Appendix A). An Inter-Agency Working Group, consisting of many governmental, non-governmental and United Nations agencies (see Appendix B), was established to oversee the management of the MICS2 survey and monitor its progress. An international consultant was fielded to assist the CSO staff on the technical implementation of the survey.

This MICS2 Survey Report details the results of a survey that is truly national in scope. Officials of the Government of Sierra Leone ("Government") worked closely with officials of the Revolutionary United Front Party (RUFP) and the Commission for the Consolidation of Peace (CCP) to reach an agreement whereby the survey team would include members of these two groups. This approach was pursued in order to further the process of national reconciliation and ensure access to the entire country for the data collection effort. Only the outbreak of hostilities in May 2000 prevented the survey teams from covering 100 percent of the country. Ninety-two percent of the country was successfully surveyed and statistical weighting techniques have been used to construct unbiased national estimates of all indicators. This report therefore documents the first methodologically rigorous survey in many years that provides accurate estimates of key health and education indices for areas in Sierra Leone controlled by rebel forces.

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[2] The CRC was adopted by the General Assembly of the United Nations in 1989 and was subsequently ratified by the Government on June 18, 1990.

Sierra Leone Background: Independence, conflict and consequences

Sierra Leone achieved independence from British rule in 1961. Living conditions in Sierra Leone at that time were difficult for many, yet the mood was upbeat. The country appeared to be well-positioned initially for a transition from a colonial state into an independent democratic republic. Sierra Leone had a multi-party system with a western-style parliament and well-organized political parties. In 1967, the first in a series of coups and counter-coups took place, with a subsequent negative effect on the political stability of the country. In 1978, following the model of many other African countries of that era, a one-party system was adopted with the goal of containing ethnic rivalry and unifying all sections of society. This goal was not achieved—the system was abused and the basic tenets of good governance in Sierra Leone were undermined.

In 1991, the rebel war that persists to this day in Sierra Leone began with an attack on the country from rebels based in Liberia. The following nine years constitute a tragic chapter in the history of the Republic   Armed forces of the Revolutionary United Front (RUF) controlled close to half of the country at the time of the data collection for this survey in April 2000.

What have been the consequences of the unending political and military turmoil on those most vulnerable to poverty and disease in Sierra Leone—her women and children? Prior to this survey, the estimated under-five mortality in Sierra Leone was 316 per 1,000 births[3], giving this country the dubious distinction of having the highest under-five mortality rate in the world. This report confirms and quantifies the catastrophic effect that the conflict in Sierra Leone has had on the health and education sectors in Sierra Leone. The levels of many health and education indicators at the national level are tragically low, and the residents of regions controlled by rebel forces are significantly more disadvantaged than those living in the rest of the country. This decade-long conflict is the defining context of the information presented in this report.

Survey Objectives

The 2000 Sierra Leone Multiple Indicator Cluster Survey—2 has as its primary objectives:

- To provide up-to-date information for assessing the situation of children and women in Sierra Leone at the end of the decade and for looking forward to the next decade;

- to furnish data needed for monitoring progress toward goals established at the World Summit for Children and a basis for future action; and,

- to contribute to the improvement of data and monitoring systems in Sierra Leone and to strengthen technical expertise in the design, implementation, and analysis of such systems.

II. Survey Methodology

Background

Reliable census data were not readily available at the time of planning the conduct of the MICS2 survey in Sierra Leone. These data were a prerequisite to the construction of a viable sampling frame. Armed members of the RUF effectively controlled over fifty percent of the country and only granted limited access to areas under their control. All parties involved in the conduct of the survey were committed to conducting a survey that would be truly national in scope, despite the

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[3] State of the World Children 2000, UNICEF

constraints imposed by the armed conflict. Within this context, the MICS2 survey team had to design the study in a creative manner in order to ensure a quality data collection effort.

One of the most sensitive issues faced in the development of the sampling plan was how to carry out the survey in "inaccessible areas" that were controlled by rebel forces. The sampling plan that was developed assumed that permission would be secured from rebel leaders to conduct the survey in areas of Sierra Leone that were currently inaccessible. As a result of subsequent discussions with government officials and the rebel leaders, agreement was reached on both sides to conduct the survey throughout the country. The data collection teams included members of various rebel groups in Sierra Leone in order to ensure that enumerators achieved access to areas that were currently under the control of the rebel groups as well as to enhance a sense of ownership in the survey process among members of rebel groups.

Sample Design

The sampling methodology used in the MICS2 survey was designed to provide estimates of health and education indicators at the national level, for urban and rural areas, and for the four regions of Sierra Leone: North, South, East and West. The sample was selected in three stages using a stratified cluster sampling methodology. Sierra Leone has been demarcated into 2,546 enumeration areas (EAs) for the purpose of collecting census data. The current population of each EA in Sierra Leone was estimated through the use of key informants at the chiefdom level. Refugee camps containing Internally Displaced Persons (IDPs) were considered to be additional EAs and were included in the sample frame of EAs in order to ensure that IDPs were adequately represented in the survey. Based on the EA population estimates, randomized systematic sampling was used to select 225 EAs for the survey. The probability of an EA's selection was proportional to the size of its population[4], resulting in a self-weighting sample. Selected EAs were divided into <u>segments</u> of approximately 100 households each with the aid of a local informant. Maps of the selected EAs, maintained in the Cartographic Section of the CSO, were used to guide this "segmentation". One segment in each EA was then randomly selected. The map of this segment was then updated. This segment was then divided into <u>pieces</u> of approximately 20 households, one of which was randomly selected for inclusion in the survey. All households in the selected <u>piece</u> were listed on the <u>Household Listing Form</u> for the EA and included in the survey. This approach to sampling yielded an overall sample size of 4,566 households. A household was defined as "a group of people who all eat from the same pot", in line with the definition of <u>household</u> used in previous surveys in Sierra Leone.

Five of the selected enumeration areas were not surveyed because they were not accessible during the enumeration period. Data from twelve additional EAs in the North that were surveyed were not processed because the fieldworkers had to flee Makeni when hostilities resumed between RUF and government forces in May 2000. Sample weights were used for reporting results to compensate for the seventeen clusters that were not included in the final database. Full technical details of the sampling plan are detailed in Appendix C.

Questionnaires

The MICS2 manual provides a carefully constructed core questionnaire that is extremely comprehensive in nature. The core questionnaire is made up of three questionnaires: <u>Household questionnaire</u>, <u>Questionnaire for women</u>, and <u>Questionnaire for children</u>. Explicit instructions are given regarding the addition and subtraction of questions to the core questionnaire. Very minimal

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[4] Note: large EAs may have had more than one cluster of 20 households selected for inclusion in the survey.

modifications were made to the questionnaires for the purpose of the Sierra Leone MICS2. Optional modules such as the Disability Module and the Maternal Mortality Module were modified and added to the core questionnaire. Several additional questions were incorporated into existing modules to provide information pertinent to development and relief efforts in Sierra Leone. Any additions to or deletions from the core questionnaire were done within the guidelines detailed in the MICS2 manual.

The household questionnaire was administered in each household. This questionnaire collects information on household members including sex, age, literacy, marital status, and orphanhood status. The household questionnaire also includes modules on education, child labor, water and sanitation, salt iodization, disability and maternal mortality. The <u>Questionnaire for women</u> and <u>Questionnaire for children</u> were administered in each surveyed household for women age 15-49 and children under age five. For children, the questionnaire was administered to the mother or caretaker of the child. The questionnaire for women contains the following modules:

- Child mortality;
- tetanus toxoid;
- maternal and newborn health;
- contraceptive use; and,
- HIV/AIDS.

The questionnaire for children under age five includes modules on:

- Birth registration and early learning;
- Vitamin A supplementation;
- breastfeeding;
- care of illness;
- malaria;
- immunization; and,
- anthropometry.

Translation of questionnaire

The MICS2 manual recommends that enumerators never verbally translate the questionnaire "on-the-spot" to a respondent during the survey. It is instead recommended that enumerators are provided with a full complement of different language versions of the MICS2 questionnaire for all locally spoken languages. This allows interviewers to interview each respondent in a reliable manner with a fully pre-tested version of the questionnaire in a language in which the respondent is fluent. This protocol is grounded in rigorous research methodology and clearly should be followed to the extent possible. However, this approach was logistically impossible to adhere to in Sierra Leone. Five different languages are spoken in Sierra Leone—English, Krio, Temne, Mende and Limba—and the latter four are not written. In line with past surveys conducted by CSO, enumerators were provided with an English version of the questionnaire along with a list of key words (for each question on the questionnaire) in the language(s) spoken in the regions to be surveyed. Enumerators translated questions in an ad-lib fashion, while making sure to use the key words while translating.

Pre-testing of questionnaire

The finalized questionnaire was pre-tested in both rural and urban areas of the Western region. As noted above, there are five principal languages in Sierra Leone: English, Krio, Temne, Mende, and Limba. During the pre-test, the questionnaire was administered in each of these five

languages in at least six households per language. The finalized questionnaires are included in Appendix D.

Training and Fieldwork

Training

Eight Technical Supervisors from the CSO were trained for two days in supervision protocols prior to the commencement of the enumerator training. Enumerators were trained for five days in Freetown based on a modification of the training plan outlined in the MICS2 manual. Although the enumerator training included lecture and demonstration components, a substantial practical component comprised the most important aspect of the training. Each trainee conducted at least three complete interviews during the training, and at least two of these interviews were observed in full by a (different) supervisor. Each supervisor made comprehensive written notes based on their observation. These notes were shared with both the pertinent enumerator as well as among supervisors at the daily supervisors' meeting that took place each day at the close of training. Trainees had to be approved by each of the supervisors who observed their performance in order to be offered employment as an Enumerator in the survey. Following the training, thirty-one Enumerators and eight Technical Supervisors were hired to participate in the collection of data. Twelve Associate Supervisors from the two principle rebel groups (RUF and the Armed Forces Revolutionary Council (AFRC)) participated in the enumerator training and were hired to work alongside the CSO Technical Supervisors. An outline of the training schedule is included in Appendix E.

Data collection and supervision

Data collection commenced immediately following the training of enumerators in late March 2000. The first two days of data collection took place in the Western region under the strict supervision of the Survey Coordinator, the UNICEF M&E Officer and the MICS2 Survey Consultant. These three individuals served as supervisors for both the Enumerators and Technical Supervisors. Common mistakes in both enumeration and supervision were observed and immediate feedback was given to the enumerators and supervisors. Based on this experience a Supervision Plan and Supervision Checklist were developed. The Survey Coordinator and the UNICEF M&E Officer used these supervisory tools to guide their subsequent supervision in other regions. Enumerators worked together in EAs in teams of four, and were accompanied by Technical and Associate Supervisors throughout the survey. Enumerators worked individually within households. Data collection continued for approximately five weeks and finished in early May 2000. Public sensitization for the survey was done on radio in all regions prior to the survey.

Survey personnel

The MICS2 survey exercise was coordinated, managed and executed by Senior Statisticians at the CSO. The Director of Statistics at the CSO was administratively responsible for the conduct of the survey, while the Senior Statistician in charge of Household Survey Division coordinated the actual execution of the survey. Other CSO personnel who were involved in the exercise included Statisticians, Supervisors, Cartographers, Data Programmers, Data Entry Operators, Data Coders/Verifiers, Enumerators, Clerks, Typists, Drivers and Messengers.

Although some enumerators were full-time CSO employees, the majority were private citizens hired for the duration of the survey. Most enumerators were residents of the regions that they were to survey. Approximately thirty percent of the enumerators were women.

As noted above, the survey team included individuals who were members of rebel groups. These individuals were given the title of Associate Supervisors and worked under the terms of a written job description and service contract. The primary role of the Associate Supervisors was to ensure safe access of the survey team to rebel-held areas. Several Associate Supervisors became integral members of the teams they worked with and enumerated many households alongside the enumerators.

Data processing and management

Completed questionnaires were checked in the field by supervisors and then transported to Freetown, where Verifiers checked each questionnaire to make sure that it had been clearly and correctly completed. Questionnaires were then given to Data Entry Operators for entry into the database. Much of the software that was used to enter, process and analyze the data from the MICS2 survey had been previously developed by UNICEF Headquarters and merely needed to be modified for use in the Sierra Leone MICS2 survey. The software that was used to enter and process data was run in the EpiInfo6 software program.

Data were entered on fourteen microcomputers that were rented for the purpose of the MICS2 survey. All questionnaires were double-entered and then verified using EpiInfo's <u>Validate</u> routine. CSO staff oversaw all aspects of data processing and management. Procedures and standard programs developed for MICS2 by UNICEF and adapted to the Sierra Leone questionnaire were used throughout the data management process. Data entry/processing began in June 2000 and was completed in September 2000.

Limitations of the survey

Any data collection effort must confront methodological issues that will limit the validity of the results. Results can only be safely applied to the population from which the sample was drawn, and thus the manner in which the sample frame is constructed effects the generalizability of the results. In the Sierra Leone MICS2, two major potential limitations stand out. The first is related to the manner in which the questionnaire was translated into local languages, while the second concerns the technique used to construct the sample frame of EAs. Both are discussed below.

As noted above, enumerators working in the Sierra Leone MICS2 worked with an English language version of the questionnaire and translated on-the-spot to respondents in the language preferred by the respondent. This method of translation during data collection exercises is standard practice in Sierra Leone and many other countries of the region. The result of this practice is that different enumerators will invariably ask a given question in (slightly) different ways. This generally will have the net effect of reducing the reliability (i.e., the precision) of the results, depending on the ambiguity of the question and the difficulty in its translation. If the surveyors make systematic mistakes in translating a question (e.g., if in the translation from English to Temne, most enumerators translate "health facility" to "place where a doctor or nurse or midwife or traditional healer works"—as occurred in the Northern region in this survey), then the validity of the results are compromised. No magic formula exists to counteract the limitations that result from this mode of questionnaire translation. Vigorous efforts must be made to supervise enumerators and standardize questioning and translation techniques (through monitoring and the use of standardized key words in different languages). Problems that arise

must be reported so that results can be most effectively interpreted. All of these efforts to maximize the quality of the data were carried out in the MICS2.

The MICS2 sampling plan had clear limitations. The construction of the sample frame was based on estimates of EA populations by local informants. These estimates were certainly inaccurate to some extent. The implicit assumption behind this approach is that there will be no systematic differences between different types of EAs—for example, urban and rural EAs—with regards to the accuracy of the estimates. For example, it is assumed that if population estimates were generally overstated by 20%, this occurred to an equal extent in urban and rural areas of the country. Distortions would not be introduced into the results if this was the case. However, if rural estimates of EA population are generally 20 percent overstated while urban estimates are 20 percent understated, then rural EAs will be over-represented in the sample of EAs, and indicator estimates at the national level will be skewed towards the rural estimates. What this sampling plan sought to accomplish was to generate a sample that could be fairly regarded as nationally representative to estimate key indicators to an acceptable level of precision. The survey team feels that the plan that was implemented achieved this goal in spite of the resource constraints within which the survey was conducted.

III. Sample Characteristics and Data Quality

Response Rates

As noted above, hostilities between the Revolutionary United Front (RUF) and forces aligned with the Government resumed during the final week of data collection for the MICS2 survey in May 2000. As a result, one cluster in the East and four clusters in the North could not be surveyed. Completed questionnaires from twelve clusters in the Northern region that had already been surveyed were stranded in Makeni when enumerators could not return to collect them. The completed questionnaires had been stored there for safekeeping while the survey team had traveled to remote regions to survey other clusters. Data from eight of these clusters have been retrieved recently and will shortly be added to the MICS2 database.

In the original sample of 225 EAs there were 4566 households selected for the survey. There were 4207 households selected for the survey in the 208 clusters that were successfully surveyed and entered into the database. 4021 of these 4207 households were found to be occupied and were successfully surveyed, yielding a household response rate of 97 percent (Table 1; see Appendix F). In the interviewed households, 5750 eligible women (age 15-49) were identified. Of these, 4923 were successfully interviewed, yielding a response rate of 85.6 percent. In addition, 3060 children under age five were listed in the household questionnaires of surveyed households. Questionnaires were completed for 2764 of these children for a response rate of 90.3 percent.

Age Distribution and Missing Data

As shown in Figure 1, the single year age distribution of household members by sex exhibits notable distortions. A condensed version of the data used to construct this figure can be found in Table 2. There appears to be significant heaping of males on ages 12-17 and women on age 50. For both sexes, significant digit preference is evident for ages ending in 0 and 5, a pattern typical of populations in which ages are not always known.

Figure 1: Single year age distribution of the household population by sex, Sierra Leone, 2000
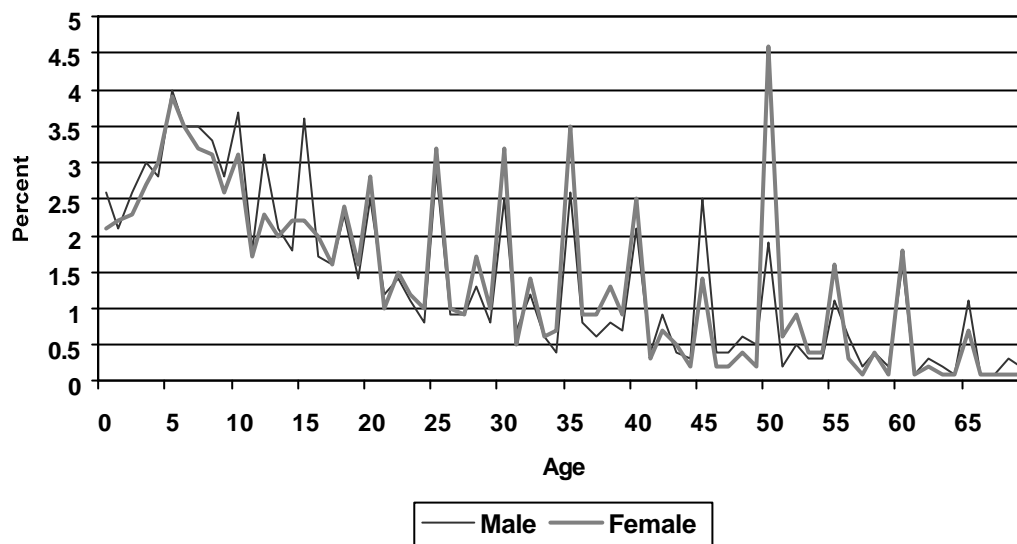
As a basic check on the quality of the survey data, the percentage of cases missing information on selected questions is shown in Table 3. Fewer than two percent of household members have missing information for both their level of education and years of education. This low level of missing data suggests that significant problems with the questions or the fieldwork did not exist, at least for this aspect of the survey. Among female respondents, 73 percent did not report a complete birth date (i.e., month and year). These data were missing for16 percent of female respondents, while 57 percent of female respondents did not know their complete birth date. Seventy-seven percent of women who had a birth in the 12 months prior to the survey did not report the date of their last tetanus toxoid injection. The degree of completeness of collection of data for these indicators is another sign of the quality and thoroughness of the fieldwork. In this case, data were collected for a very small proportion of respondents. Supervisors noted that most women in Sierra Leone are unable to state the month and year in which they were born, and that many even have great difficulty stating their age. Supervisors did feel like the high percentage of women unable to report a complete birth date may have been partially due to insufficient probing on the part of the enumerators.

The data on a child's weight and height are often the most likely information to be missing in a MICS database. In the Sierra Leone MICS2 survey, approximately ten percent of children are missing this information. The level of missing anthropometric data varied significantly among regions; the percentage of children missing data on weight and/or height is 16.1, 10.8, 0.8 and 1.5 percent in the North, East, South and West, respectively. Discussions were held with supervisors to try and explain the observed variation. The ability of survey teams to return to households where children had not been present varied among regions, due to security issues and varying distances between selected villages. In addition, surveyors in the North mistakenly followed a protocol of taking no anthropometric measurements on children aged less than six months, thus explaining a significant part of the high level of non-measurement for that region. Carelessness of enumerators in completing interviews and supervisors' inability to check every questionnaire for completeness while in the field also accounted for some cases of non-measurement. By

international standards, the percentage of unmeasured children is moderate in comparison to other surveys in which anthropometric measurements are taken.

Characteristics of the Household Population

Information on the characteristics of the household population and the survey respondents is provided to assist in the interpretation of the survey findings and to serve as a basic check on the sample implementation.

Table 1 presents the percent distribution of households in the sample by background characteristics. About 30 percent of the households (1187/3916) are urban and 70 percent (2729 households) are rural. Settlements with populations of 2,000 people or more were defined as urban, while those with populations below 2,000 were defined as rural. The Northern region comprises the largest of the four regions with 31 percent (1200/3916) of households interviewed while the Eastern region is the next largest with 25 percent (975/3916; Table 4). The remaining regions—the Southern region and the Western Area—contain 21 (817/3916) and 24 (924/3916) percent of the surveyed households, respectively. Most of the households in the sample (64%) have between four and seven members. Fifty-four percent of the households contain at least one child under age five and 87 percent contain at least one woman aged 15-49.

Information was gathered on household possessions among surveyed households. The chart below shows the percentage of households in Sierra Leone that report owning selected items.

Chart 1: Percentage of households owning selected items, Sierra Leone, 2000

Item	# that own	# questioned	% that own
Radio	1791	3905	45.9
Television	159	3910	4.1
Automobile	62	3910	1.6
Motorcycle	56	3910	1.4
Bicycle	248	3910	6.3
The house they live in	1875	3904	48.0

Table 3 shows the background characteristics of children under age five (and their mothers) who were surveyed. Approximately 78 percent of the mothers of the surveyed children are uneducated[5]. The proportion of children in each one-year age category between ages 0-11 months to children aged 36 – 47 months steadily increases from age zero years to age three years until falling for the group of children aged four years (i.e., 48-59 months). Fifty percent of the children are male.

Among women of child-bearing age in the sample, 16 percent have completed some secondary education (i.e., those who have at least completed the first year of Form 1) while 78 percent are uneducated (Table 4a). Ten percent of women of child-bearing age are in the age group 15-19 years (Table 5). The lowest percentage (2.4) is in the age group 45-49 years. Eighty percent of women in the sample are married and 79 percent have given birth to at least one child (Table 5).

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[5] For children whose mothers did not live in the household, the education of the child's caretaker is used.

IV. Results

A. Infant and Under-Five Mortality

Child mortality indicators

Indicator	Rate
Infant mortality rate (number of children dying before age one divided by the number of live births in the year)	170 per 1000
Under-five mortality rate (number of children dying before the age of five years divided by the number of live births)	286 per 1000
Note: These indicators were calculated using indirect techniques. Numerators and denominators for these indicators are therefore not reported.	

The *infant mortality rate* (IMR) is the probability of dying before the first birthday. The *under-five mortality rate* (U5MR) is the probability of dying before the fifth birthday. In the MICS2 survey, infant and under-five mortality rates are calculated based on an indirect estimation technique (the Brass method). The data used in the estimation are the mean number of children ever born for five year age groups of women from age 15 to 49 and the proportion of these children who are dead (also for the same five year age groups of women). The technique converts these data into probabilities of dying by taking into account both the mortality risks to which children are exposed and their length of exposure to the risk of dying. The Brass method therefore uses retrospective data to obtain estimates of IMR and U5MR. Several different estimates of these indicators are generated, all of which are pegged to different reference years in the past. Generally, following examination of the data, the most recent estimate that is felt to be robust is used. In the case of MICS2, although the survey has been conducted in the year 2000, the IMR and U5MR reported here represent estimates of the rates for1997 (precisely, 1997.3).

Figure 2: Estimates of infant and under-five mortality based on indirect estimation, Sierra Leone, 2000
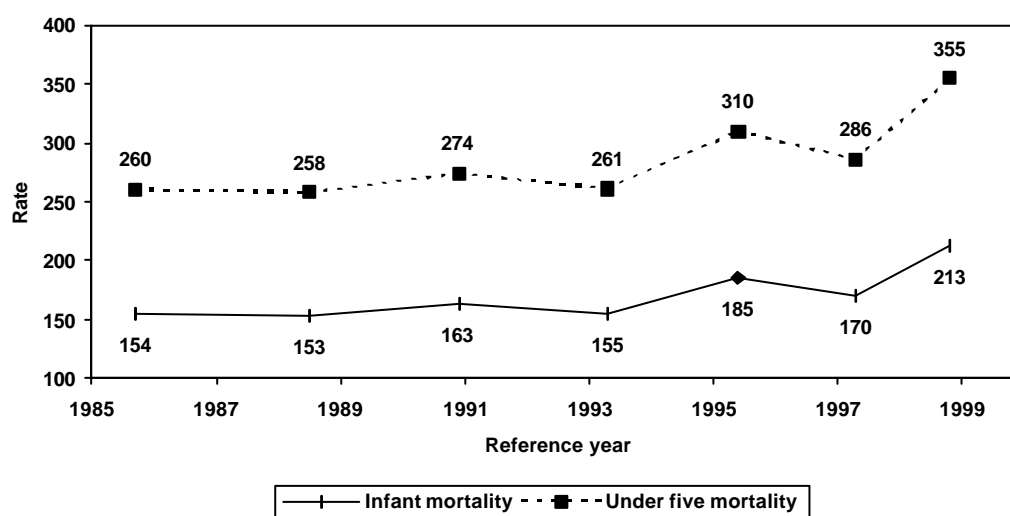
Mortality estimates were calculated using the United Nations QFIVE software program. When using the Brass method a model must be selected that best fits the mortality patterns in the country where the survey was conducted. There are four models: North, South, East and West. The North model life table was selected to estimate mortality rates in this survey. The North model is generally used in countries where both 1) the IMR is high and 2) the mortality rate of children aged one to four years is also high. The North model was used to estimate infant and child mortality for Sierra Leone in 1974 and 1985. Estimates of infant and under-five mortality calculated from the MICS2 data for several reference years are plotted in Figure 2. Visual inspection of these data show that the 1999 estimate is much higher than other estimates, and the 1995 estimates are also notably higher than the estimates from both 1993 and 1997. Estimates from the years 1986 to 1993 are very similar and the 1997 estimates are only slightly higher than estimates from these previous years. Which of these estimates should be chosen as the "correct" estimate—i.e., the most recent robust estimate—for the purposes of reporting? When using the Brass method of indirect estimation, the most recent estimates of IMR/U5MR—those based on the reports of women aged 15-19—are almost never used (and indeed, in this case, they are abnormally high). Some experts recommend that estimates based on the reports of women aged 20-24 should also not be used (i.e., the estimates for the year 1997 in Figure 2 above). However, there are two arguments for using the 1997 data in this case. First, based on visual inspection of Figure 2, the 1997 estimates appear to be reasonably robust, since they are generally in line with data from previous years. Secondly, previous estimates of IMR/U5MR in Sierra Leone have used data from women aged 20-24. The use of data from this age group therefore enhances the comparability of these estimates with previous estimates in Sierra Leone.

Figure 3: Infant mortality rate and under five mortality rate in Sierra Leone over time
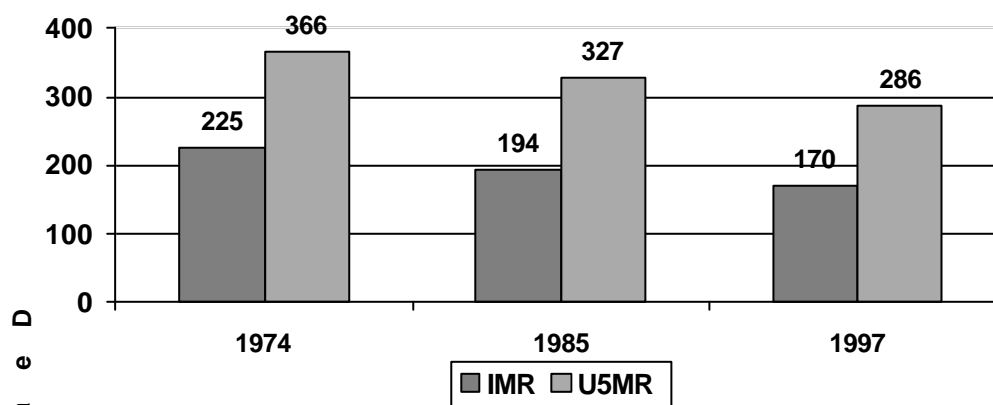
In summary, the IMR/U5MR estimates for 1997 appear to be the most recent data that can be used with confidence. Figure 3 above shows the IMR and U5MR estimates from both MICS2 and previous surveys[6] in Sierra Leone.

Discussion: Infant and child mortality
- The infant and under-five mortality rates reported here are extremely high and highlight the need to intensify efforts to combat mortality among the children of Sierra Leone.
- The data appear to be robust and suggest that the IMR and U5MR in Sierra Leone have slowly but consistently decreased over the last 25 years. One might ask why these rates have been decreasing during such a difficult period in the history of Sierra Leone. The data suggest that the victories of public health have made some impact on the mortality rates in Sierra Leone despite the trying conditions there. Cleaner sources of water prevent many water-borne diseases and the use of oral rehydration solution (ORS) to manage diarrhea saves the lives of countless children in Sierra Leone—children who, with the same disease but without management with ORS, would have died 30 years ago. Vaccinations protect many Sierra Leonean children from diphtheria, polio, measles and tuberculosis. Vitamin A supplementation programs have been proven to lower child mortality dramatically.
- The World Summit for Children goal for these indicators is to reduce IMR and U5MR to 50 and 70 deaths per 1,000 live births, respectively. Sierra Leone is far from achieving this goal.

B. Education

Indicators for education

Indicator			%
Preschool development	*Numerator:*	# of children aged 36-59 months who are attending some form of organized early childhood education program	12
	Denominator:	# of children aged 36-59 months in the sample	
Net primary school attendance rate	*Numerator:*	# of children aged 5-12 years attending primary school according to documentation or caretaker's report	42
	Denominator:	# of children aged 5-12 years in the sample	
Children entering primary school who reach grade 5	*Note: This indicator was calculated using indirect techniques. The numerator and denominator for this indicator are therefore not reported.*		85
Literacy rate	*Numerator:*	# of people aged 15 years or more in the surveyed households who were reported to be able to read a newspaper or a letter "easily" or "with difficulty"	30
	Denominator:	# of people aged 15 years or more in the surveyed households	

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[6] Source of 1997 estimates is the MICS2 survey. The 1974 and 1985 estimates of IMR and U5MR are documented in The Analytical Report: 1985 Population and Housing Census Sierra Leone (Central Statistics Office, Government of Sierra Leone) and derive from the Sierra Leone Population and Housing Censuses of 1974 and 1985, respectively.

Universal access to basic education and the achievement of primary education by the world's children is one of the most important goals of the World Summit for Children. Education is a vital prerequisite for combating poverty, empowering women, protecting children from hazardous and exploitative labor and sexual exploitation, promoting human rights and democracy, protecting the environment, and influencing population growth.

Early childhood education

Approximately one in nine children (11.7 percent) aged 36-59 months are attending an organized early childhood education program—such as kindergarten or community childcare—with organized learning activities (Table 9). Approximately equal percentages of girls and boys are attending these programs. There are large variations in this indicator according to region ranging from 4.3 percent of children in the North to 31.2 percent in the Western region. In addition, children in urban areas are over twice as likely to attend early learning activities as children in rural areas. Relatively few three-year-old children attend (8 percent of all three-year-olds) while a larger proportion of children of age four years attend (17 percent of all four-year-olds). Finally, the education of the mother is strongly related to the likelihood that a child will attend an early childhood education program. The percentage of children attending increases from 8 percent to 36.2 percent as the mother's education increases from none to secondary or higher education.

Basic education

Overall, 42 percent of children of primary school age (6-12 years) in Sierra Leone are attending primary school (Table 11). In urban areas, 64 percent of children attend school while in rural areas 34 percent attend. School attendance in the North and East (28 and 35 percent) is significantly lower than in the South and West (48 and 75 percent). At the national level, differences in primary school attendance by gender are small; 44 percent of male children and 40 percent of female children attend primary schools.

Eighty-five percent of children who enter the first grade of primary school eventually reach grade five (Table 10). However, there are regional and urban-rural disparities in the achievement of grade five. Approximately 93 percent of urban children who enter grade one reach grade five compared to 76 percent for children in rural areas. Only about 69 percent of the children in the South reach grade 5 as compared to 84 percent in the East and 97 percent in the Western region.

Figure 4: Percentage of children of primary school age attending primary school, Sierra Leone, 2000
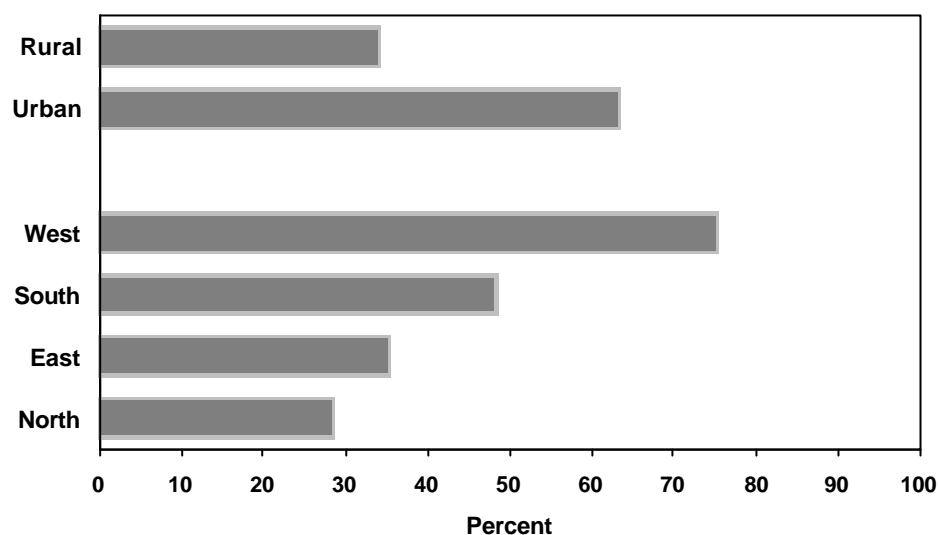
Literacy

Only 30 percent of the population over age 15 years in Sierra Leone is literate (Table 12). The *literate* population includes those who are reported to read "easily" or "with difficulty". Overall, females are less likely than males to be literate (20 vs. 40 percent). The literacy rate is 69 percent in the Western region, while regional rates are generally lower outside the Western region – (14 percent in the North, 20 percent in the East and 28 percent in the South.). Literacy declines with increasing age. The percentage literate declines from 38 percent among those aged 15-24 to 15 percent among the population aged 65 and older.

Discussion: Education

- Early childhood education in Sierra Leone is a new concept. This is the best explanation for the low enrolment rate for the country. The higher rate in the Western Area is probably due to the higher proportion of educated and employed mothers in that region. Many of these mothers use kindergarten as a child care institution while they are at work.

- Enrolment of children of primary school age shows a small improvement over that obtained in the 1985 Census (37 percent).

- The adult literacy rate (30 percent) shows an improvement over the rate estimated in the 1985 Census (13 percent). However, the current estimate is still well below the goal set at the World Summit (goal: 60% adult literacy by the year 2000). The adult literacy rate has increased across gender between 1984 and 2000: from 17 percent (1985 Census) to 40 percent (MICS 2, 2000) for males and from 9 to 20 percent for females during the same period. This positive change is most likely due to changes in attitudes towards education, particularly for the girl child.

- The finding that 85% of Sierra Leonean children who enter grade one complete grade five is—at first glance—surprisingly high. However, the comparison of this result with data from other countries of the region shows that it concurs with regional trends. The State of the

World's Children 2000 (SOTWC; UNICEF, 2000) reports rates of primary school completion of 75 percent in the Ivory Coast, 80 percent in Guinea, 75 percent in Burkina Faso and 80 percent in Ghana. The Government of Sierra Leone has adopted a "6:3:3:4 approach"[7] to education in the early 1990s. Following the implementation of this plan, children in many schools have passed easily from one primary grade to another, almost irrespective of merit. Passing the national exams and gaining entry to secondary school is far more difficult under "6:3:3:4". It is thus fairly easy—from a scholastic point of view—for a child to complete his or her primary education in Sierra Leone.

- The two indicators of basic education taken together suggest that putting a child in school in Sierra Leone is a decision taken seriously by the child's family. Once a child is put in primary school, the family does what is necessary to keep them in until they complete Class 5. This finding would seem to have clear programmatic implications for those working in the education sector in Sierra Leone. The push should be to encourage children to enter Class 1. Support mechanisms will need to be developed and implemented to help "new children"— that is, those who might not have attended school if not encouraged—to complete their primary education.

C. Water and Sanitation

Indicators for monitoring access to safe drinking water and sanitary means of excreta disposal

Indicator			%
Use of safe drinking water	*Numerator:*	# of people in the surveyed households who use any of the following types of water supply for drinking: piped water; public tap; borehole/pump; protected well; protected spring; or rainwater.	54
Use of sanitary means of excreta disposal	*Numerator:*	# of people in the surveyed households who have any of the following within their dwelling or compound: toilet connected to sewage system; any other flush toilet (private or public); improved pit latrine; or traditional pit latrine.	63
	Denominator:	# of people in the surveyed households	

Use of drinking water

Safe drinking water is a basic necessity for good health. Unsafe drinking water can be a significant carrier of diseases such as trachoma, cholera, typhoid, and schistosomiasis. Drinking water can also be tainted with chemical, physical and radiological contaminants with harmful

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[7] According to the 6:3:3:4 system of education, a student should complete their formal education in 16 years. The student enters primary school in Class 1 and completes their primary education in Class 6. After passing national exams, the student enters the first year of secondary education at the Junior Secondary School Level 1 (JSS1). Following three years of education at this level the student completes JSS3 and sits a second national exam. If the student is successful on this exam, he enters the Senior Secondary School Level 1 (SSS1). Following the student's completion of SSS3 (the final year of secondary school) he takes a national exam that, if passed, allows him to attend the University for four years.

effects on human health. In addition to its association with disease, access to drinking water may be particularly important for women and children, particularly in rural areas, who bear the primary responsibility for carrying water, often for long distances.

The distribution of the overall population by source of drinking water is shown in Figure 5. Only 2 percent of the population uses drinking water from a source that is piped into their dwelling and 7 percent used water piped into their yard or plot. Rainwater collection is an insignificant source of drinking water. Potentially unsafe sources of drinking water such as unprotected dug wells, springs, ponds, rivers or streams are used by a significant percentage (46 percent) of the population.

Figure 5: Percent distribution of the population in Sierra Leone by source of drinking water, Sierra Leone, 2000
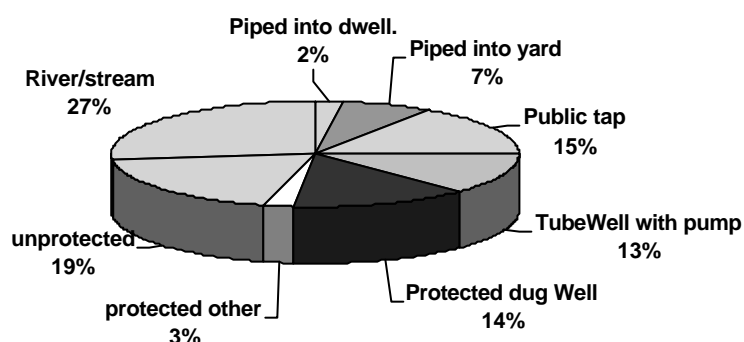
The source of drinking water for the population varies strongly by region (Table 13). In the Western Area, 32 percent of the population uses drinking water that is piped into their dwelling or into their yard or plot. The corresponding percentages for the regions are 0.4, 3 and 0.2 for the North, East and South. Access to drinking water at public water taps was higher than access to private piped water in all regions, with percentage access at 3, 16, 12 and 41 respectively for the North, East, South and West regions.

People who use safe drinking water sources are those who use any of the following types of supply: piped water, public tap, borehole/tubewell, protected well, protected spring or rainwater. Overall, 54 percent of the population has access to safe drinking water: 74 percent in urban areas and 46 percent in rural areas. The situation in the North with regard to this indicator is considerably worse than in other regions; only 30 percent of the population in the Northern region gets its drinking water from a safe source.

Use of sanitation

Inadequate disposal of human excreta and personal hygiene is associated with a range of diseases including diarrheal diseases and polio. Sanitary means of excreta disposal include: flush toilets connected to sewage systems or septic tanks, other flush toilets, improved pit latrines, and traditional pit latrines. Sixty-three percent of the population of Sierra Leone is living in households with sanitary means of excreta disposal (Table 14). This percentage is 88 in urban areas and 53 percent in rural areas. Access on regional basis is 53, 62, 51 and 95 percent in the North, East, South and Western regions, respectively. Most of the population without proper sanitary means of excreta disposal use open pits, rivers, the bush, fields, or other places for defecation.

Discussion: Water and sanitation

- Survey results suggest that improvement may have taken place in the population's access to sources of safe drinking water in Sierra Leone between 1985 and 2000. The 1985 census reported that 16 percent of the population of Sierra Leone obtained their drinking water from (private or public) taps, while this survey found that 24 percent of the population drinks water from taps. The 1985 census did not differentiate between wells that had safe and unsafe drinking water—a differentiation made in the MICS2 survey—making it impossible to assess overall change between 1985 and 2000 in the level of the population with access to safe drinking water.

- Comparisons between the level of the indicator percentage of the population that has access to sanitary means of excreta disposal in 1985 and 2000 are impossible because of the way data was collected. The 1985 census did not differentiate between the different types of pit latrines (ventilated improved pit (VIP) latrine; traditional pit latrine; open pit) that, taken together, are used by more than half of the population of Sierra Leone. The MICS2 survey differentiated between these types of pit latrines, and considered the VIP and the traditional pit latrine to be sanitary means of excreta disposal, whereas an open pit was not. The primary difference between an open pit latrine (OPL) and a traditional pit latrine (TPL) is that the TPL is covered whereas the OPL is not covered.

- Given the high percentage of the population that reports using a TPL (54 percent), it would be worthwhile to conduct a further investigation of the hygienic standards and quality of TPLs used in Sierra Leone. This could provide information that would guide the development of programs to improve the quality of sanitary facilities and ensure that TPLs in Sierra Leone are truly "sanitary means of excreta disposal".

- This survey found that 54 percent of Sierra Leoneans have access to safe drinking water. This result is well short of the World Summit goal of universal (100%) access to safe drinking water. Access to adequate sanitary means of excreta disposal as measured in MICS2 (63%) is also far below the goal of universal access that was set at the World Summit.

D. Child Malnutrition

Nutritional status

Indicators of moderate and severe malnutrition among under-five children

Indicator			%
Underweight prevalence	*Numerator:*	# of children aged 0-59 months who fall below minus 2 standard deviations from median weight-for-age of NCHS/WHO reference population	27
Stunting prevalence	*Numerator:*	# of children aged 0-59 months who fall below minus 2 standard deviations from median height-for-age of NCHS/WHO reference population	34
Wasting prevalence	*Numerator:*	# of children aged 0-59 months who fall below minus 2 standard deviations from median weight-for-height of NCHS/WHO reference population	10
	Denominator:	# of children aged 0-59 months who had complete data for weight, height, and age in the sample	

Children's nutritional status is a reflection of their overall health. When children have access to an adequate food supply, are not exposed to repeated illness, and are well cared for, they reach their growth potential and are considered well nourished.

In a well-nourished population, there is a standard distribution of height and weight for children under age five. Undernourishment in a population can be gauged by comparing children to this standard distribution. The standard or reference population used here is the NCHS standard, which is recommended for use by UNICEF and the World Health Organization. Each of the three nutritional status indicators are expressed in standard deviation units (z-scores) from the median of this reference popula tion.

Weight-for-age is a measure of both acute and chronic malnutrition. Children whose weight-for-age is more than two standard deviations below the median of the reference population are considered <u>moderately or severely underweight</u> while those whose weight-for-age is more than three standard deviations below the median are classified as <u>severely underweight</u>.

Height-for-age is a measure of linear growth. Children whose height-for-age is more than two standard deviations below the median of the reference population are considered short for their age and are classified as <u>moderately or severely stunted</u>. Those whose height-for-age is more than three standard deviations below the median are classified as <u>severely stunted</u>. Stunting is a reflection of chronic malnutrition as a result of failure to receive adequate nutrition over a long period and recurrent or chronic illness.

Finally, children whose weight for height is more than two standard deviations below the median of the reference population are classified as <u>moderately or severely wasted</u> while those who fall more than three standard deviations below the median are <u>severely wasted</u>. Wasting is usually the result of a recent nutritional deficiency. The indicator may exhibit significant seasonal shifts associated with changes in the availability of food or disease prevalence.

In Table 15, the percentage of children who had missing weights and heights (approximately 10 percent of the interviewed children) is described.   These children are excluded from anthropometric calculations, as are those children whose measurements fall outside a plausible range. In addition, the eight percent of children in the sample whose birth dates were unknown have also been excluded from these calculations.

More than one child in four under age five in Sierra Leone is moderately (27 percent) underweight and 8 percent are severely underweight (Table 15a). Thirty-four percent of children are stunted (i.e., are too short for their age) and 9.8 percent are wasted (i.e., too thin given their height).   Figure 6 displays percentages of children who are underweight, stunted, or wasted, across different age categories.

Figure 6: Percentage of under-five children in Sierra Leone who are undernourished, Sierra Leone, 2000
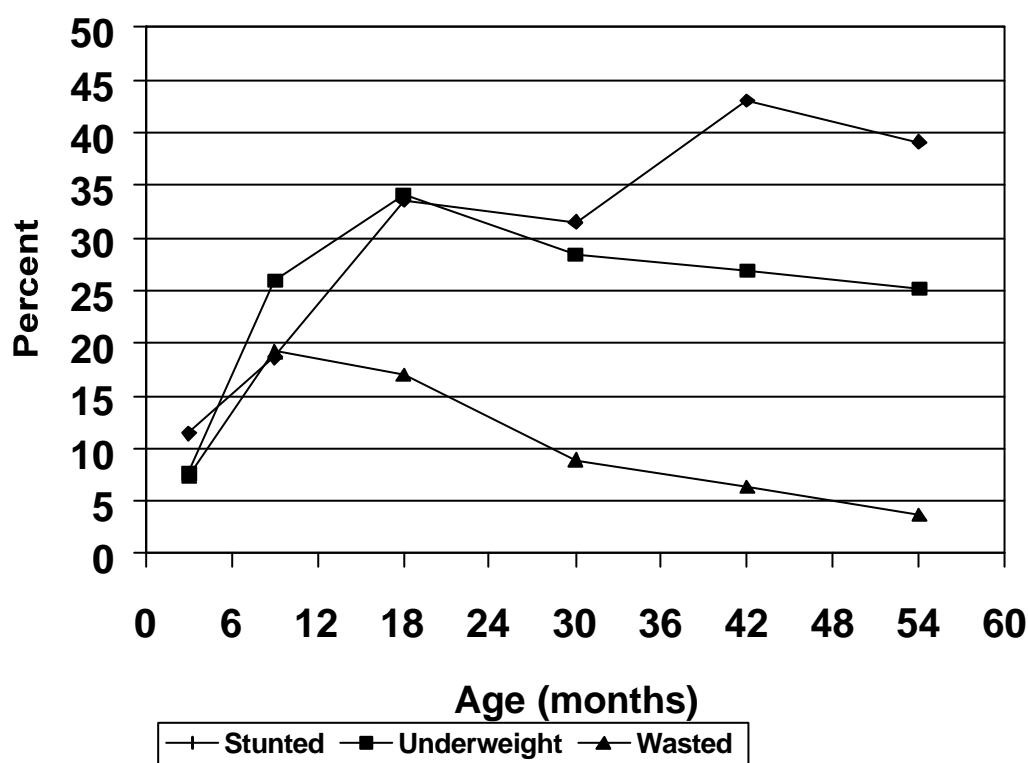
Higher percentages of children in the North and East are underweight (29 and 32 percent) than children in the South and West (24 and 20 percent). Levels of stunting are uniformly high in the North, East and South (range: 36-40 percent) and are lower (yet still high) in the West (22 percent).   Levels of wasting are fairly constant across regions, ranging from 8 percent in the South to 11 percent in the North. Mothers who have secondary or higher education are less likely to have children who are underweight, stunted or wasted, as compared to children of mothers with lower levels of education. Boys appear to be somewhat more likely to be underweight,

stunted, and wasted than girls. The age pattern shows that malnutrition in under-fives starts manifesting itself as early as six months and reaches a peak before the child is two years old. In the case of underweight, the children are more likely to falter in growth as late as the fourth year of life (Table 15a). This pattern is typical in many developing countries, due to the fact that children at this age cease to be breastfed and are newly exposed to contamination in water, food, and environment.

Discussion: Child malnutrition

- A major contributing factor to under-five mortality in Sierra Leone has been childhood malnutrition. The present levels of moderate and severe malnutrition rates for underweight, wasting and stunting (27, 10 and 34 percent) in the MICS2 survey are comparable to the figures reported for Sierra Leone in the SOTWC (29, 9, and 35 percent). The unacceptably high figures are due to the overall economic depression the country has undergone for the past ten years. There has been inadequate food production in the country due to displacement of people because of war. This has subsequently led to the household food insecurity that triggers malnutrition among the under-five children.

- The rates of malnutrition reported here for Sierra Leone are similar to those reported for other countries in West Africa and for the region as a whole (source: SOTWC), suggesting that the data are robust. Ivory Coast and The Gambia report underweight prevalence of 24 and 26 percent, while the regional underweight prevalence is 32 percent. Stunting prevalence is 24, 29, 30 and 41 percent in Ivory Coast, Guinea, The Gambia and the region, respectively. Similarly, wasting prevalence is 8, 12 and 9 percent in Ivory Coast, Guinea and the region. Two key conclusions that can be drawn here are that 1) the child malnutrition crisis is regional, not national, in nature, and 2) vigorous relief efforts in Sierra Leone by a variety of agencies may have helped to prevent the prevalence of child malnutrition in Sierra Leone from increasing beyond regional norms.

Breastfeeding

Indicators of breastfeeding status

Indicator			**%**
Exclusive breastfeeding rate	*Numerator:*	# of children aged less than 4 months who were exclusively breastfed according to mother's or caretaker's report	2
	Denominator	# of children less than 4 months of age in the sample	
Timely complementary feeding rate	*Numerator:*	# of children aged 6-9 months who received breast milk AND complementary food according to mother's or caretaker's report	52
	Denominator:	# of children aged 6-9 months in the sample	
Continued breastfeeding rate	*Numerator:*	# of children aged: 12-15 months 20-23 months who were breastfeeding at time of the survey according to mother's or caretaker's report.	85 51
	Denominator:	# of children aged 12-15 months and 20-23 months in the sample	

Breastfeeding for the first few years of life protects children from infection, provides an ideal source of nutrients, and is economical and safe. However, many mothers stop breastfeeding too soon, and there are often pressures to switch to infant formula milk, which can contribute to growth faltering and micro-nutrient malnutrition. Use of formula milk is unsafe if clean water is not readily available. The World Summit for Children goal states that children should be exclusively breastfed for four to six months, and that breastfeeding should continue with complementary food well into the second year of life. Many countries have adopted the recommendation of exclusive breastfeeding for about six months.

In Table 16, breastfeeding status is based on women's reports of children's consumption in the 24 hours prior to the interview. Exclusive breastfeeding refers to children who receive only breast milk and vitamins, mineral supplements, or medicine. Complementary feeding refers to children who receive breast milk and solid or semi-solid food. The last two columns of the table include children who are continuing to be breastfed at 12-15 and 20-23 months of age. Exclusive breastfeeding status was investigated for children aged three months and below in this study.

An extremely low percentage of Sierra Leonean children aged 0-3 months (2 percent) are exclusively breastfed. At age 6-9 months, 52 percent of children are receiving both solid or semi-solid foods and breastmilk. Encouragingly, 85 percent of children aged 12-15 months are still being breastfed, while 51 percent of children aged 20-23 months are breastfed. Breastfeeding rates were similar for boys and girls except at age 20-23 months, when girls were more likely to be breastfed than boys (58 vs. 45 percent).

Figure 7 shows the percentage of children by breastfeeding status by age in months. Note that the percentage of children who are breastfeeding and drinking other liquids but not solid or semi-solid food is not shown on the graph. For example, among children three months of age, 2 percent are exclusively breastfed, 2 percent are not breastfed, and 9 percent receive both solid or semi-solid foods and breastmilk. From these data it can be determined that 87 percent (100 − [2 + 2 + 9]) of children aged 3 months receive breastmilk and other liquids but not solid or semi-solid food.

Figure 7: Percent distribution of living children under two years by breastfeeding status, Sierra Leone, 2000
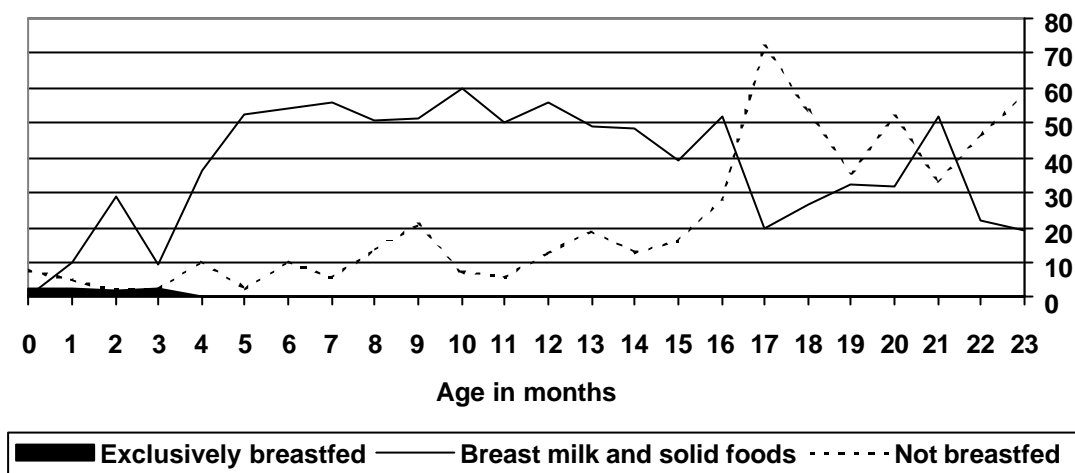
Discussion: Breastfeeding

- The rate of exclusive breastfeeding (EBF) in Sierra Leone (2 percent) is essentially nil and well below the regional average (31 percent for Sub-Saharan Africa). Given the high rate of infant mortality, high levels of infant malnutrition, and the prevalence of diarrhea among children 0-3 months of age (9 percent) in Sierra Leone, there is clearly a need to promote EBF among Sierra Leonean mothers.

- The rate of complementary feeding as measured in MICS2 (52 percent) is low with regards to previously reported rates in Sierra Leone (94 percent; source: SOTWC) but is only slightly lower than the regional average (66 percent, SOTWC). The percentage of children in the Sierra Leone MICS2 whose caretakers reported that they received breastmilk but no solid or semi-solid foods in the 24 hours prior to the survey interview is high across many age categories. For example, caretakers of 31 of 79 children (39 percent) aged 20-23 months who reported that the child received breastmilk during the 24 hours prior to the interview reported that the child did not receive solid or semi-solid food. The value of this indicator for children aged 12-15 months and 16-19 months is 40 and 32 percent, respectively. These data suggest that either a substantial percentage of very young breastfeeding children in Sierra Leone are not receiving complementary food—perhaps due to food shortage, current illness, or lack of caretaker knowledge—or that some respondents misunderstood the question and answered that their children had not received complementary food when in fact they had.

Salt iodization

Indicator of iodized salt consumption

Indicator			%
Iodized salt consumption	*Numerator:*	# of households consuming adequately iodized salt	23
	Denominator:	# of households that provided salt to sample in the sample	

Deficiency of iodine in the diet is the world's single greatest cause of preventable mental retardation and can lower the average intelligence quotient (IQ) of a population by as much as thirteen points. Salt iodization is an effective, low-cost way of preventing iodine deficiency disorders (IDD). *Adequately iodized salt* contains 15 ppm (parts per million) of iodine or more. In MICS, interviewers tested household salt for iodine levels by means of a testing kit.

Approximately 93 percent of households had salt that was tested during the MICS2 (Table 17). Among these households, 23 percent had adequately iodized salt. The percentage of households with adequately iodized salt ranges from 5 percent in the North (where local mining of salt is prevalent) to 47 percent in the Eastern province (where no mining of salt occurs). Twenty-eight percent of urban households had adequately iodized salt as compared to 22 percent of rural households.

Discussion: Salt iodization
- Sierra Leone is a long way from achieving the goal of universal iodization of household salt for consumption. The government should consider formulating policy and introducing legislation that would help to achieve this goal.
- The percentage of households consuming adequately iodized salt in Sierra Leone (23 percent) is similar to the percentages in other countries of Western Africa (9, 10, 23 and 37 percent in Senegal, Ghana, Burkina Faso and Guinea, respectively) but is well short of the average for Sub-Saharan Africa (62 percent; source: SOTWC).
- Local salt mining is an important economic activity in the Northern region and the Western Area. Local salt mining (of uniodized salt) in these two regions may be the reason for the low prevalence of iodized salt there. Households in the Eastern and Southern regions generally depend on imported salt that is more likely to be adequately iodized.

Vitamin A supplementation

Indicators for Vitamin A supplementation coverage

Indicator			%
Children receiving Vitamin A supplementation	*Numerator:*	# of children aged 6-59 months who received a high dose of Vitamin A supplement in the six months prior to the survey	58
	Denominator:	# of children aged 6-59 months in the sample	
Mothers receiving Vitamin A supplementation	*Numerator:*	# of mothers who received a high-dose Vitamin A supplement before infant was 8 weeks old	33
	Denominator:	# of mothers in the sample with live births in the 12 months prior to the survey	

Vitamin A deficiency (VAD) impairs children's immune systems, thereby increasing their chances of dying of common childhood diseases. VAD undermines the health of pregnant and lactating women and it can also cause eye damage and blindness in children. Yet it can be easily prevented by vitamin A supplementation or food fortification. UNICEF and WHO recommend that all countries with an under-five mortality rate exceeding 70 per 1000 live births, or where vitamin A deficiency is a public health problem, should put in place a program for control of vitamin A deficiency. Based on UNICEF/WHO guidelines, the Ministry of Health and Sanitation in Sierra Leone recommends that 1) children aged 6-12 months be given one dose Vitamin A capsule of 100,000 IU every six months, and that 2) children older than one year be given one high dose of 200,000 IU every six months.

Sierra Leone does not have a formal program to control VAD. However, actions are taken in Sierra Leone to provide Vitamin A to malnourished children in therapeutic and supplementary feeding centers. Children who are given measles vaccine in Sierra Leone are routinely given a Vitamin A capsule. Vitamin A capsules have been given to children concurrent with polio immunization as part of the National Immunization Day (NID) campaigns.

Within the six months prior to the MICS2 survey, 58 percent of surveyed children aged 6-59 months received a high-dose Vitamin A supplement (Table 18). Approximately 2 percent of the children had not received the supplement in the six months prior to the survey, but had received one earlier. A minor percentage (1.4 percent) of children received a Vitamin A supplement at some time in the past, although their caretaker was unable to specify when. The distribution of Vitamin A supplementation coverage in the regions is 60, 71, 40, and 50 percent for North, East, South and West, respectively. There was no significant association between the mother's level of education and the likelihood of her child receiving Vitamin A supplementation.

Vitamin A supplementation of mothers is much higher in the Eastern region (55 percent) than in the three remaining regions, where coverage levels range between 24 and 27 percent.

<u>Discussion: Vitamin A supplementation</u>
- Field trials of Vitamin A supplementation (VAS) have shown its outstanding potential to dramatically lower child mortality rates. Given the high IMR in Sierra Leone, the

implementation of a formal Vitamin A supplementation program should clearly be considered. Vitamin A supplementation in under-fives has recently received a boost during the National Immunization Days, as all children receiving polio vaccine during these campaigns have also received a Vitamin A tablet. In the short-term, the Ministry of Health might consider making VAS for under-fives at under-five clinics mandatory, so as to maintain and improve on current coverage levels.

- Somewhat surprisingly, VAS coverage rates were lower in the South and Western regions— where access to health activities is thought to have been better in the last three years during the civil conflict—than in the East and Northern regions. This is somewhat puzzling, given that VAS is conducted during National Immunization Day (NID) campaigns, and NID coverage was thought to be highest in the Southern region and Western Area. Vitamin A tablets are also given to children receiving measles vaccine in Sierra Leone, but there have not been any major measles vaccination campaigns in the North or East recently that would explain such high VAS coverage rates. Supplementary and therapeutic feeding centers are (or have been) operated in the North and East by non-governmental organizations such as Medicines Sans Frontieres (MSF) in the 6 months prior to the survey. The existence of larger numbers of nutritional centers (and/or larger caseloads) in the North and East—as compared to the South and West—may explain the high VAS rates in the North and East.

Low birth weight

Indicator of low birth weight

Indicator			%
Birth weight below 2.5 kg	*Numerator:*	# of live births in the 12 months prior to the survey among female respondents that are estimated to have weighed below 2500 grams at birth	52
	Denominator:	# of live births in the 12 months prior to the survey among female respondents in the sample	

Infants who weigh less than 2500 grams (2.5 kg.) at birth are categorized as low birth weight babies (LBWB). Since many infants are not weighed at birth and those who are weighed may be a biased sample of all births, reported birth weight cannot be used to estimate the prevalence of low birth weight among all children. Therefore, the percentage of births weighing below 2500 grams is estimated from two items in the questionnaire: the mother's assessment of the child's size at birth (i.e., very small, smaller than average, average, larger than average, very large) and the child's weight as recorded on a health card if the child was weighed at birth. Birth weight documentation was shown to enumerators for seven percent (n = 67) of the total number of births (n = 910 unweighted, 964 weighted) in the MICS2.

The following method is used to calculate the percentage of LBWB. First, for those 67 births where data are available for both size and weight, the two items (i.e., size and weight) are cross-tabulated for those children who were weighed at birth to obtain the proportion of births in each category of **size** who weighed less than 2500 grams (see Chart 2 below). For each category of size, the applicable proportion is then multiplied by the total number of children (out of the total pool of 910 births) to obtain the estimated number of children in the size category who were of low birth weight. The numbers for each size category are summed to obtain the total number of low birth weight children. This number is divided by the total number of live births (i.e., 910) to obtain the percentage of children with low birth weight. It should be noted that this method is

based on the estimations (of <u>size</u>) of a select group of women (i.e., women who had their children weighed at birth—presumably more educated, well-to-do women with access to higher-quality-than-average health care). In the case of this survey, the primary problem with this methodology is that the sample size of women who have recalled their child's weight is <u>very</u> small, especially when it is stratified into different categories of <u>size</u>. The resulting estimate of <u>percent LBWB</u> is highly imprecise and should be interpreted with caution.

Chart 2: Comparison of documented birth weight with caretakers' estimate of size

	Size as reported by caretaker					
	Very small	**Smaller than average**	**Average**	**Larger than average**	**Very large**	**Total**
Percentage of births less than 2500 grams	80 (4/5)	0 (0/7)	19 (5/27)	23 (3/13)	20 (3/15)	22 (15/67)

Using the procedure described above, the data suggest that 52 percent of infants in Sierra Leone weigh less than 2500 grams at birth (Table 20). The prevalence of low birth weight babies ranges from 49 percent in the West to 56 percent in the East. High levels of low birth weight babies also prevail across urban and rural areas and among mothers of all education levels.

A second estimate of low birth weight could be gained by calculating the percentage of low-birth-weight children among those who had documented birth weight, while bearing in mind that this is a non-representative group of children. As noted above, caretakers showed enumerators documentation of birth weight for 67 of the 910 children born in the last year. Twenty-two percent of these children (15/67) had documented birth weights below 2500 grams.

<u>Discussion: Low birth weight</u>
- The estimate of the percentage of Sierra Leonean children with a birth weight below 2,500 grams (53 percent) is much higher than previous estimates in Sierra Leone (11 percent), estimates in the region (15 percent for Sub-Saharan Africa) and neighboring countries (12, 13 and 21 percent in Ivory Coast, Guinea and Burkina Faso; source for all estimates: SOTWC)).
- The high rate of low-birth-weight children suggests a high level of maternal malnutrition in Sierra Leone.
- The World Summit for Children goal for this indicator is ten percent, well below its present value in Sierra Leone.

E. Child Health

Immunization Coverage

Indicators for immunization coverage

Indicator			%
Percentage of children aged 12-23 months currently immunized against **tuberculosis**	*Numerator:*	# of children aged 12-23 months who received a BCG vaccination according to documentation or guardian's report	73
Percentage of children aged 12-23 months currently immunized against **polio**	*Numerator:*	# of children aged 12-23 months who received the OPV3 vaccination according to documentation or guardian's report	61
Percentage of children aged 12-23 months currently immunized against **diphtheria, pertusis and tetanus**	*Numerator:*	# of children aged 12-23 months who received the DPT3 vaccination according to documentation or guardian's report	46
Percentage of children aged 12-23 months currently immunized against **measles**	*Numerator:*	# of children aged 12-23 months who received a measles vaccination according to documentation or guardian's report	62
Percentage of children aged 12-23 months currently immunized against **tuberculosis, polio, diphtheria, pertussis tetanus, and measles**	*Numerator:*	# of children aged 12-23 months who received **ALL** of the following vaccinations: BCG, OPV3, DPT3, and measles, according to documentation or guardian's report	39
	Denominator (for all indicators):	# of children aged 12-23 months in the sample	

According to UNICEF and WHO guidelines, a child should receive a BCG vaccination to protect against tuberculosis, three doses of DPT vaccine to protect against diphtheria, pertussis, and tetanus, three doses of polio vaccine (OPV), and a measles vaccination. All of these vaccinations should be administered by the age of 12 months. In the MICS2 survey, mothers were asked to provide vaccination cards (i.e., Health Cards) for children under the age of five. Interviewers copied vaccination information from the cards onto the survey questionnaire. If the child did not have a card, the mother was asked to recall whether or not the child had received each of the vaccinations and, for DPT and Polio, how many times. Mothers who recalled their children's vaccination history were not asked to estimate the child's age at vaccination. Surveyors did not exam children for the presence of a BCG scar.

A perfect measure of vaccination coverage does not exist. The primary method used to measure vaccination coverage in the MICS2 survey has been to construct an indicator based on both documentation and a caretaker's report. According to this method of calculating coverage, a child is considered to be vaccinated with a particular antigen if either the child's Health Card shows that the pertinent vaccination was given or the child's caretaker states that the vaccination was administered. This method of calculating coverage may yield an estimate of coverage that is somewhat higher than the true coverage level, if some caretakers exhibit faulty recall (i.e., if some caretakers recall that their children were vaccinated when they really weren't). However, this combination indicator of recorded/recalled coverage is generally considered to be the most accurate indicator available for many countries.

It should be noted that the indicator percent vaccine coverage for (*antigen*) by age one cannot be measured for all surveyed children from the data collected in the Sierra Leone MICS2, because vaccination data obtained through caretaker recall was not date-specific. Percent vaccine coverage for (*antigen*) by age one can be calculated for the sub-group of children with vaccination cards. However, this indicator will not be useful, as children with vaccination cards would be expected to have higher coverage rates than the general population of children.

The denominator for all vaccination coverage indicators reported here thus consists of the number of children aged 12-23 months who were surveyed. This age group of children is used because they are the youngest age group of children who were old enough to be fully vaccinated at the time of the survey. Calculating coverage indicators for this group permits use of both recall and card-based data and yields the most useful and accurate indicator of coverage.

Thirty-five percent of children in Sierra Leone aged 12-23 months had health cards. The percentage of caretakers who were able to show the interviewer a vaccination card for their child aged 12-23 months was 28 percent in the North, 35 percent in the East, 43 percent in the South, and 50 percent in West. Forty-three percent of caretakers were able to show vaccination cards to the surveyors in urban areas as compared to thirty-three percent in rural areas.

Table 21 in the appendix, as well as the figure below, show the percentage of children aged 12 to 23 months who received each of the vaccinations. Approximately 73 percent of children aged 12-23 months received a BCG vaccination while the first dose of DPT was given to 68 percent. The percentage coverage for subsequent doses of DPT was 58 for DPT2 and 46 percent for DPT3. Corresponding coverage figures for polio were 82 percent for OPV1, 76 percent for OPV2 and 61 percent for OPV3. The coverage rate for measles vaccine was 62 percent. Thirty-nine percent of surveyed children aged 12-23 months had received all of these vaccines.

Figure 8: Percentage of children aged 12-23 months who received vaccinations by the time of the survey, Sierra Leone, 2000
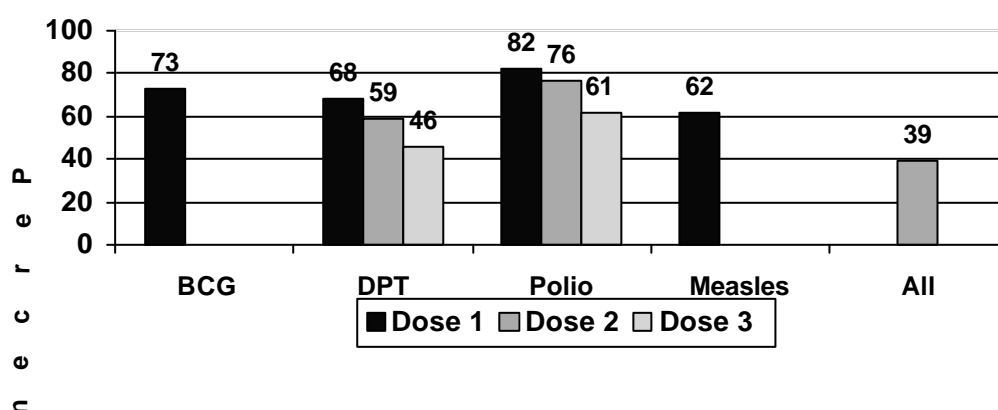
Vaccination coverage for male children is consistently about five percentage points higher than for female children for all antigens (Table 22). Vaccination rates for children living in urban areas are 10-20% higher than for children living in rural areas, depending on the vaccine.

Vaccination rates are generally higher in the Southern and Western regions than in the East and North, although the gap is lower for OPV coverage (5-15%) than for other antigens (15-30%). Vaccination coverage is consistently highest among children whose mothers have completed primary level education; the children of uneducated mothers and mothers who had completed secondary education had lower coverage rates. This latter finding is probably due to a statistical anomaly and is therefore best regarded as a spurious result. There were only 29 caretakers (a low sample size for drawing conclusions of this type) of children aged 12-23 months who had primary school education (as opposed to 443 uneducated caretakers and 77 caretakers with secondary or higher education). The 29 caretakers with primary education were disproportionably from the Western Area and from urban areas (where vaccination coverage is higher). The observed result is therefore probably more related to the place of residence of the 29 caretakers than to their educational background.

Discussion: Immunization coverage

- The neediest groups of children in Sierra Leone have the lowest coverage. Coverage rates measured in this survey were generally found to be moderately lower among traditionally underserved groups: girls, children living in rural areas, children living in areas of the country with limited access due to armed conflict (i.e., Northern and Eastern regions), and children of uneducated mothers.

- Coverage rates among regions were most similar for polio vaccination, suggesting that the mass vaccination of children against polio through the conduct of National Immunization Days—in coordination with the RUFP—has achieved considerable success and should be continued. This conclusion is supported by the finding (reported above) that rates of Vitamin A supplementation coverage was higher in rebel-controlled areas than in the Southern region or Western Area.

- Drop-out rates (i.e., the percentage of children who receive one vaccine in the OPV/DPT series but do not receive the subsequent vaccine) were much higher among children who did not have Health Cards as compared to those who did. This finding suggests that efforts to ensure that all children who are vaccinated be issued a Health Card and have their vaccinations recorded there should be intensified.

- The World Summit for Children goal for vaccination coverage is 90 percent for all antigens for children one year of age. The coverage rates reported above, measured for children aged 12-23 months (i.e., a more liberal measure of coverage than that used for the WSC goal), fall far short of that goal.

Diarrhea

Indicators for home management of diarrheal disease

Indicator			%
Prevalence of diarrhea	*Numerator:*	# of children aged 0-59 months whose caretaker reported that they had diarrhea in the previous 2 weeks	25
	Denominator:	# of children aged 0 -59 months in the sample	
ORT use	*Numerator:*	# of under-five children whose caretaker reported that the child received oral rehydration salts, breast milk, gruel, other milk or infant formula, water with feeding, or a locally acceptable ORS substitute while they had diarrhea	86
Increased fluids during diarrhea episode	*Numerator:*	# of children aged 0-59 months whose caretaker reported that they drank more fluids than usual while they had diarrhea	56
Continued feeding during diarrhea episode	*Numerator:*	# of children aged 0-59 months whose caretaker reported that they ate somewhat less, the same, or more than usual while they had diarrhea	46
Home management of diarrhea	*Numerator:*	# of children aged 0-59 months whose caretaker reported that they d rank more fluids than usual AND ate somewhat less, the same, or more than usual while they had diarrhea	28
	Denominator:	# of children aged 0-59 months whose caretaker reported that they had diarrhea in the previous 2 weeks	

Dehydration caused by diarrhea is a major cause of mortality among children in Sierra Leone. Appropriate home management of diarrhea—through the administration of either oral rehydration salts (ORS) or a recommended home fluid (RHF)—can prevent many of these deaths. Preventing dehydration and malnutrition by increasing fluid intake and continuing to feed the child who is ill with diarrhea are other important strategies for the home management of diarrhea.

In the MICS2 questionnaire, mothers (or caretakers) were asked to report whether their child had had diarrhea in the two weeks prior to the survey. If the caretaker answered "yes", s/he was asked a series of questions about what the child had to drink and eat during the episode and whether this was more or less than the child usually ate and drank. Overall, 25 percent of under-five children had diarrhea in the two weeks preceding the survey (Table 23). The prevalence of diarrhea was lower in the South (15%) and West (22%) than in the East and North (~28% in each region). Among children of different age groups in the survey, diarrhea prevalence peaked among children being weaned and/or being introduced to solid foods (i.e., children aged 6-23 months).

Table 23 also shows the percentage of children receiving various types of recommended liquids during the episode of diarrhea. Since mothers were asked to name all types of liquid that the child received, and all liquids were recorded, the percentages sum to more than 100 across strata (e.g., for male children, or children living in the Eastern region). Seven in ten children aged less than twenty-four months received breast milk while they had diarrhea. About 14 percent of children with diarrhea received gruel while 42 percent received ORS. Children of mothers with secondary education and above appear more likely than other children to receive ORS. Eighty-six percent of children with diarrhea received one or more of the recommended home treatments (i.e., were treated with ORS or a RHF).

Slightly more than half (56%) of under-five children with diarrhea drank more than usual while 38 percent drank the same or less (Table 24). About 46 percent ate somewhat less, the same, or more than usual while 51 percent ate much less than usual or nothing. Overall, only 28 percent of children with diarrhea received increased fluids and continued eating as recommended.

<u>Discussion: Diarrhea</u>
- The prevalence of diarrhea reported by caretakers in this survey is quite high. The "diarrhea season" in Sierra Leone takes place at the beginning of the rainy season in May and June, at which time diarrhea prevalence rates in excess of thirty percent can be predicted. Data for this survey was collected throughout April and into the first week of May: that is, right before the commencement of the rainy season.
- Although the percentage of children with diarrhea who receive ORT is high (86 percent), the percentage of children who receive increased fluids during their episode (56 percent) has substantial room for improvement. In Sierra Leone's hot and humid climate, the high prevalence of diarrhea coupled with low levels of adequate fluid intake put the children in Sierra Leone at substantial risk of potentially fatal dehydration due to diarrhea.

Acute respiratory infection (ARI)

Indicators for home management of acute respiratory infection

Indicator			%
Prevalence of ARI	*Numerator:*	# of children aged 0-59 months who had an illness in the previous two weeks with a cough accompanied by rapid or difficult breathing and whose symptoms were due to a problem in the chest, or both a problem in the chest and a blocked nose, or whose mother did not know the source of the problem.	9
	Denominator:	# of children aged 0-59 months in the sample	
Care seeking for ARI	*Numerator:*	# of children aged 0-59 months whose caretaker reported that they took their child to a hospital, health center, dispensary, village health worker, MCH or mobile/outreach clinic, or private physician while they had ARI	50
	Denominator:	# of children aged 0-59 months who had an illness in the previous two weeks with a cough accompanied by rapid or difficult breathing and whose symptoms were due to a problem in the chest, or both a problem in the chest and a blocked nose, or whose mother did not know the source of the problem.	

Acute lower respiratory infections, particularly pneumonia, are one of the leading causes of child mortality in the world. In the MICS2 questionnaire, <u>children with acute respiratory infection</u> are defined as those who had an illness with a cough accompanied by rapid or difficult breathing and whose symptoms were due to a problem in the chest, or both a problem in the chest and a blocked nose, or whose mother did not know the source of the problem. Only nine percent of under-five children had an acute respiratory infection in the two weeks prior to the survey according to these criteria (Table 25). Of these, 17 percent were taken to a hospital for treatment, and 22 percent were taken to a health center. Overall, 50 percent of children with ARI were taken to an

appropriate health provider (i.e., hospital, health center, dispensary, village health worker, MCH or mobile/outreach clinic, or private physician).

Discussion: Acute respiratory infection

- Data here again highlight the traditional mismatch of need and treatment. Although children in the North endure the highest prevalence of ARI in the country (11 percent in the North versus 4 to 9 percent in other regions), they are the least likely to be treated by an appropriate health provider (40 percent in the North versus 53 to 68 percent in other regions).
- The prevalence of ARI as measured in this survey is modest. ARI season peaks in Sierra Leone in July and August. Data for this survey was collected in April and early May. Recognition of the symptoms for ARI is generally difficult for non-health workers

The Integrated Management of Childhood Illnesses (IMCI) initiative

Indicators for IMCI

Indicator			%
Prevalence of illness	*Numerator:*	# of children aged 0-59 months whose caretaker reported that they were ill in the previous 2 weeks	62
	Denominator:	# of children aged 0-59 months in the sample	
Correct home management of illness	*Numerator:*	# of children aged 0-59 months whose caretaker reported that they drank more fluids than usual AND ate slightly less, the same, or more than usual while they were ill	30
	Denominator:	# of children aged 0-59 months whose caretaker reported that they were ill in the previous 2 weeks	
Correct care-seeking knowledge	*Numerator:*	# of caretakers of children aged 0-59 months who reported at least two of the following as symptoms that would cause them to take their child to a health facility right away: • develops a fever • blood in stool • child becomes sicker • inability of child to breastfeed • fast breathing • difficult breathing • drinking poorly	77
	Denominator:	# of caretakers of children aged 0-59 months	

The Integrated Management of Childhood Illnesses (IMCI) is a program developed by UNICEF and WHO that combines strategies for control and treatment of five major killers of children: acute lower respiratory tract infections, diarrheal dehydration, measles, malaria, and malnutrition. The program focuses on the improvement of case management skills by health workers, improvement of the health system, and improvement of family and community practices in the prevention and early management of childhood illnesses. Appropriate home management of illness is therefore one component of IMCI. The IMCI program advocates that mothers practice home management of diarrhea or any other illness by increasing the sick child's fluid intake and continuing to feed the sick child as s/he is normally fed. While Sierra Leone does not have a formally established IMCI program, many of the practices and principles of IMCI are advocated by the MOH and other non-governmental agencies and organizations in Sierra Leone.

Table 26 presents information on the drinking and eating behavior of sick children. Almost two out of every three children were reported to have had diarrhea or some other illness in the two weeks preceding the survey. Of these, 55 percent drank more liquids during the illness and 48 percent continued eating (i.e., ate somewhat less, the same, or more). Overall, 30 percent of ill children received increased fluids and continued eating as recommended under the IMCI program.

Promoting knowledge among caretakers about when it is appropriate to seek care for ill children is another important component of the IMCI program. In the Sierra Leone MICS2, caretakers of children were asked to name all of the symptoms that would cause them to take a child to a health facility right away. There was some variation in how this question was asked among regions. In the Northern region, there is often no health facility close enough so that a caretaker might feasibly take a sick child to be treated there. Enumerators in the North therefore (mistakenly) asked "During your child's illness, what types of symptoms would cause you to take your child to see somebody who could treat the illness right away?" thus including traditional healers and witch doctors in their list of possible treatment alternatives. The question was asked in a uniform, correct manner in other regions, using the word "health facility" to define the care alternatives being referred to.

Seventy-seven percent of caretakers were able to correctly state at least two symptoms that would cause them to take their child to a health facility immediately. The most common response, given by 82 percent of caretakers, was that they would take their child to a health facility right away if s/he developed a fever (Table 27). Forty-five percent said that blood in stool would cause them to take the child to a health facility and 43 percent mentioned a child becoming sicker. Between 7 and 28 percent of caretakers cited an inability to breastfeed, fast breathing, difficult breathing, and drinking poorly as reasons for taking a child to a health facility right away.

Among the regions, the results surprisingly suggest that caretakers in the Western Area (by far the most developed area of Sierra Leone) are notably less likely than caretakers in other regions to know the signs for seeking care immediately. Overall, 47 percent of caretakers in the West know at least two signs for seeking care compared to 76 to 91 percent in the remaining regions. These regional differences are also reflected in the urban-rural and educational differentials. Rural caretakers and those with no education were more likely to mention at least two signs for seeking care than other caretakers.

Discussion: Integrated Management of Childhood Illnesses
- The level of reported child morbidity among under-fives during the two weeks prior to the survey was very high (62 percent). A large percentage of the children in Sierra Leone are malnourished and drinking water from unsafe sources, thus rendering them susceptible to different disease agents. This statistic is one of the most important indicators of the low state of preventive health care measures in Sierra Leone.
- The low level of the indicator <u>correct home management of illness</u> (30 percent) mirrors the result for the same indicator for <u>correct home management of diarrhea</u> (28 percent). The majority of caretakers in Sierra Leone have either not received—or have not acted upon—the message that continued fluids and feeding are vital aspects of the home management of children's disease.
- Care-seeking knowledge as measured in the MICS2 is high in all regions except for the Western Area. Supervisors were closely questioned regarding the surprising result s among regions for the indicator <u>correct care-seeking knowledge</u>. Supervisors were adamant that the results showing lower levels of knowledge in the Western Area than in the remainder of the country reflected real differences and were not due to inter-regional differences in the way

that the question was asked (e.g., in the degree of probing by enumerators for additional answers). It was noted that urban mothers may be more competent in managing illness and thus may not feel the need to seek treatment at a health facility for as comprehensive a set of conditions as their rural counterparts. It was also felt that one should be careful not to assume that rural or uneducated caretakers would have lower levels of treatment-related knowledge than urban, educated caretakers. Several supervisors felt that it was plausible that uneducated mothers would take better care of their children than educated mothers, thus explaining these findings.

Malaria

Indicators for protection from and treatment of malaria

Indicator			%
Use of bednets	*Numerator:*	# of children aged 0-59 months whose caretaker reported that they slept under an insecticide-impregnated bednet last night	2
	Denominator:	# of children aged 0-59 months in the sample	
Malaria treatment	*Numerator:*	# of children aged 0-59 months whose caretaker reported that they received chloroquine or Fansidar while they were ill with fever	61
	Denominator:	# of children aged 0-59 months whose caretaker reported that they were ill with fever in the previous 2 weeks	

Malaria is the leading cause of death of children under age five in the world. It also contributes to anemia in children and is a common cause of school absenteeism. Preventive measures, especially the use of mosquito nets treated with insecticide, can dramatically reduce malaria mortality rates among children. In areas where malaria is common, international recommendations suggest treating any fever in children as if it were malaria and immediately giving the child a full course of recommended anti-malarial tablets. Children with severe malaria symptoms, such as fever or convulsions, should be taken to a health facility. Also, children recovering from malaria should be given extra liquids and food and should continue breastfeeding.

The MICS2 questionnaire incorporates questions on the use of bednets among children. Fifteen percent of under-five children slept under a bednet the night prior to the survey interview (Table 28). This percentage is constant across age groups. Overall, only about ten percent of the few bednets that are used are impregnated with insecticide. Multiplying these two indicators together reveals that less than two percent (1.5 percent) of under-five children sleep under impregnated bednets in Sierra Leone.

Questions on the prevalence and treatment of fever were asked for all children under age five. Almost one in two (46%) under-five children were ill with fever in the two weeks prior to the MICS2 (Table 29), a truly alarming level of morbidity. The prevalence of fever is approximately the same for children of all ages groups except for children aged less than six months, for whom it is somewhat lower (34 percent). Urban-rural differences in this indicator are not large, although modest differences are seen across regions, where the prevalence of fever ranges from 35 percent in the South to 50 percent in the North.

Mothers were asked to report all of the medicines given to a child during their illness, both any medicine given at home and medicines given or prescribed at a health facility. Approximately 66

percent of children were given paracetamol and 60 percent were given chloroquine while only four percent were given Fansidar. A relatively large percentage of children (43 percent) were given some other medicine. Sixty-one percent of under-five children in Sierra Leone who were ill with fever received appropriate anti-malarial treatment. Children with fever in the North appear to be somewhat less likely to receive an appropriate anti-malarial drug (53 percent) than children in the East, South and West (72, 70 and 64 percent, respectively). Urban and rural children were equally likely to be treated appropriately and differences in this indicator across the education levels of mothers are modest.

Discussion: Malaria

- The portrait painted by these data is disturbing. Almost one in two under-five children in Sierra Leone has been ill with fever within the two weeks prior to the survey and six of ten ill children have taken anti-malarial medication. This suggests that thirty percent of under-five children are taking anti-malarial medication every two weeks. While it is encouraging that access to medication is reasonably high, it is far from ideal to constantly treat young children with strong medication. Among other potential harmful side effects, this practice eventually leads to the development of drug-resistant strains of malaria if treatment is not given correctly.

- These data clearly show that the approach to malaria control in Sierra Leone is curative rather than preventive. Half of the children are sick and the majority of ill children are taking medication, while almost nobody is using bednets—much less impregnated bednets. Impregnated bednets have proven effect against malaria morbidity. Programs to promote and support their use in Sierra Leone should be developed and implemented.

- The Northern region again stands out as the region with the greatest need (in terms of morbidity) and the least resources (in terms of prevention and treatment). The percentage of under-fives ill with fever in the North is higher than in any other region, while the percentage of ill children receiving appropriate anti-malarial drugs and the percentage of children sleeping under an impregnated mosquito net are lower in the North than in any other region. Within the constraints imposed by the ongoing conflict with rebel forces in Sierra Leone, the Northern region should clearly be the recipient of a disproportionately high percentage of resources targeting health and education problems.

F. HIV/AIDS

Indicators for monitoring knowledge of HIV/AIDS

Indicator			%
Knowledge of preventing *HIV/AIDS*	*Numerator:*	# of women 15-49 years who correctly state the three main ways of avoiding *HIV* infection	21
Knowledge of misconceptions of *HIV/AIDS*	*Numerator:*	# of women aged 15-49 years who correctly identified three misconceptions about *HIV/AIDS*	19
Knowledge of mother-to-child transmission of *HIV*	*Numerator:*	# of women aged 15-49 years who correctly identify means of transmission of *HIV* from mother to child	34
Attitude to people with *HIV/AIDS*	*Numerator:*	# of women aged 15-49 years who express a discriminatory attitude towards people with *HIV/AIDS*	23
Women who know where	*Numerator:*	# of women aged 15-49 years who know	9

to be tested for *HIV*		where to get *HIV* test	
Women who have been tested for *HIV*	*Numerator:*	# of women aged 15-49 years who reported they had been tested for *HIV*	2
	Denominator:	# of women aged 15-49 years in the sample	

AIDS knowledge

A major strategy for the reduction of the rate of HIV/AIDS infection is the promotion of accurate knowledge of how AIDS is transmitted and how to prevent transmission. Among women aged 15-49 in Sierra Leone, 54 percent have heard of AIDS (Table 30). This percentage is higher in urban areas (78%) than in rural areas (44%).

Women interviewed in the MICS2 were given several statements about the means of HIV/AIDS transmission and asked to state whether they believed the statements were true. Among surveyed women, twenty-nine percent correctly believed that having only one uninfected sex partner can prevent HIV transmission. Twenty-seven percent correctly believed that using a condom every time one has sex can prevent HIV transmission and twenty-seven percent correctly believe that abstaining from sex prevents HIV transmission. Overall, 21 percent of surveyed women correctly knew all three ways of preventing HIV transmission and 33 percent were aware of at least one of the means of preventing transmission. Women who had never heard of HIV/AIDS were assumed to have inaccurate knowledge and were not given any statements about HIV/AIDS transmission.

Accurate knowledge of the means of HIV/AIDS transmission varied dramatically across regions. The percentage of women who knew all three ways of preventing HIV transmission was 2 percent in the North, 43 percent in the East, 20 percent in South, and 33 percent in the West. Higher levels of a woman's formal education were strongly associated with correct knowledge regarding HIV transmission. There is no clear association between a woman's age and her knowledge regarding HIV transmission.

Another category of inquiry that was assessed in the MICS2 survey concerned women's misconceptions regarding HIV/AIDS. Thirty-three percent of women correctly stated that AIDS can't be transmitted by supernatural means while 26 percent correctly stated that AIDS can't be spread by mosquito bites (Table 31). Thirty-two percent of the women correctly believe that a healthy-looking person can be infected with HIV. Nineteen percent of respondents correctly identified all three misconceptions. Only 4 percent of the women in the North have knowledge of all three misconceptions about AIDS transmission, underscoring the low levels of knowledge regarding HIV-related issues in the North, as compared to other regions in Sierra Leone. Women in the Eastern and Western regions were more likely to recognize all three misconceptions than women in the North and South. Women in urban areas (32%) were more likely to recognize misconceptions about HIV prevention and transmission than women in rural areas (13%).

Thirty-four percent of women in Sierra Leone correctly believe that AIDS can be transmitted from mother to child (Table 32). When asked specifically about the mechanisms through which mother to child transmission can take place, 32 percent said that transmission during pregnancy was possible, 30 percent said that transmission at delivery was possible, and only 30 percent agreed that AIDS can be transmitted through breast milk. Twenty-seven percent knew all three modes of transmission. Approximately, 67 percent did not know any specific way that HIV can be transmitted from mother to child.

The MICS survey also attempted to measure discriminatory attitudes towards people who have HIV/AIDS. To this end, respondents were asked whether they agreed with two questions. The first asked whether a teacher who has the HIV virus but is not sick should be allowed to continue teaching in school. The second question asked whether the respondent would buy food from a shopkeeper or food seller who the respondent knew to be infected with HIV. The results are presented in Table 33.

Twenty three percent of the women aged 15-49 years believe that a teacher with HIV/AIDS should not be allowed to work. This percentage is highest in the Eastern region at 44 percent and lowest in the Northern region at 8 percent. Taking into account that women who had not heard of HIV/AIDS were not asked this question, 42% (22.6/54.2) of women who have heard of HIV/AIDS expressed this discriminatory attitude. Urban women and those with secondary or higher education are more likely to express this discriminatory attitude than rural women and those who have completed primary education or who are uneducated. Five percent of women would not buy food from a person infected with AIDS. Interestingly, this measure shows a different regional pattern than the first question. Fourteen percent of women in the West stated that they would not buy food from a person with HIV/AIDS, while less than five percent of the women of the remaining regions express this sentiment   Overall, 23 percent of women agree with at least one of the discriminatory statements.

Table 34 summarizes information from two previous tables on AIDS knowledge (Tables 30 and 31). The second column shows the percentage of women who know all three means of preventing HIV transmission – having one faithful uninfected partner, using a condom during every sexual encounter, and abstaining from sex. Twenty one percent of women know all three ways. The third column of the table shows the percentage of women who correctly identified all three misconceptions about HIV transmission: that HIV can be transmitted through supernatural means, that it can be transmitted through mosquito bites, and that a healthy looking person cannot be infected. Nineteen percent of women correctly identified these misconceptions. Finally, the fourth column of the table shows the percentage of women who have "sufficient knowledge" of HIV/AIDS transmission. These are women who know all three ways of preventing HIV transmission <u>and</u> correctly identified all three misconceptions. Only 13 percent of women aged 15-49 fall into this category.

Knowledge of HIV/AIDS transmission varies dramatically by level of education (Figure 9). Women with secondary or higher education are almost two times more likely to know all three ways to prevent transmission than women with no education. They are also three times more likely to correctly identify all three misconceptions about AIDS and twice more likely to have sufficient knowledge of HIV/AIDS transmission.

Figure 9: Percentage of women aged 15-49 that has sufficient knowledge of HIV/AIDS transmission by level of education, Sierra Leone, 2000
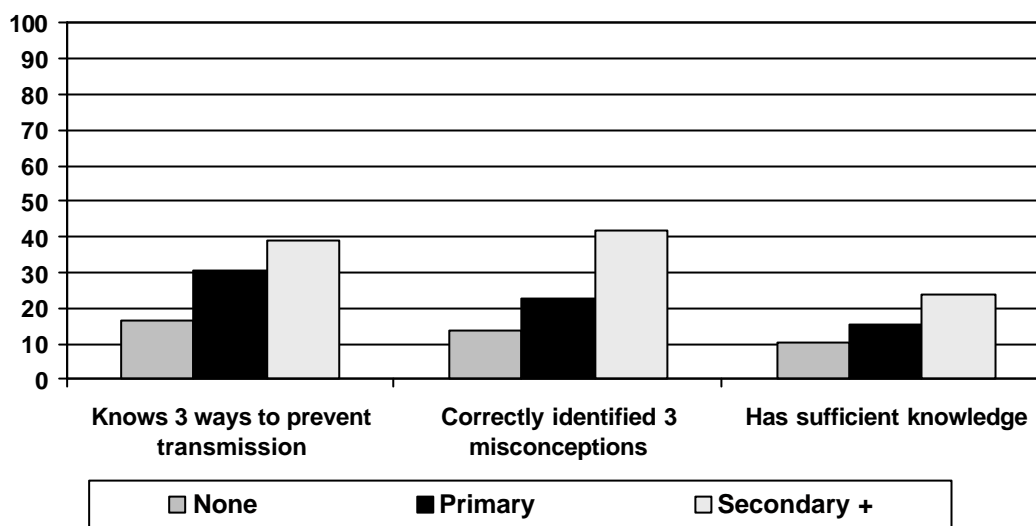
AIDS testing

Voluntary testing for AIDS, accompanied by counseling, allows those infected to seek health care and to prevent the infection of others. Testing is particularly important for pregnant women who can then take steps to prevent infecting their babies. The indicators shown in Table 35 are designed to monitor whether women are aware of places to get tested for HIV/AIDS, the extent to which they have been tested, and the extent to which those tested have been told the result of the test. In some places, a relatively large proportion of people who are tested do not return to get their results due to fear of having the disease, fear that their privacy will be violated, or other reasons.

Nine percent of women of reproductive age in Sierra Leone know a place to get tested for AIDS. Women living in the Western Area are most likely to know a place, followed by those in the South, East and North, respectively. Only 4 percent of women with no education know of a place to get tested compared to 12 percent of women with primary school education and 29 percent of women with secondary or higher education.

About 2 percent of women of reproductive age in Sierra Leone report that they have been tested for AIDS. Again, this percentage is highest in the Western Area at 5 percent and lowest in the Northern region (1 percent). The majority (59 percent) of women who have been tested were told the result. However, variation in this indicator exists across regions, age groups, and education levels. Among regions, women in the North are least likely to have been told their result. Adolescent women (age 15-19) are the least likely of any age group to have been tested and least likely to know the result. Women with no education are less likely than educated women to have been tested.

Discussion: HIV/AIDS

- The vast majority of women of child-bearing age in Sierra Leone have either never heard of HIV/AIDS or lack basic knowledge regarding this disease. This lack of knowledge about such a serious public health problem has clear potential consequences for the spread of HIV/AIDS in the country. Given the paucity of mass media channels in Sierra Leone, innovative and effective avenues for conducting information dissemination campaigns on this and other issues must be identified and exploited. The Northern and Southern regions should be targeted, given the exceptionally low knowledge levels there.

- Women who have heard of HIV/AIDS expressed high levels of discriminatory attitudes towards individuals with this disease. Any communication campaign that is developed must clearly focus on minimizing discrimination through correct knowledge. The data suggest that the Eastern region, where 57 percent (44.2/77.4) of women who have heard of HIV/AIDS express discriminatory attitudes, should receive special attention in this effort.

- The proportion of women who know where they can be tested for HIV is extremely low. Any effort to provide information about HIV/AIDS in Sierra Leone must also include information regarding where facilities for testing for HIV are located. Efforts in this regard may need to include efforts to increase the number of laboratory facilities that offer HIV testing, especially in the Northern, Southern and Eastern regions.

G. Reproductive Health

Contraception

Indicators for contraceptive use

Indicator			%
Contraceptive prevalence	*Numerator:*	# of married or in union women aged 15-49 years who report that they or their partner are using a contraceptive method (either modern or traditional)	4.3
	Denominator:	# of women aged 15-49 years in the sample.	

Indicators of contraceptive use, or prevalence, can be reported for three groups of women of reproductive age (i.e., aged 15-49): 1) for all women, 2) for all women who are married or in union, and 3) for all women who report that they are "sexually active". In the MICS2 survey, 4.3% of women who reported that they were married or in union used contraceptives (3.9 percent modern, 0.4 percent traditional; see Table 36). Among women who reported that they were sexually active, 7.3 percent reported that they used contraceptives (Table: 36a). Six percent (297/4923) of all surveyed women of reproductive age reported that they use contraceptives.

Among women of reproductive age who are married or in union in Sierra Leone, the pill and injections were the most commonly used contraceptive methods. One in forty respondents (2.5 percent) reported that she took the pill and 0.9 percent of respondents reported that they used injections.

Contraceptive use among women who are married or in union is highest in the Western Area at 14 percent. This level of use is at least four times higher than in any other region.

Women's level of education is strongly associated with their use of contraceptives. The percentage of women using any method of contraception rises from 3 percent among those with

no education to 8 percent among women with primary education and 14 percent among women with secondary or higher education.

Prenatal care

Indicators for prenatal care coverage

Indicator			%
Prenatal care	*Numerator:*	# of women aged 15-49 years who gave birth in the last year and were seen at least once for antenatal care during their pregnancy by a physician, nurse, midwife or auxiliary midwife	68
Child birth care	*Numerator:*	# of women aged 15-49 years who gave birth in the last year and whose delivery was attended by a physician, nurse, midwife or auxiliary midwife	42
Children protected against neonatal tetanus	*Numerator:*	# of women aged 15-49 who gave birth in the last year and reported that they had received either: 1) 2 doses of tetanus toxoid (TT), the last within 3 years; or, 2) 3 doses of TT, the last within 5 years; or, 3) 5 doses of TT during their lifetime.	58
	Denominator:	# of women in the sample who reported that they gave birth in the year prior to the survey	

Quality prenatal care can contribute to the prevention of maternal mortality by detecting and managing potential risk factors, including pre-eclampsia, anemia, and sexually transmitted diseases.   Antenatal care also provides opportunities for women to learn the danger signs of pregnancy and delivery, to be immunized against tetanus, to learn about infant care, and be treated for existing conditions, such as malaria and anemia.

Tetanus toxoid injections are given to women during pregnancy to protect infants from neonatal tetanus, a major cause of infant death that is due primarily to unsafe and unclean delivery practices. Two doses of tetanus toxoid during pregnancy offer protection from neonatal tetanus. However, if a woman was vaccinated during a previous pregnancy, she may only need a booster to give full protection. Five doses are thought to provide lifetime protection.

Fifty-eight percent of mothers who gave birth in Sierra Leone in the 12 months prior to the MICS2 survey received sufficient doses of tetanus toxoid to protect their children against neonatal tetanus (Table 37). Almost all of these women (98 percent) achieved protection by receiving two or more doses of tetanus toxoid within the last three years. Among the regions, women living in the South are most likely to be protected (76 percent) while those living in the North are the least likely to be protected (45 percent). Long periods of deprivation of women in the Northern region from comprehensive reproductive health care is a major reason for this low coverage.

A woman's educational level is associated with the status of her protection against tetanus. The results of this survey show that a higher proportion of women with secondary or higher education (75 percent) are more likely to be protected against tetanus than those with either no education (55 percent) or primary education (64 percent).

Female respondents who gave birth in the year prior to MICS2 were asked whether they had received antenatal care for the birth and, if so, what type of person provided the care. If the

woman saw more than one type of provider, all were recorded in the questionnaire. Table 38 presents the percent distribution of women with a birth in the year prior to the MICS2 by the type of personnel who delivered antenatal care. If more than one provider was mentioned by the respondent, she is categorized as having seen the most skilled person she mentioned.

Figure 10: Percent distribution of women with a birth in the last year by type of personnel providing antenatal care, Sierra Leone, 2000
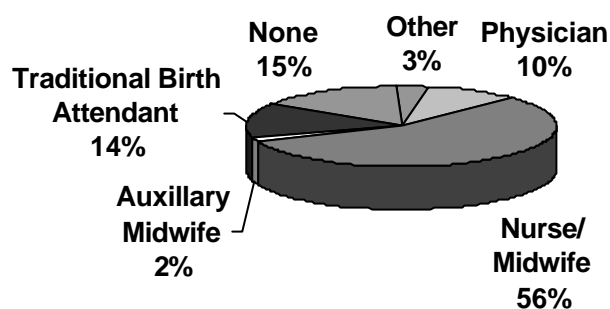
As the figure above shows, most women in Sierra Leone (85 percent) receive some type of antenatal care during their pregnancy. Approximately 68 percent of pregnant women receive antenatal care from skilled personnel (doctor, health assistant, nurse, midwife, auxiliary midwife). Women are more likely to receive antenatal care from a physician if she lives in the Western Area (38 percent) than if she lives in the other regions (where this indicator ranges from 6 percent in the South to 8 percent in the North). Most physicians in Sierra Leone, particularly obstetricians and gynecologists, reside in the Western Area.

Assistance at delivery

The provision of delivery assistance by skilled attendants can greatly improve outcomes for mothers and children by the use of technically appropriate procedures, accurate and speedy diagnosis, and treatment of complications. Skilled assistance at delivery is defined as assistance provided by a doctor, nurse, midwife, or auxiliary midwife. Approximately 42 percent of births occurring in Sierra Leone in the year prior to the MICS2 survey were attended by skilled personnel (Table 39). The percentage of births attended by skilled personnel is consistent across the Eastern, Southern and Western regions at 66, 57 and 64 percent, respectively. The exception to this trend was in the Northern region, where only 22 percent of births were attended by skilled personnel. The births of women with either primary or secondary levels of education were attended by skilled personnel more frequently than births by uneducated women.

Thirty-four percent of births in Sierra Leone during the year prior to the MICS2 survey were attended by a nurse/midwife, while physicians attended 3 percent of births. Auxiliary midwifes attended 5 percent of births. The low percentage of deliveries attended by physicians suggests that very few women deliver at hospitals where comprehensive obstetric services are provided. Traditional Birth Attendants (TBAs) assisted at 38 percent of births nationally. Among regions,

TBAs were most widely used in the North, where they assisted at 44% of births. TBAs attended between 32 and 34% of births in the remaining three regions.

Discussion: Reproductive health

- The promotion of modern contraceptive methods among married or sexually active women and their partners in the Sierra Leonean population has been unsuccessful over the years. The prevalence of contraceptive use in Sierra Leone (4 percent) even lags behind the low standards of the region; the average value of this indicator is 17 percent in Sub-Saharan Africa, and is 12, 22 and 29 percent in The Gambia, Ghana and Guinea, respectively (source: SOTWC). Many would-be users of contraceptives lack adequate access to family planning commodities. Reasons for this lack of access include inadequate health facilities, a complete lack of family planning services within communities, and a lack of disposable income for the public to use to pay for these services. Another major constraint to the use of modern contraceptive methods is the unwillingness of partners to change from their old ways. For instance, despite the global promotion of condoms as a protective device against HIV/AIDS as well as an aid to family planning, this survey indicates that condoms are virtually unused as a method of contraception in Sierra Leone.

- Even though many pregnant women in Sierra Leone attend prenatal clinics, a large proportion of them are only attended by TBAs during their deliveries. The data make this clear; a much larger percentage of women see skilled personnel for antenatal care (68 percent) than have their birth attended by skilled personnel (46 percent). The gap is made up by TBAs, who provide antenatal care for only 14 percent of mothers but attend 38 percent of births nationwide. Trained TBAs can adequately manage normal deliveries, however they are incapable of managing complicated deliveries. Any attempts by them to manage such cases may lead to delays in referral and proper management of complicated obstetric cases. Maternal deaths often result from delays or mistakes in the management of complicated deliveries. Given the heavy reliance on TBAs in Sierra Leone, TBAs need to be comprehensively trained to recognize at-risk pregnancies during ante-partum and complications during childbirth so that women at risk can be promptly referred to hospitals for specialized care.

- The percentage of births attended by skilled personnel in Sierra Leone is as high or higher than most countries in the region. The value of this indicator is 36 percent in Sub-Saharan Africa, and is 27, 31 and 47 percent in Burkina Faso, Guinea, and Ivory Coast, respectively (source: SOWCR).

H. Child Rights

Indicators for monitoring children's rights

Indicator			%
Birth registration	*Numerator:*	# of children aged 0-59 months whose births are reported registered.	47
	Denominator:	# of children aged 0-59 months in the sample	
Children not living with a biological parent	*Numerator:*	# of children aged 0-14 years who are not living with a biological parent	16
Orphans in household	*Numerator:*	# of children aged 0-14 years whose mother and father are dead	2.4
	Denominator:	# of children aged 0-14 years in the sample	
Child labor	*Numerator:*	# of children aged 5-14 years who do one or more of the following: 4) perform paid or unpaid work for someone who is not a member of the household 5) perform more than four hours of housekeeping chores per day in their own household 6) perform other family work (e.g., on a farm or in a business)	72
	Denominator:	# of children aged 5-14 years in the sample	

Birth registration

The International Convention on the Rights of the Child states that every child has the right to a name and a nationality and the right to protection from being deprived of his or her identity. Birth registration is a fundamental means of securing these rights for children. The births of 47 percent of children aged less than five years in Sierra Leone have been registered (Table 40). There are no significant variations in birth registration across gender or age categories. The birth registration breakdown across regions shows that 27, 50, 67 and 81 percent of children have been registered in the Northern, Eastern, Southern and Western regions, respectively. During the MICS2 survey, caretakers who had not registered the birth of their child were asked to explain why. In the North, caretakers cited "didn't know it should be registered" and "don't know where to register" as the principal reasons for not having registered the birth. The cost of registration, having to travel too far for registration, and lack of knowledge regarding the registration process were all cited by significant proportions of caretakers in Sierra Leone's remaining three regions as reasons why they had not registered the birth of their children.

Orphanhood and living arrangements of children

Children who are orphaned or living away from their parents may be at increased risk of impoverishment, discrimination, denial of property rights and rights to inheritance, various forms of abuse, neglect, and exploitation of their labor or sexuality. Monitoring the level of orphanhood and the living arrangements of children assists in identifying those who may be at risk and in tracking changes over time.

In Sierra Leone 61 percent of children aged 0-14 are living with both parents (Table 41). Approximately 9 percent are living with their mothers only although their fathers are alive. About 10 percent of children are living with neither parent although both parents are alive. Sixteen percent of children live with neither of their biological parents and twelve percent of children aged 0-14 years have one or both parents dead. Older children are more likely to live away from their biological parents than young children; while only 7 percent of children under age five are not living with a biological parent, 23 percent of children aged 10-14 do so.

The situation of children in the Western Area differs from that of other children in Sierra Leone. In the Western Area, less than half of children live with both parents. Nineteen percent of children live with their mother only although their father is alive and a relatively large proportion (21 percent) live with neither parent. This pattern is most likely due to the war and labor migration of men and, to some extent, women from the Western region to other regions and neighboring countries.

Child labor

It is important to monitor the extent to which children work and the type of work in which they participate for several reasons. Children who are working are less likely to attend school and more likely to drop out. This pattern can trap children in a cycle of poverty and disadvantage. Working conditions for children are often unregulated with few safeguards against potential abuse. In addition, many types of work are intrinsically hazardous and others present less obvious hazards to children, such as exposure to pesticides in agricultural work, carrying heavy weights and scavenging in garbage dumps.

In Sierra Leone, the MICS2 survey estimates that only about two percent of children aged 5-14 years engage in paid work (Table 42). About twenty-five times as many (48 percent) participate in unpaid work for someone other than a household member.

Domestic work is defined as cooking, shopping, cleaning, washing clothes, fetching water, and caring for children.   Almost three in four children aged 5-14 years do these tasks for less than four hours a day while 10 percent spend more than four hours a day on such tasks. This result does not differ significantly across gender. Variations across regions are greatest in the percentage of children who engage in more than four hours of domestic work a day.   This percentage ranges from 3 percent in the West regions to 14 percent in the North.

Children who either 1) perform paid or unpaid work for someone who is not a member of the household, or 2) perform more than four hours of housekeeping chores in the household, or 3) perform other family work are considered to be currently working. Overall, 72 percent of surveyed children were classified as currently working. There is virtually no difference between boys and girls (72 percent of boys and 71 percent of girls). At the regional level, the percentage of children working is lowest in the West regions at 64 percent and highest in the North at 78 percent. Rural children (74 percent) are somewhat more likely to be currently working than urban children (66 percent).

Discussion: child rights

- The results regarding birth registration indicate that sensitization on Child's Rights in Sierra Leone needs to be increased, especially in the Northern region. The large percentages of the population who are either ignorant of the birth registration process or who—despite their awareness—choose not to register the birth of their child suggests that the importance and significance of birth registration is not well understood. It is clearly significant that the areas

of lowest registration are those that are least accessible to mainstream society. This suggests a lack of facilities and systems to register births within these areas that is perhaps exacerbated by constraints in verifying supporting information needed in the birth registration process. Within a tense security environment, the issue of greater distances to travel to register a birth takes on increased importance.

- Sensitization on child's rights in terms of the responsibilities of parents towards children needs to be emphasized at all levels throughout the country, especially in the Northern region. Children must be aware of their rights and must be encouraged to attend school or learn a skill. In situations where assessments show that poverty will hinder a child's development and threaten their rights, caretakers must be linked to poverty-alleviation programs and other programs that support income-generating activities.

- The finding that 10 percent of children do not stay with their parents even though they are alive requires further investigation. If children living away from their parents do so with their consent and communicate regularly with them, then the risk that their rights will be abused is lower. Children are sent to live with relations at times because the parents believe that the relation has more to offer the child in terms of his or her education and development.

- The percentage of orphans seems low and may not be representative of the number of orphans in the country as a whole. The MICS2 was a household survey. Many orphans live either in care systems or on the street and do not have an adult caretaker. These children would not be counted in a household survey.

- The percentage of surveyed children that is classified as <u>currently working</u> is high (72 percent). This is due to the definition of <u>work</u> that was used in MICS2 and cultural norms as they relate to "work" in Sierra Leone. The performance of domestic work by children is routine in Sierra Leonean households as is agricultural work for children in rural communities. While the high value of an indicator of child labor such as <u>children currently working</u> should be noted and assessed, we cannot make assumptions about child labor and child development from this statistic alone. The work that a child performs is not necessarily exploitative and can have positive impact on a child's life by 1) enhancing the child's "fit" or role in their family, 2) contributing to the overall functioning of the family's social and economic status, and 3) serving as one of the child's few entry points to subsistence.

- In order to understand the true impact of the work a child performs we need to understand not only how much of the child's day is devoted to work but also what the child does when s/he is not working. This is a key issue in child labor. What is sometimes more important than the work itself is what else there is in the child's life to stimulate their development: for example, educational or recreational activities.

I. Maternal Mortality

Maternal mortality indicator

Indicator	Rate
Maternal mortality rate (the number of maternal deaths out of 100,000 live births)	$1,800 \pm 800$

One of the goals of the MICS2 effort in Sierra Leone was to attempt to estimate the Maternal Mortality Rate(MMR) at the national level. This indicator has not been measured in Sierra Leone for many years. The current MMR in Sierra Leone is estimated to be the highest of any country in the world at 1,800 maternal deaths per 100,000 live births. Even though it generally takes a much larger sample size than that of the MICS2 to estimate the MMR to a reasonable level of

precision, members of the MICS2 Advisory Committee did not want to pass up the chance to collect data to assess this important health indicator.

The maternal mortality rate is defined as the number of [maternal deaths : live births] and is generally reported as the number of maternal deaths per 100,000 live births. In this survey, data was gathered to estimate the MMR through the recall of the head of household and of women of reproductive age. The head of every surveyed household was asked if a maternal death had occurred in his or her household in the previous year. The enumerators defined maternal deaths for all respondents according to standard international definition. If the respondent answered affirmatively, s/he was asked for more information about the death, including the date, the time at which the death took place (i.e., during pregnancy, during childbirth, or within 6 weeks after childbirth), and the cause of death. The Household Questionnaire in Appendix D contains the full sequence of instructions that were given and questions that were asked. Data on the number of live births during the year prior to the survey was gathered from births reported by women of reproductive age in the surveyed households.

Respondents in 19 households reported that a maternal death had occurred in the 12 months prior to the survey. Deaths were only considered to be valid when the respondent could state the date of the death and when that date was less than 365 days prior to the date of the interview. Deaths were also considered valid if the respondent only recalled the month and year of the death (but not the day) and the recalled month was less than 12 months prior to the month of the interview.

Women of reproductive age interviewed in this survey reported that they had given 910 live births in the year prior to the interview date. This value needs to be adjusted because a certain percentage of women (14.4%) of reproductive age who lived in the surveyed households were not interviewed. If these women had been interviewed, the number of live births reported to enumerators would presumably have been higher. Assuming that the proportion of women who gave birth in the year before the survey was equal among women who were both interviewed and not interviewed, we can estimate that there were 1,063 live births (910/0.856) among all women of reproductive age living in surveyed households in the year before the survey.

The estimate of the MMR resulting from these data is 1,800 (19/1,063 x 100,000). This value is the same as current working estimates of the MMR, supporting the accuracy of the estimate. Given the small sample size of the survey, this estimate is highly imprecise. The level of precision can be calculated using the following standard formula:

$$p = x/n \pm 1.96\sqrt{pq/n}$$

The terms used in the equation are defined as follows:

p	the proportion of maternal deaths among all live births	=	0.0179
x	the number of maternal deaths in the observed sample	=	19
n	the estimated number of live births in the observed sample	=	1063
q	1 – p	=	0.9821

Plugging the values in the box above into the equation and then multiplying by 100,000 reveals that the 95% confidence limits for the MMR estimate are ± 800. The 95% confidence interval for the estimated MMR is thus equal to [1000, 2600].

Seven of the reported deaths occurred in the Northern region. Six of the deaths occurred in the Southern region, while three deaths took place in both the Eastern region and the Western Area. Respondents reported that six of the women died while pregnant, while another six died in labor. Four respondents died within 42 days following the birth of their children. Data was not available for the remaining three women.

Of the six women who died while they were pregnant, four were reported to have died from an induced abortion.

Four of the women died from obstructed labor, while three died from a ruptured uterus. Two died from sepsis while one each died from bleeding and eclampsia. Three women died from other causes. Three respondents did not know the cause of death.

Seven of the women died at home, while another seven died at the hospital. Two died at a Primary Health Unit. Data on place of death is not available for the three remaining women.

Data is available for seventeen women regarding their parity at the time of their deaths. One woman had never given birth while 14 of the women had given birth from one to three times. One of the two remaining women had given birth five times while the other had given birth six times.

Discussion: Maternal mortality

- The estimate of the MMR generated in this survey is extremely high. There is a 95 percent chance that the MMR is between 1,000 and 2,600 deaths per 100,000 live births. Even the lower end of this confidence interval represents a tragically high MMR. These data suggest that approximately 4,000 maternal deaths occur per year in Sierra Leone[8]. This can only be termed an epidemic and calls for drastic measures to reduce the MMR.
- The number of maternal deaths about which information was gathered is too small to draw conclusions regarding where maternal deaths are the biggest problem in Sierra Leone, or which factors are associated with maternal deaths. It is clear that women from all regions of the country are at risk of maternal death and that observed maternal deaths were due to a variety of causes. Given that four of the maternal deaths were reported to be due to complications arising from induced abortions, it would appear that women who undergo abortions in Sierra Leone are at extreme risk of an adverse outcome.

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[8] A very rough approximation of the number of maternal deaths in Sierra Leone per year can be estimated by dividing the number of deaths measured in this survey by the proportion of the population in Sierra Leone that was surveyed. The number of people living the surveyed households was 24,375. In this case, 19 maternal deaths ÷ (24,375 / 5,000,000) = 3,897 (i.e., approximately 4,000) maternal deaths per year in Sierra Leone, assuming that the population of Sierra Leone is approximately 5 million.

J. Disability

Members of the MICS2 National Task Force felt that basic information about disability in Sierra Leone should be collected during the survey. During the survey, each head of household (or his or her surrogate) was asked if any member of the household was disabled. The cause of disability was investigated for each reported disability. The chart below describes the frequency of the disabilities that were reported as well as their causes. The data are reported for the 24,375 people who lived in the surveyed households.

Disabilities and their causes were reported for 157 individuals living in surveyed households. Single disabilities were reported for 145 individuals, two disabilities for eleven people, and three disabilities for one individual, thus yielding a total of 170 disabilities among 157 individuals. The % disabled column on the far right shows the estimate generated by the MICS2 survey of the percentage of the Sierra Leonean population who are challenged by a particular disability. For example, 38 people in surveyed households were reported to be blind out of a total of 24,375 respondents ($38/24,375 \times 100$ percent = 0.16 percent)

Chart 3: Frequency of disability in Sierra Leone by type and cause, Sierra Leone, 2000

Type of disability	Cause of disability							Total	% disabled
	From birth	Accident	War	Illness	Assault	Other	Missing		
Blindness	5	14	1	18	0	0	0	38	0.16
Crippled	1	10	3	16	1	0	3	34	0.14
Lost limbs	2	2	4	4	0	0	0	12	0.05
Deaf	12	4	2	17	0	0	1	36	0.15
Dumb	6	5	0	1	0	0	0	12	0.05
Mental disability	8	4	0	4	0	0	1	17	0.07
Other	3	2	2	12	0	2	0	21	0.09
Total (%)	37 (22)	41 (24)	12 (7)	72 (42)	1 (1)	2 (1)	5 (3)	170 (100)	

Appendices

Appendix A: Survey costs

Category		Leones	US $
Estimation of EA Population	-	2,987,800	1,440
Demarcation of Segments	-	12,400,000	5,976
Equipment and Stationery Supplies	-	23,712,250	11,428
Pre – Test	-	1,242,500	599
Printing and Photocopying	-	26,200,000	12,627
Training of Supervisors & Enumerators	-	6,407,000	3,088
Data Collection	-	40,018,000	19,286
Identity Cards	-	325,000	157
Data Processing	-	11,270,000	5,431
Analysis and Report Writing	-	900,000	434
Administration and Coordination	-	4,430,000	2,135
Publicity and Dissemination	-	6,000,000	2,892
Technical Assistance	-	44,612,500	21,500
Contingency	-	13,589,255	6,549
Total	-	**194,093,425**	**93,539**

		Monetary Contribution	Percent Contribution
UNICEF	-	157,391,435	81.1
UNFPA	-	23,250,500	12.0
Action Aid Sierra Leone	-	6,693,215	3.4
Christian Children's Fund	-	6,432,500	3.3
Christian Health Association S/Leone	-	325,775	0.2
Total	-	**194,093,425**	**100.0**

Appendix B: List of personnel involved in Sierra Leone MICS2

Members of the National Task Force on MICS2

Mrs. S A Bockarie-Torto	-	Central Statistics Office (CSO)
Mr. B H Bola-William	-	Christian Health Association of Sierra Leone (CHASL)
Mr. S A T P Horton	-	Ministry of Health and Sanitation (MOHS)
Mr. S I Jalloh	-	Ministry of Youths, Education and Sports (MYES)
Ms Nafisatu Jalloh	-	UNHCR
Mr. B M Javombo	-	Ministry of Development and Economic Planning (MODEP)
Mrs. Ethel Johnson	-	Ministry of Information and Broadcasting (MIB)
Mr. Davidson Jonah	-	Christian Children's Fund (CCF)
Mrs. Iris Juxon-Smith	-	Ministry of Social Welfare Gender and Children's Affair (MSWGCA)
Mr. Daniel Kaindeneh	-	CCF
Mr. L S Kain	-	MODEP
Mr. I A K Kanu	-	Ministry of Local Government and Rural Development (MLGRD)
Mr. A C Lahai	-	FAO
Mr. M B Lappia	-	Ministry of Safety and Security (MSS)
Dr. Bailah Leigh	-	MSWGCA
Mrs. Hawa Musa	-	MODEP
Mr. Sahr Ngayenga	-	Plan International
Ms Miatta Njambawai	-	Action Aid Sierra Leone
Mr. John S N Pessima	-	CSO
Mr. Morten Peterson	-	UNHCR
Mr. Paul A Sengeh	-	UNICEF
Ms Theresa Vamboi	-	MSWGCA
Mr. Moses L J Williams	-	CSO
Mrs. Frederica Wyse	-	UNFPA

Survey personnel

Senior staff

Dr. H.B.S Kandeh	-	Survey Director
Mrs. S A Bockarie-Torto	-	Survey Director
Mr. John S N Pessima	-	Survey Coordinator
Mr. Andrew B Johnny	-	Supervisor/Cartographer
Mr. Abdulai A Jalloh	-	Supervisor/Programmer
Mr. Alimamy Kamara	-	Supervisor/Verifier
Mr. George D Katta	-	Supervisor/Verifier
Mr. Mohamed King Koroma	-	Supervisor/Data Specialist
Mrs. Muriel V MacCormack	-	Supervisor
Mr. Lawrence Moiguah	-	Supervisor
Mr. Moses L J Williams	-	Supervisor/Data Analyst

Associate supervisors

Mr. Joseph S Jayah	-	Associate Supervisor (AFRC)
Mr. Omoroh B L Marah	-	Associate Supervisor (AFRC)
Mr. Alimamy F Turay	-	Associate Supervisor (AFRC)
Mr. Edward Warner Jr.	-	Associate Supervisor (AFRC)
Mr. Peter E T Z Adonis	-	Associate Supervisor (RUF)
Mr. Romeo Ansumana	-	Associate Supervisor (RUF)
Mr. Joe Fatorma	-	Associate Supervisor (RUF)
Mr. Jackson Jakema	-	Associate Supervisor (RUF)
Mr. Gassious Jimmie	-	Associate Supervisor (RUF)
Mr. Ibrahim Koroma	-	Associate Supervisor (RUF)
Mr. Brima Njawhen	-	Associate Supervisor (RUF)

Listers

Mr. Sheku Golfa	-	Lister
Mr. Gerald Woode	-	Lister

Enumerators

Mr. Augustine P Bangalie	-	Enumerator
Ms Jean Bangura	-	Enumerator
Ms Anita Cole	-	Enumerator
Mr. A B S Conteh	-	Enumerator
Mrs. Mariama Deensie	-	Enumerator
Ms Mamusu Dumbuya	-	Enumerator
Mr. N'pha Dumbuya	-	Enumerator
Mr. Osman Kemoh Kabba	-	Enumerator
Ms Agnes Fatu Kamara	-	Enumerator
Ms Aminata B Kamara	-	Enumerator
Mr. Edward S Kamara	-	Enumerator
Mr. Jeromy Kamara	-	Enumerator
Ms Karietta Kamara	-	Enumerator
Ms Mamie Jue Kargbo	-	Enumerator
Mr. Mustapha Kawa	-	Enumerator
Mr. Abdul S Koroma	-	Enumerator
Mr. Charles S Koroma	-	Enumerator
Mr. James M Koroma	-	Enumerator
Mr. M S Koroma	-	Enumerator
Ms N'gadie Koroma	-	Enumerator
Ms Siatta Lukuley	-	Enumerator
Mr. Charles Macauley	-	Enumerator
Mr. David M'bayo	-	Enumerator
Mr. A B S Samura	-	Enumerator
Mr. M M Sanusi	-	Enumerator
Mr. Mohamed S Sesay	-	Enumerator
Mr. M M Swaray	-	Enumerator
Ms Jannie Taylor	-	Enumerator
Mr. Samuel A Wilson	-	Enumerator
Mr. Akintola Wyse	-	Enumerator

Data entry personnel

Ms Marian M Conteh	-	Data Entry Clerk
Ms Christiana Davies	-	Data Entry Clerk
Mr. Billy K Hamilton	-	Data Entry Clerk
Ms Isata Jigba	-	Data Entry Clerk
Ms Maimunatu Karim	-	Data Entry Clerk
Ms Mariatu S Mansaray	-	Data Entry Clerk
Ms Matilda Ngondo	-	Data Entry Clerk
Ms Gifty Palmer	-	Data Entry Clerk
Ms Shuwai Pratt	-	Data Entry Clerk
Ms Christiana Richards	-	Data Entry Clerk
Ms Katumu Samba	-	Data Entry Clerk
Mrs. Hawa Sesay	-	Data Entry Clerk
Ms Cecilia Sillah	-	Data Entry Clerk
Ms Cynthia Will	-	Data Entry Clerk

Logistical support staff

Mrs. Elizabeth Bangura	-	Secretary
Mr. M D Kallon	-	Sub Accountant
Mr. James Kamara	-	Driver
Mr. Paul Koroma	-	Driver
Mr. Mohamed Turay	-	Office Assistant
Mr. Emmanuel Vincent	-	Finance Clerk

Technical support staff

Dr. Robert McPherson	-	Consultant
Mr. Paul Sengeh	-	M&E Officer, UNICEF

Appendix C: Sample design

The sampling design described below sought to guide a survey that would be truly national in scope. The sampling unit of the MICS2 survey is the household. However, depending on the indicator, the child, the caretaker, and the household all may serve as the unit of analysis.

The MICS2 Manual[9] was consulted extensively during the development of the sample design. Any significant deviations from the suggestions made in that manual are noted in the text below.

Sampling strategy

The sample was randomly selected using a three-stage stratified cluster sampling methodology. The strata that were used in the sampling process derive directly from the administrative structure of Sierra Leone that is based on regions, districts, chiefdoms, and enumeration areas (EAs).

First stage of sampling

The goal of the first stage of the sampling process was to prepare a list of administrative units that were widely recognized in Sierra Leone, along with current estimates of the population of each unit, and then randomly select a specific number of these units for further sampling. The Central Statistics Office of the Government of Sierra Leone has historically demarcated the country into Enumeration Areas (EAs) for the purpose of carrying out censuses and other data collection efforts. The decision was therefore taken to use EAs as the primary sampling unit (PSU), given their well-defined nature. The use of EAs as the PSU for the survey was complicated by the existence of camps for internally displaced persons (IDPs); in the latest count of IDPs in November 1999, it was estimated that 319,546 people currently resided in camps. While each camp was technically situated within one or more Enumeration Areas EAs, they were more easily viewed as separate EAs for the purposes of sampling. The overall approach in this stage of sampling used EAs as the primary sampling unit with the addition of camps to the list of EAs in order to assure that IDPs were adequately represented in the survey.

In the first stage of the sampling process, a list of the 2,546 enumeration areas (EAs) of Sierra Leone was developed, along with an estimate of the current household population (i.e., number of households) of each EA. The Central Statistics Office (CSO) has a list of all EAs in Sierra Leone—the problem faced by the survey team was that the population of each EA had not been updated since the 1992 Demographic and Social Monitoring Survey. Updated estimates were established in the following manner. Senior staff from the CSO visited the country's 149 chiefdoms. Within each rural chiefdom, the CSO staff person worked with key informants such as the Paramount Chief and the clerk of the Native Administration Office and other local informants to establish an estimate of the current population of each EA.

In urban Chiefdoms the process was different. Urban chiefdoms are generally much larger than rural chiefdoms, and are divided into sections, which are in turn sub-divided into EAs. In urban chiefdoms, CSO personnel worked with the Section Chiefs or other local informants in order to establish population estimates for each EA.

The population of each camp was ascertained from the UNHACU database of camp populations. The UNHACU database was updated monthly and it was felt by local experts to be reasonably accurate.

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[9] Monitoring progress toward the goals of the world summit for children: End-decade multiple-indicator survey manual. Division of Evaluation, Policy and Planning. Program Division. UNICEF. New York, November, 1999.

The list of EAs was then ordered using implicit stratification according to five variables: 1) location [urban/rural]; 2) province/region; 3) chiefdom; 4) EA; 5) population size. The list of camps was appended to the list of 2,553 EAs. Systematic sampling was then used to select 225 EAs/camps for the survey.

Second stage of sampling
In the second stage of sampling, a Cartographer and a Mapper traveled to each of the 225 EAs that were selected in the first stage of sampling. Each EA was divided into <u>pieces</u> of approximately 100 households using the map of the EA held by the CSO. Local informants assisted in this division. One of the <u>pieces</u> was then randomly selected for the next stage of sampling.

Rebels in 16 EAs that were selected for the survey refused access to the survey team for this stage of sampling because of inadequate information from their leaders. Plans were made to revisit these EAs during the data collection phase in order to complete the sampling process. The process in refugee camps that were selected was somewhat simpler; one household was randomly chosen from the list of households held by the camp administration using simple random sampling. The 19 households following the selected household were then selected in order to form a cluster of 20 households.

Third stage of sampling
In the third stage of sampling every household in the <u>piece</u> that had been selected was mapped. Using this map, the piece was then divided into <u>segments</u>. Each segment contained approximately 20 households. One of the segments in the selected piece was then randomly selected. A household list for use by surveyors was then constructed that included all houses in the selected segment.

Sample size
In the MICS2 survey, decisions regarding sample size were are made based on a number of factors that include 1) the probability of making a Type 1 error [10] that the survey team is willing to accept, 2) the design effect [11] (or <u>deff</u>) of the survey design, 3) the estimated population prevalence of a key indicator, 4) the average number of people per household, 5) the estimated non-response rate, 6) the proportion of the target population represented by a key single-year age group (12-23 month-old children are often used), and 7) the desired level of precision for the indicator estimates. The MICS2 manual recommends that the probability of a Type 1 error be set at 0.05, that a design effect of 1.75 be assumed, that the average number of people per household be assumed to be 5 (unless available data suggest otherwise), that the survey team anticipate a non-response rate of 10%, and that the proportion of the target population in a key age group be considered to be 0.03. The manual also recommends that a specific indicator be designated as <u>key</u> by health and education officials in UNICEF and the national government. If the prevalence rate of this indicator is believed to be below 0.25 or above 0.75 (e.g., 19% vaccination with DPT3), a precision of +/- 0.03 is recommended. If prevalence rates are believed to be greater than 0.25, a precision of +/- 0.05 is recommended.

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[10] This probability, generally set at 0.05 (or 5%), is the probability that the true population value for a given indicator might fall outside of the confidence limits (in this case, the 95% confidence limits) that surround the estimate of the indicator.

[11] The design effect is the factor by which the precision of the estimates of indicators in a survey decrease due to the sampling design, as compared to a survey that uses simple random sampling.

UNICEF/Sierra Leone health and education personnel felt that almost all important indicators in those sectors were between 25 and 75 percent. In addition, the large sample size that would result from setting the desired precision at +/- 3 percent (8-10,000 households) was felt to be excessively large by UNICEF officials and members of the survey team. Available data suggest that the average household size in rural areas of Sierra Leone was approximately seven, while in urban areas it was approximately six.

The MICS2 manual gives the formula that was used for calculating the sample size. This formula, along with a definition of the terms that it contains, is reproduced below.

$$n = [4 (r) (1 - r) (deff) 1.1] / [(d^2) (p) (n_h)]$$

Terms

- n is the required sample size for the key indicator;
- 4 is a factor to achieve a 5 percent chance of Type 1 error;
- r is the predicted or anticipated prevalence for the key indicator;
- 1.1 is the factor necessary to raise the sample size by 10 percent for non-response;
- deff is the design effect;
- d is the desired precision of the estimate of the key variable;
- p is the proportion of the total population that the smallest population group comprises; and,
- n_h is the average household size.

The recommended sample size for this survey was calculated using the sample size equation given above, based on the following values of the relevant variables:

- r   = 0.5^{12}
- deff   =   1.75
- d   =   0.05
- p   =   0.03
- n_h =   6.5

Plugging these values into the sample size equation above yielded a required sample size of 3949. This requirement was then reconciled with the recommended number of segments and the recommended number of households within each segment that was listed and surveyed. The MICS2 manual suggests that a minimum of twenty households be surveyed within each segment. The manual also recommends that from 250 to 300 segments be surveyed. Combining these two factors resulted in a minimum recommended sample size of 5-6,000. It was decided to split the difference between these two estimates. A sample size of 4,500 was therefore planned for the MICS2 survey, consisting of 225 segments of approximately 20 households each.

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[12] In the equation, the value of prevalence = 0.5 is used, since this gives the most conservative (i.e., maximum) sample size.

Appendix D: Questionnaires

HOUSEHOLD QUESTIONNAIRE

WE ARE FROM (**country-specific affiliation**). WE ARE WORKING ON A PROJECT CONCERNED WITH FAMILY HEALTH AND EDUCATION. I WOULD LIKE TO TALK TO YOU ABOUT THIS. THE INTERVIEW WILL TAKE ABOUT (**40**) MINUTES. ALL THE INFORMATION WE OBTAIN WILL REMAIN STRICTLY CONFIDENTIAL AND YOUR ANSWERS WILL NEVER BE IDENTIFIED. DURING THIS TIME I WOULD LIKE TO SPEAK WITH ALL MOTHERS OR OTHERS WHO TAKE CARE OF CHILDREN IN THE HOUSEHOLD.

MAY I START NOW? *If permission is given, begin the interview.*

HOUSEHOLD INFORMATION PANEL **	
1. EA number: ___ ___ ___ ___ ___ ___	2. Household number: ___ ___ ___
3. Day/Month/Year of interview: ___ ___ / ___ ___ / ___ ___ ___ ___	4. Interviewer number: ___ ___
5. Name of head of household: _____	Sex of household head: Male...........1 Female........2
6. Area: Urban.. 1 Rural 2	7. *Region:** North...1 East ....2 South ....3 Western Area...4
8. Material of dwelling floor:** Wood/Planks .... 1 Tile/concrete.. 2 Dirt/straw.. 3 Other(*specify*) _____ 4	9. Number of rooms in dwelling:** ___ ___
9A. Which of the following do you have in this household? Number 1. Radios ……………………….. ____ 2. Television sets……………………. ____ 3. Private Vehicle …………….…… ____ 4. Motorcycle ………………………… ____ 5. Pedal bicycle ……………………… ____ 6. Own house ………………………... ____	
10. Result of HH interview: Completed .... 1 Refused... 2 Not at home.. 3 HH not found/destroyed .... 4 Other (*specify*)_____ 5	
11. No. of women eligible for interview: ___ ___	12. No. of women interviews completed: ___ ___
13. No. of children under age 5: ___ ___	14. No. of child interviews completed: ___ ___
15. Data entry clerk: ___ __	
Interviewer/supervisor notes : *Use this space to record notes about the interview with this household, such as call-back times, incomplete individual interview forms, number of attempts to re-visit, etc.*	

EA no.__ __ __ __ __ __   Household no. __ __ __

HOUSEHOLD LISTING FORM
FIRST, PLEASE TELL ME THE NAME OF EACH PERSON WHO USUALLY LIVES HERE, STARTING WITH THE HEAD OF THE HH. *(Use survey definition of HH member). List the first name in line 01. List adult HH members first, then list children. Then ask:* ARE THERE ANY OTHERS 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 described in Instructions for Interviewers. Add a continuation sheet if there is not enough room on this page. Tick here if continuation sheet used* ☐

				Eligible for:			For persons age **15 or over** *ask Qs. 8 and 9*		For children **under age 15 years** *ask Qs. 10-13*			
				WOMEN'S MODULES	CHILD LABOUR MODULE	CHILD HEALTH MODULES						
1. *Line no.*	2. *Name*	3. IS (*name*) MALE OR FEMALE? 1 MALE 2 FEM.	4. HOW OLD IS (*name*)? HOW OLD WAS (*name*) ON HIS/HER LAST BIRTHDAY? *Record in completed years* 99=DK*	5. *Circle Line no. if woman is age 15-49*	6. *For each child* **age 5-14**: WHO IS THE MOTHER OR PRIMARY CARETAKER OF THIS CHILD? *Record Line no. of mother/ caretaker*	7. *For each child* **under 5**: WHO IS THE MOTHER OR PRIMARY CARETAKER OF THIS CHILD? *Record Line no. of mother/ caretaker*	8. CAN HE/SHE READ A LETTER OR NEWSPAPER EASILY, WITH DIFFICULTY OR NOT AT ALL? 1 EASILY 2 DIFFICULT 3 NOT AT ALL 9 DK	9. WHAT IS THE MARITAL STATUS OF (*name*)?** 1 CURRENTLY MARRIED/ IN UNION 2 WIDOWED 3 DIVORCED 4 SEPARATED 5 NEVER MARRIED	10. IS (*name's*) NATURAL MOTHER ALIVE? 1 YES 2 NO 9 DK	11. *If alive:* DOES (*name's*) NATURAL MOTHER LIVE IN THIS HOUSE- HOLD? 1 YES 2 NO	12. IS (*name's*) NATURAL FATHER ALIVE? 1 YES 2 NO 9 DK	13. *If alive:* DOES (*name's*) NATURAL FATHER LIVE IN THIS HOUSE- HOLD? 1 YES 2 NO
LINE	NAME	M F	AGE	15-49	MOTHER	MOTHER	E D N DK	M W D S N	Y N DK	Y N	Y N DK	Y N
01		1 2	____ ____	01	___ ___	___ ___	1 2 3 9	1 2 3 4 5	1 2 9	1 2	1 2 9	1 2
02		1 2	____ ____	02	___ ___	___ ___	1 2 3 9	1 2 3 4 5	1 2 9	1 2	1 2 9	1 2
03		1 2	____ ____	03	___ ___	___ ___	1 2 3 9	1 2 3 4 5	1 2 9	1 2	1 2 9	1 2
04		1 2	____ ____	04	___ ___	___ ___	1 2 3 9	1 2 3 4 5	1 2 9	1 2	1 2 9	1 2
05		1 2	____ ____	05	___ ___	___ ___	1 2 3 9	1 2 3 4 5	1 2 9	1 2	1 2 9	1 2
06		1 2	____ ____	06	___ ___	___ ___	1 2 3 9	1 2 3 4 5	1 2 9	1 2	1 2 9	1 2
07		1 2	____ ____	07	___ ___	___ ___	1 2 3 9	1 2 3 4 5	1 2 9	1 2	1 2 9	1 2

ARE THERE ANY OTHER CHILDREN LIVING HERE – EVEN IF THEY ARE NOT MEMBERS OF YOUR FAMILY OR DO NOT HAVE PARENTS LIVING IN THIS HOUSEHOLD?
INCLUDING CHILDREN AT WORK OR AT SCHOOL? *If yes, insert child's name and complete form.*
* *See instructions: to be used only for elderly household members (code meaning "do not know/over age 50").*

EA no. __ __ __ __ __ __   **Household no.** __ __ __

EDUCATION MODULE

If interview takes place between two school years, use alternative wording found in Appendix 1.

For persons age 5 or over ask Qs. 15 and 16	*For children age 5 through 17 years, continue on, asking Qs. 17-22*

14. Line no.	15. HAS (*name*) EVER ATTENDED SCHOOL?	16. WHAT IS THE HIGHEST LEVEL OF SCHOOL (*name*) ATTENDED? WHAT IS THE HIGHEST GRADE (*name*) COMPLETED AT THIS LEVEL? LEVEL:	17. IS (*name*) CURRENTLY ATTENDING SCHOOL?	18. DURING THE CURRENT SCHOOL YEAR, DID (*name*) ATTEND SCHOOL AT ANY TIME?	19. SINCE LAST (*day of the week*), HOW MANY DAYS DID (*name*) ATTEND SCHOOL?	20. WHICH LEVEL AND GRADE IS/WAS (*name*) ATTENDING? LEVEL:	21. DID (*name*) ATTEND SCHOOL LAST YEAR?	22. WHICH LEVEL AND GRADE DID (*name*) ATTEND LAST YEAR? LEVEL:
		1 PRIMARY 2 SECONDARY 3 HIGHER				1 PRESCHOOL 2 PRIMARY 3 SECONDARY 4 NON-STANDARD CURRICULUM		1 PRESCHOOL 2 PRIMARY 3 SECONDARY 4 NON-STANDARD CURRICULUM
	1 YES ⇨ Q.16 2 NO ↘ NEXT LINE	4 NON-STANDARD CURRICULUM 9 DK GRADE: 99 DK *If less than 1 grade, enter 00.*	1 YES ⇨ Q.19 2 NO	1 YES 2 NO ⇨ Q.21	*Insert number of days in space below.*	9 DK GRADE: 99 DK	1 YES 2 NO ↘ NEXT LINE 9 DK ↘ NEXT LINE	9 DK GRADE: 99 DK

LINE	Y NO	LEVEL	GRADE	YES NO	YES NO	DAYS	LEVEL	GRADE	Y N DK	LEVEL	GRADE
01	1 2 ⇨ NEXT LINE	1 2 3 4 9	__ __	1 2	1 2	____	1 2 3 4 9	__ __	1 2 9	1 2 3 4 9	__ __
02	1 2 ⇨ NEXT LINE	1 2 3 4 9	__ __	1 2	1 2	____	1 2 3 4 9	__ __	1 2 9	1 2 3 4 9	__ __
03	1 2 ⇨ NEXT LINE	1 2 3 4 9	__ __	1 2	1 2	____	1 2 3 4 9	__ __	1 2 9	1 2 3 4 9	__ __
04	1 2 ⇨ NEXT LINE	1 2 3 4 9	__ __	1 2	1 2	____	1 2 3 4 9	__ __	1 2 9	1 2 3 4 9	__ __
05	1 2 ⇨ NEXT LINE	1 2 3 4 9	__ __	1 2	1 2	____	1 2 3 4 9	__ __	1 2 9	1 2 3 4 9	__ __
06	1 2 ⇨ NEXT LINE	1 2 3 4 9	__ __	1 2	1 2	____	1 2 3 4 9	__ __	1 2 9	1 2 3 4 9	__ __
07	1 2 ⇨ NEXT LINE	1 2 3 4 9	__ __	1 2	1 2	____	1 2 3 4 9	__ __	1 2 9	1 2 3 4 9	__ __

Now for each woman age 15-49 years, write her name and line number at the top of each page in the Women's Questionnaire.
For each child under age 5, write his/her name and line number AND the line number of his/her mother or caretaker at the top of each page in the Children's Questionnaire.
You should now have a separate questionnaire for each eligible woman and child in the household.

EA no.__ __ __ __ __ __   Household no. __ __ __

CHILD LABOUR MODULE								
To be administered to caretaker of each child resident in the household age 5 through 14 years. **Country-specific adaptation may change age range through to age 17.** *Copy line number of each eligible child from household listing.* NOW I WOULD LIKE TO ASK ABOUT ANY WORK CHILDREN IN THIS HOUSEHOLD MAY DO.								
1. *Line no.*	2. *Name*	3. DURING THE PAST WEEK, DID (*name*) DO ANY KIND OF WORK FOR SOMEONE WHO IS NOT A MEMBER OF THIS HOUSEHOLD? *If yes*: FOR PAY? 1 YES, FOR PAY (CASH OR KIND) 2 YES, UNPAID 3 NO ⇨ TO Q.5	4. *If yes:* SINCE LAST (*day of the week*), ABOUT HOW MANY hours per day did he/she DO THIS WORK FOR SOMEONE WHO IS NOT A MEMBER OF THIS HOUSEHOLD? *If more than one job, include all hours at all jobs.* *Record response then* ⇨ *Q.6*	5. AT ANY TIME DURING THE PAST YEAR, DID (*name*) DO ANY KIND OF WORK FOR SOMEONE WHO IS NOT A MEMBER OF THIS HOUSEHOLD? *If yes*: FOR PAY? 1 YES, FOR PAY (CASH OR KIND) 2 YES, UNPAID 3 NO	6. DURING THE PAST WEEK, DID (*name*) HELP WITH HOUSEKEEPING CHORES SUCH AS COOKING, SHOPPING, CLEANING, WASHING CLOTHES, FETCHING WATER, OR CARING FOR CHILDREN? 1 YES 2 NO ⇨ TO Q.8	7. *If yes:* SINCE LAST (*day of the week*), ABOUT HOW MANY hours per day did he/she spend doing these chores? *Multiply the number by 7 and insert into the columns below*	8. DURING THE PAST WEEK, DID (*name*) DO ANY OTHER FAMILY WORK (ON THE FARM OR IN A BUSINESS)? 1 YES 2 NO ↘ NEXT LINE	9. *If yes:* SINCE LAST (*day of the week*), ABOUT HOW MANY HOURS DID HE/SHE DO THIS WORK?
LINE NO.	NAME	YES PAID UNPAID NO	NO. HOURS	YES PAID UNPAID NO	YES NO	NO. HOURS	YES NO	NO. HOURS
___ ___		1 2 3	___ ___	1 2 3	1 2	___ ___	1 2	___ ___
___ ___		1 2 3	___ ___	1 2 3	1 2	___ ___	1 2	___ ___
___ ___		1 2 3	___ ___	1 2 3	1 2	___ ___	1 2	___ ___
___ ___		1 2 3	___ ___	1 2 3	1 2	___ ___	1 2	___ ___
___ ___		1 2 3	___ ___	1 2 3	1 2	___ ___	1 2	___ ___
___ ___		1 2 3	___ ___	1 2 3	1 2	___ ___	1 2	___ ___
___ ___		1 2 3	___ ___	1 2 3	1 2	___ ___	1 2	___ ___

When all children in the age range have been covered, **GO TO WATER AND SANITATION MODULE** ⇨

EA no.__ __ __ __ __ __   Household no. __ __ __

WATER AND SANITATION MODULE		
This module is to be administered once for each household visited. *Record only one response for each question.* *If more than one response is given, record the most usual source or facility.*		
1. WHAT IS THE MAIN SOURCE OF DRINKING WATER FOR MEMBERS OF YOUR HOUSEHOLD?	Piped into dwelling ....01 Piped into yard or plot ....02 Public tap ....03 Tubewell/borehole with pump ....04 Protected dug well ....05 Protected spring.......................................06 Rainwater collection ....07 Bottled water ....08 Unprotected dug well...............................09 Unprotected spring...................................10 Pond, river or stream...............................11 Tanker-truck, vendor ....12 Other (*specify*) _____ 13 No answer or DK 99	
2. HOW LONG DOES IT TAKE TO GO THERE, GET WATER, AND COME BACK?	No. of minutes ....__ __ __ Water on premises ....888 DK 999	
2A. HOW FAR FROM HERE IS THE WATER SOURCE?	Water source on the premises...................1 Water source is within 1 mile from here.......2 Water source more than 1 mile from here....3 DK...4	
3. WHAT KIND OF TOILET FACILITY DOES YOUR HOUSEHOLD USE?	Flush to sewage system or septic tank ...... 1 Pour flush latrine (water seal type) .... 2 Improved pit latrine (e.g., VIP).................... 3 Traditional pit latrine .... 4 Open pit .... 5 Bucket.. 6 Other (*specify*) _____ 7 No facilities or bush or field 8	8⇨Q.5
4. IS THIS FACILITY LOCATED WITHIN YOUR DWELLING, OR YARD OR COMPOUND?**	Yes, in dwelling/yard/compound .... 1 No, outside dwelling/yard/compound .... 2 DK 9	
5. WHAT HAPPENS WITH THE STOOLS OF YOUNG CHILDREN (0-3 YEARS) WHEN THEY DO NOT USE THE LATRINE OR TOILET FACILITY?	Children always use toilet or latrine .... 1 Thrown into toilet or latrine........................ 2 Thrown outside the yard .... 3 Buried in the yard...................................... 4 Not disposed of or left on the ground......... 5 Other (*specify*) _____ 6 No young children in household 8	

GO TO NEXT MODULE ⇨

EA no.__ __ __ __ __ __   Household no. __ __ __

SALT IODIZATION MODULE		
1. WE WOULD LIKE TO CHECK WHETHER THE SALT USED IN YOUR HOUSEHOLD IS IODIZED. MAY I SEE A SAMPLE OF THE SALT USED TO COOK THE MAIN MEAL EATEN BY MEMBERS OF YOUR HOUSEHOLD LAST NIGHT? *Once you have examined the salt, circle number that corresponds to test outcome.* **Categories correspond to test kit recommended by UNICEF to be used in all MICS surveys.**	Not iodized 0 PPM (no color) .... 1 Less than 15 PPM (weak color)................. 2 15 PPM or more (strong color) .... 3 No salt in home... 8 Salt not tested.. 9	

EA no.__ __ __ __ __ __   Household no. __ __ __

DISABILITY MODULE

To be administered for everybody in the household with a disability. If possible, observe the household member to confirm any disability that is described.

1.	DOES ANY MEMBER OF THIS HOUSEHOLD HAVE A DISABILITY SUCH AS BEING BLIND, OR DEAF, OR DUMB, OR CRIPPLED, OR MENTALLY DISABLED, OR HAVING LOST ONE OR MORE ARMS OR LEGS?	Yes ………………………….. 1 No ……………………… 2	2 ⇨ NEXT MODULE

Ask the respondent "PLEASE TELL ME THE NAMES OF EVERYBODY IN YOUR HOUSEHOLD WHO HAS A DISABILITY". *Write the names and corresponding line numbers of all household members with disabilities in columns 2 and 3 below. Then ask the respondent questions 4 through 10 about each household member with a disability. For each question, if the respondent answers* "YES", *circle "1" and ask the respondent* "WHAT WAS THE CAUSE OF THE DISABILITY" *Record their answer in the space provided, using the appropriate code from the list at the right. If the respondent answers* "NO", *circle* "2", *leave the code space blank and go to the next column.*

Cause of Disability (Insert code)

1. From birth
2. Accidents
3. War
4. Illness
5. Assaults
6. Other (specify)

2. LINE NO.	3. NAME	4. Is (*NAME*) BLIND? Yes…1 No …2	5. Is (*NAME*) CRIPPLED? Yes…1 No …2	6. HAS (*NAME*) LOST ANY LIMBS? Yes…1 No …2	7. Is (*NAME*) DEAF? Yes…1 No …2	8. Is (*NAME*) DUMB? Yes…1 No …2	9 Is (*name*) mentally disabled? Yes…1 No …2	10. DOES (*name*) have any Yes…1 No …2 *If* "YES", *write name of disability in "Dis" space*
__ __		1 2 Code: ____	1 2 Code: ____	1 2 Code: ____	1 2 Code:	1 2 Code:	1 2 Code:	1 2 Dis: _____ Code: ____
__ __		1 2 Code: ____	1 2 Code: ____	1 2 Code: ____	1 2 Code:	1 2 Code:	1 2 Code:	1 2 Dis: _____ Code: ____
__ __		1 2 Code: ____	1 2 Code: ____	1 2 Code: ____	1 2 Code: ____	1 2 Code: ____	1 2 Code: ____	1 2 Dis: _____ Code: ____
__ __		1 2 Code:	1 2 Code:	1 2 Code:	1 2 Code:	1 2 Code:	1 2 Code:	1 2 Dis: _____ Code: ____
__ __		1 2 Code: ____	1 2 Code:	1 2 Code:	1 2 Code:	1 2 Code:	1 2 Code:	1 2 Dis: _____ Code: ____
__ __		1 2 Code: ____	1 2 Code:	1 2 Code:	1 2 Code:	1 2 Code:	1 2 Code:	1 2 Dis: _____ Code: ____

EA no.__ __ __ __ __ __   Household no. __ __ __

MATERNAL MORTALITY MODULE

Administer for each woman who died in the household within 12 months prior to this survey either during her pregnancy or during childbirth or within 42 days after delivery of her child

1.	IS THERE ANY WOMAN WHO WAS A MEMBER OF THIS HOUSEHOLD AND WHO DIED IN THE 12 MONTHS PRIOR TO THIS SURVEY EITHER DURING HER PREGNANCY OR DURING CHILDBIRTH OR WITHIN 42 DAYS AFTER THE DELIVERY OF HER CHILD?	Yes ………….. 1 No …………. 2	2 ⇨ GO TO WOMEN'S QUESTIONNAIRE

2.	*Ask the respondent:* PLEASE TELL ME THE NAME, AND THE DATE OF HER DEATH, FOR EVERY WOMAN WHO WAS A MEMBER OF THIS HOUSEHOLD AND WHO DIED IN THE 12 MONTHS PRIOR TO THIS SURVY EITHER DURING HER PREGNANCY OR DURING CHILDBIRTH OR WITHIN 42 DAYS AFTER THE DELIVERY OF HER CHILD. WRITE THE NAMES GIVEN BY THE RESPONDENT IN THE APPROPRIATE COLUMN BELOW. THEN ASK THE RESPONDENT QUESTIONS 4 THROUGH 10 ABOUT EACH WOMAN WHO DIED.

3. NAME / DATE OF DEATH	4. HOW MANY YEARS OLD WAS *(name)* WHEN SHE DIED?	5. DID *(name)* DIE DURING HER PREGNANCY, WHILE IN LABOUR, OR WITHIN 42 DAYS AFTER HER DELIVERY? 1. PREGNANT 2. IN LABOUR ⇨ Q.7 3. WITHIN 42 DAYS AFTER DELIVERY ⇨ Q.7 9. DON'T KNOW	6. DID *(name)* DIE FROM COMPLICATIONS OF INDUCED ABORTION? 1. YES 2. NO	7. WHAT WAS THE PRIMARY CAUSE OF *(name's)* DEATH? 1. BLEEDING 2. OBSTRUCTED LABOUR 3. SEPSIS 4. RUPTURED UTERUS 5. ECLAMPSIA 6. OTHER (SPECIFY) 9. DON'T KNOW	8. WHERE DID *(name)* DIE? 1. AT HOME 2. AT A PHU 3. AT A HOSPITAL. 4. OTHER PLACE (SPECIFY) 9. DON'T KNOW	9. AT THE TIME OF HER DEATH, HOW MANY MILES WAS *(name)* FROM THE NEAREST HOSPITAL? 88 = DIED IN HOSPITAL 99 = DON'T KNOW	10. HOW MANY CHILDREN DID *(name)* GIVE BIRTH TO DURING HER LIFE TIME?* 99 = DON'T KNOW
__ __ / __ __ / __ __	— —	—	Yes ….. 1 No …. 2	—	—	— —	— —

GO TO WOMEN'S QUESTIONNAIRE ⇨

EA no. __ __ __ __ __ __   **Household no.** __ __ __   **Woman line no.** __ __

QUESTIONNAIRE FOR INDIVIDUAL WOMEN

WOMEN'S INFORMATION PANEL		
This module is to be administered to all women age 15 through 49 (see column 5 of HH listing). *Fill in one form for each eligible woman.*		
1. Woman's line number (from HH listing).	Line number .... __ __	
2. Woman's name.	Name_____	
3A. IN WHAT MONTH AND YEAR WERE YOU BORN? *Or:* 3B. HOW OLD WERE YOU AT YOUR LAST BIRTHDAY?	Date of birth Month/Year .... __ __ / __ __ __ __ DK date of birth...............................999999 *Or:* Age (in completed years).................... __ __	DK⇨3B

GO TO NEXT MODULE ⇨

EA no. __ __ __ __ __ __   Household no. __ __ __   Woman line no. __ __

CHILD MORTALITY MODULE		
This module is to be administered to all women age 15-49.		
All questions refer only to LIVE births.		
Follow instructions as provided in training. See Instructions for Interviewers.		
1. NOW I WOULD LIKE TO ASK ABOUT ALL THE BIRTHS YOU HAVE HAD DURING YOUR LIFE. HAVE YOU EVER GIVEN BIRTH? *If "NO" probe by asking:* I MEAN, TO A CHILD WHO EVER BREATHED OR CRIED OR SHOWED OTHER SIGNS OF LIFE − EVEN IF HE OR SHE LIVED ONLY A FEW MINUTES OR HOURS?	Yes ....1 No 2	2⇨ CONTRA-CEPTIVE USE MODULE
2A. WHAT WAS THE DATE OF YOUR FIRST BIRTH? I MEAN THE VERY FIRST TIME YOU GAVE BIRTH, EVEN IF THE CHILD IS NO LONGER LIVING, OR IS THE CHILD OF A MAN OTHER THAN YOUR CURRENT PARTNER. *Or:* 2B. HOW MANY YEARS AGO DID YOU HAVE YOUR FIRST BIRTH?	Date of first birth Day/Month/Year.....................__ __/ __ __/ __ __ __ __ DK date of first birth..99999999 *Or:* Completed years since first birth..__ __ DK………………………………………. 99	DK⇨2B
3. DO YOU HAVE ANY SONS OR DAUGHTERS TO WHOM YOU HAVE GIVEN BIRTH WHO ARE NOW LIVING WITH YOU?	Yes ....1 No 2	2⇨Q.5
4. HOW MANY SONS LIVE WITH YOU? HOW MANY DAUGHTERS LIVE WITH YOU?	Sons at home ....__ __ Daughters at home ....__ __	
5. DO YOU HAVE ANY SONS OR DAUGHTERS TO WHOM YOU HAVE GIVEN BIRTH WHO ARE ALIVE BUT DO NOT LIVE WITH YOU?	Yes ....1 No 2	2⇨Q.7
6. HOW MANY SONS ARE ALIVE BUT DO NOT LIVE WITH YOU? HOW MANY DAUGHTERS ARE ALIVE BUT DO NOT LIVE WITH YOU?	Sons elsewhere...__ __ Daughters elsewhere..................................__ __	
7. HAVE YOU EVER GIVEN BIRTH TO A BOY OR GIRL WHO WAS BORN ALIVE BUT LATER DIED?	Yes ....1 No 2	2⇨Q.9
8. HOW MANY BOYS HAVE DIED? HOW MANY GIRLS HAVE DIED?	Boys dead...__ __ Girls dead ....__ __	
9. Sum answers to Q. 4, 6, and 8.	Sum...__ __	
10. JUST TO MAKE SURE THAT I HAVE THIS RIGHT, YOU HAVE HAD IN TOTAL (*total number*) BIRTHS DURING YOUR LIFE. IS THIS CORRECT? ☐ Yes ⇨ *Go to Q.11* ☐ No ⇨ *Check responses and make corrections before proceeding to Q.11*		
11. OF THESE (*total number*) BIRTHS YOU HAVE HAD, WHEN DID YOU DELIVER THE LAST ONE (EVEN IF HE OR SHE HAS DIED)?	Date of last birth Day/Month/Year.....................__ __/ __ __/ __ __ __ __	
*Did the woman's last birth occur within the last year, that is, since (**insert date**)?* ☐ *Yes, live birth in last year.* ⇨ *GO TO TETANUS TOXOID MODULE* ☐ *No live birth in last year.* ⇨ *GO TO CONTRACEPTIVE USE MODULE*		

EA no. __ __ __ __ __ __ **Household no.** __ __ __ **Woman line no.** __ __

TETANUS TOXOID (TT) MODULE		
This module is to be administered to all women with a live birth in the year preceding date of interview.		
1. DO YOU HAVE A CARD OR OTHER DOCUMENT WITH YOUR OWN IMMUNIZATIONS LISTED? *If a card is presented, use it to assist with answers to the following questions.*	Yes (card seen) .... 1 Yes (card not seen) .... 2 No.. 3 DK 9	
2. WHEN YOU WERE PREGNANT WITH YOUR LAST CHILD, DID YOU RECEIVE ANY INJECTION TO PREVENT HIM OR HER FROM GETTING CONVULSIONS AFTER BIRTH (AN ANTI-TETANUS SHOT, AN INJECTION AT THE TOP OF THE ARM OR SHOULDER)?	Yes .... 1 No.. 2 DK 9	 2⇨Q.4 9⇨Q.4
3. *If yes:* HOW MANY DOSES OF TETANUS TOXOID (ANTI-TETANUS INJECTIONS) DID YOU RECEIVE DURING YOUR LAST PREGNANCY?	No. of doses .... __ __ DK 99	
How many TT doses were reported during last pregnancy in Q.3? ☐ *At least two TT injections during last pregnancy.* ⇨ *GO TO MATERNAL AND NEWBORN HEALTH MODULE* ☐ *Fewer than two TT injections during last pregnancy.* ⇨ *CONTINUE WITH Q.4*		
4. DID YOU RECEIVE ANY TETANUS TOXOID INJECTION (*additional probes*) AT ANY TIME BEFORE YOUR LAST PREGNANCY, INCLUDING DURING A PREVIOUS PREGNANCY OR BETWEEN PREGNANCIES?	Yes .... 1 No.. 2 DK 9	 2⇨Q.7 9⇨Q.7
5. *If yes:* HOW MANY DOSES DID YOU RECEIVE?	No. of doses .... __ __	
6A. WHEN WAS THE LAST DOSE RECEIVED? *Or:* 6B. HOW MANY YEARS AGO DID YOU RECEIVE THE LAST DOSE?	Date of last dose Month/Year .... __ __ / __ __ __ __ DK date...999999 *Or:* Years ago... __ __	 DK⇨6B
7. *Add responses to Q.3 and Q.5 to obtain total number of doses in lifetime.*	Total no. of doses .... __ __	

GO TO MATERNAL AND NEWBORN HEALTH MODULE ⇨

EA no. __ __ __ __ __ __ **Household no.** __ __ __ **Woman line no.** __ __

MATERNAL AND NEWBORN HEALTH MODULE		
This module is to be administered to all women with a live birth in the year preceding date of interview.		
Use Q.7 and Q.8 only in countries where a local term for night blindness exists.		
1. IN THE FIRST TWO MONTHS AFTER YOUR LAST BIRTH, DID YOU RECEIVE A VITAMIN A DOSE LIKE THIS? *Show 200,000 IU capsule or dispenser.*	Yes .... 1 No.. 2 DK 9	
2. DID YOU SEE ANYONE FOR ANTENATAL CARE FOR THIS PREGNANCY? *If yes*: WHOM DID YOU SEE? ANYONE ELSE? *Probe for the type of person seen and circle all answers given.*	Health professional: Doctor.. 1 Nurse/midwife .... 2 Auxiliary midwife................................. 3 Other person Traditional birth attendant...................... 4 Other (*specify*) _____ 6 No one 0	
3. WHO ASSISTED WITH THE DELIVERY OF YOUR LAST CHILD (*or name*)? ANYONE ELSE? *Probe for the type of person assisting and circle all answers given.*	Health professional: Doctor.. 1 Nurse/midwife .... 2 Auxiliary midwife................................. 3 Other person Traditional birth attendant...................... 4 Relative/friend .... 5 Other (*specify*) _____ 6 No one 0	
4. WHEN YOUR LAST CHILD (*name*) WAS BORN, WAS HE/SHE VERY LARGE, LARGER THAN AVERAGE, AVERAGE, SMALLER THAN AVERAGE, OR VERY SMALL?	Very large.. 1 Larger than average .... 2 Average .... 3 Smaller than average .... 4 Very small .... 5 DK 9	
5. WAS (*name*) WEIGHED AT BIRTH?	Yes .... 1 No.. 2 DK 9	2⇨Q.7 9⇨Q.7
6. HOW MUCH DID (*name*) WEIGH? *Record weight from health card, if available.*	From card............... 1 (grams) __ , __ __ __ From recall .... 2 (grams) __ , __ __ __ DK 99999	
7A. HAVE YOU EVER HAD AN ABORTION? IF YES, WHICH TYPE IF NO, GO THE NEXT MODULE	Induced abortion .... 1 Spontaneous abortion .... 2 DK 9	
7B. WHY DID YOU HAVE THE ABORTION?	Unwanted pregnancy .... 1 Because of schooling .... 2 Lack of support for the pregnancy...............3 DK 9	

GO TO NEXT MODULE ⇨

EA no. __ __ __ __ __ __ **Household no.** __ __ __ **Woman line no.** __ __

CONTRACEPTIVE USE MODULE		
Ask Q.1 for all women age 15-49 and then follow the skip instruction carefully. *Questions on pregnancy and contraception are to be asked only of women who are currently married or in union.*		
1. ARE YOU CURRENTLY MARRIED OR LIVING WITH A MAN?	Yes .... 1 No, widowed, divorced, separated............ 2 No, never married 3	
1A. ARE YOU SEXUALLY ACTIVE?	Yes.. 1 No…………………………………………..2	2⇨NEXT MODULE

2. *Now I am going to change topics.*
   I would like to talk with you about another subject –
   family planning – and your reproductive health.
   Of course, all the information you supply will remain
   strictly confidential. You will never be identified with
   the answers to these questions.
   ARE YOU PREGNANT NOW?
	Yes, currently pregnant 1
	
	No.. 2
	
	Unsure or DK 3
		1⇨NEXT MODULE

3. SOME COUPLES USE VARIOUS WAYS OR
      METHODS TO DELAY OR AVOID A PREGNANCY.
      ARE YOU CURRENTLY DOING SOMETHING OR
      USING ANY METHOD TO DELAY OR AVOID
      GETTING PREGNANT?
	Yes 1
	No... 2
		2⇨ go to 3A & 3B & NEXT MODULE

3A. HAVE YOU EVER USED ANY METHOD TO PREVENT PREGNANCY?	Yes …………………………………………1 No ……………………………………………2	
3B. NAME THREE METHODS OF CONTRACEPTION NAMED THREE METHODS CORRECTLY?	Yes…………………………………………1 No……………………………………………2	
4. WHICH METHOD ARE YOU USING? *Do not prompt.* *If more than one method is mentioned, circle each* *one.*	Female sterilization ....01 Male sterilization ....02 Pill ....03 IUD ....04 Injections ....05 Implants ....06 Condom ....07 Female condom ....08 Diaphragm...09 Foam/jelly..10 Lactational amenorrhoea method (LAM) ....11 Periodic abstinence...................................12 Withdrawal ....13 Other (*specify*) _____ 14	
5. HOW MANY CHILDREN WOULD YOU LIKE/HAVE LIKED TO HAVE?	Boys…………………………………………1 Girls…………………………………………2	
5B. WHO DECIDED YOU SHOULD USE CONTRACEPTIVES?	Partner…………………………………………1 Parent…………………………………………2 Self…………………………………………3 Other (Specify)_____ …………4	

GO TO NEXT MODULE ⇨

EA no. __ __ __ __ __ __   Household no. __ __ __   Woman line no. __ __

HIV/AIDS MODULE		
This module is to be administered to all women age 15-49. *See Instructions for Interviewers for further discussion of these questions.*		
1. NOW I WOULD LIKE TO TALK WITH YOU ABOUT WHAT YOU KNOW ABOUT SERIOUS ILLNESS, IN PARTICULAR, ABOUT HIV AND AIDS. HAVE YOU EVER HEARD OF THE VIRUS HIV OR AN ILLNESS CALLED AIDS?	Yes .... 1 No.. 2	 2⇨Q.18
2. IS THERE ANYTHING A PERSON CAN DO TO AVOID GETTING HIV, THE VIRUS THAT CAUSES AIDS?	Yes .... 1 No.. 2 DK 9	 2⇨Q.8 9⇨Q.8
3. NOW I WILL READ SOME QUESTIONS ABOUT HOW PEOPLE CAN PROTECT THEMSELVES FROM THE AIDS VIRUS. THESE QUESTIONS INCLUDE ISSUES RELATED TO YOUR ANSWERS ARE VERY IMPORTANT TO HELP UNDERSTAND THE NEEDS OF PEOPLE IN (*Sierra Leone*). AGAIN, THIS INFORMATION IS ALL COMPLETELY PRIVATE AND ANONYMOUS. PLEASE ANSWER YES OR NO TO EACH QUESTION. CAN PEOPLE PROTECT THEMSELVES FROM GETTING INFECTED WITH THE AIDS VIRUS BY HAVING ONE UNINFECTED SEX PARTNER WHO ALSO HAS NO OTHER PARTNERS?	Yes .... 1 No.. 2 DK 9	
4. DO YOU THINK A PERSON CAN GET INFECTED WITH THE AIDS VIRUS THROUGH SUPERNATURAL MEANS?**	Yes .... 1 No.. 2 DK 9	
5. CAN PEOPLE PROTECT THEMSELVES FROM THE AIDS VIRUS BY USING A CONDOM CORRECTLY EVERY TIME THEY HAVE SEX?	Yes .... 1 No.. 2 DK 9	
6. CAN A PERSON GET THE AIDS VIRUS FROM MOSQUITO BITES?	Yes .... 1 No.. 2 DK 9	
7. CAN PEOPLE PROTECT THEMSELVES FROM GETTING INFECTED WITH THE AIDS VIRUS BY NOT HAVING SEX AT ALL?	Yes .... 1 No.. 2 DK 9	
8. IS IT POSSIBLE FOR A HEALTHY-LOOKING PERSON TO HAVE THE AIDS VIRUS?	Yes .... 1 No.. 2 DK 9	

HIV/AIDS MODULE (CONTINUED)		
This module is to be administered to all women age 15-49. *See Instructions for Interviewers for further discussion of these questions.*		
9. CAN THE AIDS VIRUS BE TRANSMITTED FROM A MOTHER TO A CHILD?	Yes .... 1 No .... 2 DK 9	2⇨Q.13 9⇨Q.13
10. CAN THE AIDS VIRUS BE TRANSMITTED FROM A MOTHER TO A CHILD DURING PREGNANCY?	Yes .... 1 No .... 2 DK 9	
11. CAN THE AIDS VIRUS BE TRANSMITTED FROM A MOTHER TO A CHILD AT DELIVERY?	Yes .... 1 No .... 2 DK 9	
12. CAN THE AIDS VIRUS BE TRANSMITTED FROM A MOTHER TO A CHILD THROUGH BREAST MILK?	Yes .... 1 No .... 2 DK 9	
13. IF A TEACHER HAS THE AIDS VIRUS BUT IS NOT SICK, SHOULD HE OR SHE BE ALLOWED TO CONTINUE TEACHING IN SCHOOL?	Yes .... 1 No .... 2 DK 9	
14. IF YOU KNEW THAT A SHOPKEEPER OR FOOD SELLER HAD AIDS OR THE VIRUS THAT CAUSES IT, WOULD YOU BUY FOOD FROM HIM OR HER?	Yes .... 1 No .... 2 DK 9	
15. I AM NOT GOING TO ASK YOU ABOUT YOUR HIV STATUS (*use term understood locally*), BUT WE ARE INTERESTED TO KNOW HOW MUCH DEMAND THERE IS IN YOUR COMMUNITY FOR HIV TESTING AND COUNSELLING. SO, I WOULD LIKE TO ASK YOU: I DO NOT WANT TO KNOW THE RESULTS, BUT HAVE YOU EVER BEEN TESTED TO SEE IF YOU HAVE HIV, THE VIRUS THAT CAUSES AIDS?	Yes .... 1 No 2	2⇨Q.17
16. I DO NOT WANT YOU TO TELL ME THE RESULTS OF THE TEST, BUT HAVE YOU BEEN TOLD THE RESULTS?	Yes .... 1 No 2	
17. AT THIS TIME, DO YOU KNOW OF A PLACE WHERE YOU CAN GO TO GET SUCH A TEST TO SEE IF YOU HAVE THE AIDS VIRUS?	Yes .... 1 No 2	
18. Is the woman a caretaker of any children under five years of age? ☐ *Yes.* ⇨ *GO TO QUESTIONNAIRE FOR CHILDREN UNDER FIVE* *and administer one questionnaire for each child under five for whom she is the caretaker.* ☐ *No.* ⇨ *CONTINUE WITH Q.19*		
19. Does another eligible woman reside in the household? ☐ *Yes.* ⇨ *End the current interview by thanking the woman for her cooperation and* *GO TO QUESTIONNAIRE FOR INDIVIDUAL WOMEN* *to administer the questionnaire to the next eligible woman.* ☐ *No.* ⇨ *End the interview with this woman by thanking her for her cooperation.* *Gather together all questionnaires for this household and tally the number of interviews completed on the cover page.*		

EA. no. __ __ __   Household no. __ __ __   Caretaker line no. __ __   Child line no. __ __

QUESTIONNAIRE FOR CHILDREN UNDER FIVE

This questionnaire is to be administered to all women who care for a child that lives with them
and is under the age of 5 years (see Q.4 of the HH listing).
A separate form should be used for each eligible child.
Questions should be administered to the mother or caretaker of the eligible child (see Q.7 of the HH listing).
Fill in the line number of each child, the line number of the child's mother or caretaker,
and the household and cluster numbers in the space at the top of each page.

BIRTH REGISTRATION AND EARLY LEARNING MODULE		
1. Child's name.	Name_____	
2. Child's age (copy from Q.4 of HH listing).	Age (in completed years).................... __ __	
3. NOW I WOULD LIKE TO ASK YOU SOME QUESTIONS ABOUT THE HEALTH OF EACH CHILD UNDER THE AGE OF 5 IN YOUR CARE, WHO LIVES WITH YOU NOW. NOW I WANT TO ASK YOU ABOUT (*name*). IN WHAT MONTH AND YEAR WAS (*name*) BORN? *Probe*: WHAT IS HIS/HER BIRTHDAY? *If the mother knows the exact birth date, also enter the day; otherwise, enter 99 for day.*	Date of birth Day/Month/Year ...... __ __/__ __/__ __ __ __	
4. DOES (*name*) HAVE A BIRTH CERTIFICATE? MAY I SEE IT? *If certificate is presented, verify reported birth date.* *If no birth certificate is presented, try to verify date using another document (health card, etc.).* *Correct stated age, if necessary.*	Yes, seen .... 1 Yes, not seen .... 2 No.. 3 DK 9	1⇨Q.8
5. *If no birth certificate is shown, ask:* HAS (*name's*) BIRTH BEEN REGISTERED?	Yes .... 1 No.. 2 DK 9	1⇨Q.8 9⇨Q.7
6. WHY IS (*name's*) BIRTH NOT REGISTERED?	Costs too much** .... 1 Must travel too far .... 2 Did not know it should be registered .... 3 Late, and did not want to pay fine.............. 4 Does not know where to register .... 5 Other (*specify*) _____ 6 DK 9	
7. DO YOU KNOW HOW TO REGISTER YOUR CHILD'S BIRTH?	Yes .... 1 No.. 2 No answer... 8	

EA. no. __ __ __ Household no. __ __ __ Caretaker line no. __ __ Child line no. __ __

BIRTH REGISTRATION AND EARLY LEARNING MODULE (CONTINUED)		
8. *Check age. If child is 3 years old or more, ask*: DOES (*name*) ATTEND ANY ORGANIZED LEARNING OR EARLY CHILDHOOD EDUCATION PROGRAMME, SUCH AS A PRIVATE OR GOVERNMENT FACILITY, INCLUDING KINDERGARTEN OR COMMUNITY CHILD CARE?	Yes .... 1 No.. 2 DK 9	2⇨NEXT MODULE 9⇨NEXT MODULE
9. WITHIN THE LAST SEVEN DAYS, ABOUT HOW MANY HOURS DID (*name*) ATTEND?	Number of hours .... __ __	

GO TO NEXT MODULE ⇨

EA. no. __ __ __ Household no. __ __ __ Caretaker line no. __ __ Child line no. __ __

VITAMIN A MODULE		
Further optional questions are found in Appendix Two.		
1. HAS (*name*) EVER RECEIVED A VITAMIN A CAPSULE (SUPPLEMENT) LIKE THIS ONE? *Show capsule or dispenser.*	Yes .... 1 No.. 2 DK 9	2⇨NEXT MODULE 9⇨NEXT MODULE
2. HOW MANY MONTHS AGO DID (*name*) TAKE THE LAST DOSE?	Months ago .... __ __ DK 99	
3. WHERE DID (*name*) GET THIS LAST DOSE?	On routine visit to health centre................. 1 Sick child visit to health centre .... 2 National Immunization Day campaign........ 3 Other (*specify*) _____ 4 DK 9	

GO TO NEXT MODULE ⇨

EA. no. __ __ __   Household no. __ __ __   Caretaker line no. __ __   Child line no. __ __

BREASTFEEDING MODULE		
1. HAS (*name*) EVER BEEN BREASTFED?	Yes 1	
	No... 2	2⇨Q.4
	DK 9	9⇨Q.4
2. IS HE/SHE STILL BEING BREASTFED?	Yes 1	
	No... 2	2⇨Q.4
	DK 9	9⇨Q.4
3. SINCE THIS TIME YESTERDAY, DID HE/SHE RECEIVE ANY OF THE FOLLOWING: *Read each item aloud and record response before proceeding to the next item.* Y N DK 3A. VITAMIN, MINERAL SUPPLEMENTS OR MEDICINE? 3B. PLAIN WATER? 3C. SWEETENED, FLAVOURED WATER OR FRUIT JUICE OR TEA OR INFUSION? 3D. ORAL REHYDRATION SOLUTION (ORS)? 3E. TINNED, POWDERED OR FRESH MILK OR INFANT FORMULA? 3F. ANY OTHER LIQUIDS? 3G. SOLID OR SEMI-SOLID (MUSHY) FOOD?	 A. Vitamin supplements....................1 2 9 B. Plain water ....1 2 9 C. Sweetened water or juice ....1 2 9 D. ORS ....1 2 9 E. Milk..1 2 9 F. Other liquids (*specify*) _____1 2 9 G. Mushy food 1 2 9	
4. SINCE THIS TIME YESTERDAY, HAS (*name*) BEEN GIVEN ANYTHING TO DRINK FROM A BOTTLE WITH A NIPPLE OR TEAT?	Yes .... 1 No... 2 DK 9	

GO TO NEXT MODULE ⇨

EA. no. __ __ __   Household no. __ __ __   Caretaker line no. __ __   Child line no. __ __

CARE OF ILLNESS MODULE		
1. HAS (*name*) HAD DIARRHOEA IN THE LAST TWO WEEKS, THAT IS, SINCE (*day of the week*) OF THE WEEK BEFORE LAST? *Diarrhoea is determined as perceived by mother or caretaker, or as three or more loose or watery stools per day, or blood in stool.*	Yes .... 1 No.. 2 DK 9	1⇨Q.3
2. IN THE LAST TWO WEEKS, HAS (*name*) HAD ANY OTHER ILLNESS, SUCH AS COUGH OR FEVER, OR ANY OTHER HEALTH PROBLEM?	Yes .... 1 No.. 2 DK 9	1⇨Q.4 2⇨Q.11 9⇨Q.11
3. DURING THIS LAST EPISODE OF DIARRHOEA, DID (*name*) DRINK ANY OF THE FOLLOWING: *Read each item aloud and record response before proceeding to the next item.* 3A. BREAST MILK? 3B. CEREAL-BASED GRUEL OR GRUEL MADE FROM ROOTS OR SOUP? 3C. **other locally-defined acceptable home fluids (e.g., SSS, yogurt drink)**? 3D. ORS PACKET SOLUTION? 3E. OTHER MILK OR INFANT FORMULA? 3F. WATER WITH FEEDING DURING SOME PART OF THE DAY? 3G. WATER ALONE? 3H. **defined "unacceptable" fluids (e.g., cola, etc. (insert local names))** 3I. NOTHING	Y N DK A. Breast milk ....1 2 9 B. Gruel...1 2 9 C. Other acceptable ....1 2 9 D. ORS packet ....1 2 9 E. Other milk...................................1 2 9 F. Water with feeding ....1 2 9 G. Water alone ....1 2 9 H. Unacceptable fluids.....................1 2 9 I. Nothing.......................................1 2 9	 1⇨Q.5
4. DURING (*name's*) ILLNESS, DID HE/SHE DRINK MUCH LESS, ABOUT THE SAME, OR MORE THAN USUAL?	Much less or none.................................. 1 About the same (or somewhat less) .... 2 More .... 3 DK 9	
5. DURING (*name's*) ILLNESS, DID HE/SHE EAT LESS, ABOUT THE SAME, OR MORE FOOD THAN USUAL? *If "less", probe:* MUCH LESS OR A LITTLE LESS?	None.. 1 Much less... 2 Somewhat less .... 3 About the same....................................... 4 More .... 5 DK 9	
6. HAS (*name*) HAD AN ILLNESS WITH A COUGH AT ANY TIME IN THE LAST TWO WEEKS, THAT IS, SINCE (*day of the week*) OF THE WEEK BEFORE LAST?	Yes .... 1 No.. 2 DK 9	 2⇨Q.11 9⇨Q.11

7. WHEN (*name*) HAD AN ILLNESS WITH A COUGH, DID HE/SHE BREATHE FASTER THAN USUAL WITH SHORT, QUICK BREATHS OR HAVE DIFFICULTY BREATHING?	Yes .... 1 No... 2 DK 9	2⇨Q.11 9⇨Q.11
8. WERE THE SYMPTOMS DUE TO A PROBLEM IN THE CHEST OR A BLOCKED NOSE?	Blocked nose... 1 Problem in chest .... 2 Both.. 3 Other (*specify*) _____ 4 DK 9	1⇨Q.11 4⇨Q.11
9. DID YOU SEEK ADVICE OR TREATMENT FOR THE ILLNESS OUTSIDE THE HOME?	Yes .... 1 No... 2 DK 9	2⇨Q.11 9⇨Q.11
10. FROM WHERE DID YOU SEEK CARE? ANYWHERE ELSE? *Circle all providers mentioned,* *but do NOT prompt with any suggestions.*	Hospital ....01 Health centre ....02 Dispensary ....03 Village health worker..............................04 MCH clinic ....05 Mobile/outreach clinic............................06 Private physician....................................07 Traditional healer ....08 Pharmacy or drug seller ....09 Relative or friend...................................10 Other (*specify*) _____ 11	
Ask this question (Q.11) only once for each caretaker. 11. SOMETIMES CHILDREN HAVE SEVERE ILLNESSES AND SHOULD BE TAKEN IMMEDIATELY TO A HEALTH FACILITY. WHAT TYPES OF SYMPTOMS WOULD CAUSE YOU TO TAKE YOUR CHILD TO A HEALTH FACILITY RIGHT AWAY? *Keep asking for more signs or symptoms until the caretaker cannot recall any additional symptoms. Circle all symptoms mentioned,* *but do NOT prompt with any suggestions.*	Child not able to drink or breastfeed.......................................01 Child becomes sicker ....02 Child develops a fever............................03 Child has fast breathing ....04 Child has difficult breathing ....05 Child has blood in stool ....06 Child is drinking poorly ....07 Other (*specify*) _____ 08 Other (*specify*) _____ 09 Other (*specify*) _____ 10	

GO TO NEXT MODULE ⇨

EA. no. __ __ __ Household no. __ __ __ Caretaker line no. __ __ Child line no. __ __

MALARIA MODULE		
This module is for use in countries or regions at high risk of malaria. See manual for definition.		
1. In the last two weeks, that is, since (*day of the week*) of the week before last, has (*name*) been ill with a fever?	Yes .... 1 No... 2 DK 9	 2⇨Q.8 9⇨Q.8
2. Was (*name*) seen at a health facility during this illness?	Yes .... 1 No... 2 DK 9	 2⇨Q.6 9⇨Q.6
3. Did (*name*) take a medicine for fever or malaria that was provided or prescribed at the health facility?	Yes .... 1 No... 2 DK 9	 2⇨Q.5 9⇨Q.5
4. What medicine did (*name*) take that was provided or prescribed at the health facility? *Circle all medicines mentioned.*	Paracetamol .... 1 Chloroquine .... 2 Fansidar.. 3 ***Develop categories to include locally-used drugs, then pre-test*** Other (*specify*) _____ 4 DK 9	
5. Was (*name*) given medicine for the fever or malaria before being taken to the health facility?	Yes .... 1 No... 2 DK 9	1⇨Q.7 2⇨Q.8 9⇨Q.8
6. Was (*name*) given medicine for fever or malaria during this illness?	Yes .... 1 No... 2 DK 9	 2⇨Q.8 9⇨Q.8
7. What medicine was (*name*) given? *Circle all medicines given before visiting a health facility or if no visit was made to a health facility.*	Paracetamol .... 1 Chloroquine .... 2 Fansidar.. 3 ***Develop categories to include locally-used drugs, then pre-test*** Other (*specify*) _____ 4 DK 9	
8. Did (*name*) sleep under a bednet last night?	Yes .... 1 No... 2 DK 9	 2⇨NEXT MODULE 9⇨NEXT MODULE

EA. no. __ __ __   Household no. __ __ __   Caretaker line no. __ __   Child line no. __ __

MALARIA MODULE (CONTINUED)		
This module is for use in countries or regions at high risk of malaria. See manual for definition.		
9. WAS THIS BEDNET EVER TREATED WITH A PRODUCT TO KILL MOSQUITOS?	Yes .... 1 No.. 2	2⇨NEXT MODULE
	DK 9	9⇨NEXT MODULE
10. WHEN WAS THE BEDNET LAST TREATED?	Months ago .... __ __ DK 99	

GO TO NEXT MODULE ⇨

EA. no. __ __ __   Household no. __ __ __   Caretaker line no. __ __   Child line no. __ __

IMMUNIZATION MODULE								
If an immunization card is available, copy the dates in Qs.2-5 for each type of immunization recorded on the card. Qs.7-15 are for recording vaccinations that are not recorded on the card. Qs.7-15 will only be asked when a card is not available.								

1. IS THERE A VACCINATION RECORD FOR (*name*)?	Yes, seen 1	
	Yes, not seen 2	2⇨Q.7
	No.. 3	3⇨Q.7

(a) Copy dates of all vaccinations from the card. *(b) Write '44' in day column if card shows that vaccination was given but no date recorded.*	Date of Immunization			
	DAY	MONTH	YEAR	

		DAY		MONTH		YEAR			
2. BCG	BCG								
3A. OPV0	OPV0								
3B. OPV1	OPV1								
3C. OPV2	OPV2								
3D. OPV3	OPV3								
4A. DPT1	DPT1								
4B. DPT2	DPT2								
4C. DPT3	DPT3								
5. MEASLES	MEASLES								

6. IN ADDITION TO THE VACCINATIONS SHOWN ON THIS CARD, DID (*name*) RECEIVE ANY OTHER VACCINATIONS - INCLUDING VACCINATIONS RECEIVED IN A NATIONAL IMMUNIZATION DAY? *Record 'Yes' only if respondent mentions BCG, OPV 0-3, DPT 1-3, and/or Measles vaccine(s). Go to Q.15 after you finish.*	Yes .... 1 *(Probe for vaccinations and write '66' in the corresponding day column on Q. 2 to Q. 5.)*	1⇨Q.15
	No.. 2	2⇨Q.15
	DK 9	9⇨Q.15

7. HAS (*name*) EVER RECEIVED ANY VACCINATIONS TO PREVENT HIM/HER FROM GETTING DISEASES, INCLUDING VACCINATIONS RECEIVED IN A NATIONAL IMMUNIZATION DAY CAMPAIGN?	Yes 1	
	No.. 2	2⇨Q.15
	DK 9	9⇨Q.15

8. HAS (*name*) EVER BEEN GIVEN A BCG VACCINATION AGAINST TUBERCULOSIS – THAT IS, AN INJECTION IN THE LEFT SHOULDER THAT CAUSED A SCAR?	Yes 1	
	No.. 2	
	DK 9	

EA. no. __ __ __   Household no. __ __ __   Caretaker line no. __ __   Child line no. __ __

IMMUNIZATION MODULE (CONTINUED)		
9. HAS (*name*) EVER BEEN GIVEN ANY "VACCINATION DROPS IN THE MOUTH" TO PROTECT HIM/HER FROM GETTING DISEASES – THAT IS, POLIO?	Yes .... 1 No... 2 DK 9	 2⇨Q.12 9⇨Q.12
10. HOW OLD WAS HE/SHE WHEN THE FIRST DOSE WAS GIVEN – JUST AFTER BIRTH OR LATER?	Just after birth.. 1 Later 2	
11. HOW MANY TIMES HAS HE/SHE BEEN GIVEN THESE DROPS?	No. of times .... __ __	
12. HAS (*name*) EVER BEEN GIVEN "VACCINATION INJECTIONS" – THAT IS, AN INJECTION IN THE THIGH OR BUTTOCKS – TO PREVENT HIM/HER FROM GETTING TETANUS, WHOOPING COUGH, DIPHTHERIA? (SOMETIMES GIVEN AT THE SAME TIME AS POLIO)	Yes .... 1 No... 2 DK 9	 2⇨Q.14 9⇨Q.14
13. HOW MANY TIMES?	No. of times .... __ __	
14. HAS (*name*) EVER BEEN GIVEN "VACCINATION INJECTIONS" – THAT IS, A SHOT IN THE ARM AT THE AGE OF 9 MONTHS OR OLDER - TO PREVENT HIM/HER FROM GETTING MEASLES?	Yes .... 1 No... 2 DK 9	
15. PLEASE TELL ME IF (*name*) HAS PARTICIPATED IN ANY OF THE FOLLOWING NATIONAL IMMUNIZATION DAYS: ***Date/type of campaign A*** ***Date/type of campaign B*** ***Date/type of campaign C*** ***Insert date and type of vaccination given in the most recent NID campaigns.***	 Y N DK ***Campaign A*** ....1 2 9 ***Campaign B***...................................1 2 9 ***Campaign C***...................................1 2 9	

GO TO NEXT MODULE ⇨

EA. no. __ __ __ Household no. __ __ __ Caretaker line no. __ __ Child line no. __ __

ANTHROPOMETRY MODULE		
After questionnaires for all children are complete, the measurer weighs and measures each child. *Record weight and length/height below, taking care to record the measurements on the correct questionnaire for each child. Check the child's name and line number on the HH listing before recording measurements.*		
1. Child's weight.	Kilograms (kg) .... ___ ___ . ___	
2. Child's length or height. *Check age of child:* ☐ *Child under 2 years old.* ⇨ *Measure length (lying down).* ☐ *Child age 2 or more years.* ⇨ *Measure height (standing up).*	Length (cm)　　Lying down................ 1 ___ ___ ___ . ___ Height (cm)　　Standing up................ 2 ___ ___ ___ . ___	
3. Measurer's identification code.	Measurer code......................... ___ ___ ___	
4. Result.	Measured .... 1 Not present .... 2 Refused .... 3 Other (*specify*) _____ 4	
5. Is there another child in the household who is eligible for measurement? ☐ *Yes.* ⇨ *Record measurements for next child.* ☐ *No.* ⇨ *End the interview with this household by thanking all participants for their cooperation. Gather together all questionnaires for this household and check that identification numbers are at the top of each page. Tally on the Household Information Panel the number of interviews completed.*		

Appendix E: Training schedule for enumerators

Time	Monday	Tuesday	Wednesday	Thursday	Friday
9:00 – 12:00	**Introduction** • Introduce team members • Training schedule • Explain administrative arrangements • Broad outline of survey procedure	**Household questionnaire** • Question-by-question discussion • Demonstration interview • Role-play interviews (every trainee) • How to give feedback to another enumerator regarding his/her interviewing technique. • Question and answer	**Women's questionnaire** • Question-by-question discussion • Demonstration interview • Question and answer	**Children's questionnaire** • Question-by-question discussion • Demonstration interview • Question and answer • Practice of anthropometric techniques (lunch may be delayed since this activity will take a good deal of time)	**All questionnaires** Enumerators each complete two entire interviews. Each enumerator conducts one interview in the presence of partner, and then each enumerator conducts one interview alone. All interviews to be conducted in HHs with both eligible women and children.
12:00 – 13:00	Lunch break				
13:00 - 16:30	**The job of the enumerator** • Interviewing techniques • Recording data and managing forms • Interviewing in a reliable way: translated questionnaires and key words • Demonstration of good/bad interviewing techniques • Daily wrap-up	**Practice interviewing in the community: the household questionnaire** • Each enumerator completes two household interviews. Enumerators work in pairs. • Return to training hall: demonstration of good, productive feedback session • Feedback on interviews • Daily wrap-up	**Practice interviewing in the community: the women's questionnaire** • Each enumerator completes two household interviews. Enumerators work in pairs. • Feedback on interviews • Daily wrap-up	**Practice interviewing in the community: the children's questionnaire** • Each enumerator completes two household interviews. Enumerators work in pairs. • Feedback on interviews • Daily wrap-up	**Survey procedures** • Reading maps and finding households • How to handle empty dwellings and refusals • Discuss the problem of enumerators influencing respondents' responses and other enumerator mistakes • Transition to data collection

Appendix F: Tables

Table 1: Number of households and women, and response rates, Sierra Leone, 2000

	Urban	Rural	Total
Sampled households	1253	2954	4207
Occupied households	1213	2808	4021
Completed households	1187	2729	3916
Household response rate	97.9	97.2	97.4
Eligible women	1773	3977	5750
Interviewed women	1633	3290	4923
Women response rate	92.1	82.7	85.6
Children under 5	782	2278	3060
Interviewed children under 5	776	1988	2764
Child response rate	99.2	87.3	90.3

Table 2: Age group distribution of household population by sex, Sierra Leone, 2000

		Male		Female	
		Number	Percent	Number	Percent
	0-4 yrs	1558	13.2	1561	12.3
	5-9 yrs	2036	17.2	2054	16.2
	10-14 yrs	1491	12.6	1426	11.3
	15-19 yrs	1265	10.7	1243	9.8
	20-24 yrs	832	7.0	948	7.5
Age group	**25-29 yrs**	816	6.9	983	7.8
	30-34 yrs	643	5.4	807	6.4
	35-39 yrs	658	5.6	958	7.6
	40-44 yrs	491	4.2	531	4.2
	45-49 yrs	507	4.3	310	2.4
	50 yrs +	1517	12.8	1839	14.5
	Total	11813	100.0	12660	100.0

Table 3a: Percentage of cases missing information for selected questions, Sierra Leone, 2000

	Percent missing	Number
Level of education	1.6	7245
Year of education	1.2	7249
Number of hours worked	.0	3717

Table 3b: Percentage of cases missing information for selected questions, Sierra Leone, 2000

	Percent missing	Number
Complete birth date	15.8	4923
Date of last tetanus toxoid injection	17.6	121
Ever been tested for HIV	1.7	2661

Table 3c: Percentage of cases missing information for selected questions, Sierra Leone, 2000

	Percent missing	Number
Complete birth date	3.2	2764
Diarrhoea in last 2 weeks	.2	2764
Weight	.0	2764
Height	9.3	2764

Table 4: Percent distribution of households by background characteristics, Sierra Leone, 2000

		Percent	Number	Unweighted
Region	**North**	35.6	1396	1200
	East	23.0	902	975
	South	19.7	771	817
	West	21.6	847	924
Area	**Urban**	29.7	1164	1187
	Rural	70.3	2752	2729
Number of HH members	**1**	2.8	109	117
	2-3	13.5	529	554
	4-5	23.8	933	960
	6-7	41.5	1627	1566
	8-9	6.9	269	273
	10+	11.5	449	446
Total		100.0	3916	3916

Table 4a: Percent distribution of households by background characteristics, Sierra Leone, 2000

	Percent	Number	Unweighted
At least one child age < 15	85.7	3905	3904
At least one child age < 5	53.9	3905	3904
At least one woman age 15-49	86.8	3905	3904

Table 5: Percent distribution of women 15-49 by background characteristics, Sierra Leone, 2000

		Percent	Number	Unweighted
Region	**North**	38.8	1911	1411
	East	24.0	1180	1410
	South	16.0	788	782
	West	21.2	1044	1318
Area	**Urban**	30.4	1497	1633
	Rural	69.6	3426	3288
Age	**15-19**	19.4	952	988
	20-24	16.1	792	820
	25-29	17.1	843	848
	30-34	14.2	700	695
	35-39	17.8	875	828
	40-44	9.5	467	453
	45-49	5.7	279	273
Marital status	**Currently married**	79.3	3901	3778
	Formerly married	5.9	288	295
	Never married	14.9	731	844
Ever given birth	**Yes**	78.9	3882	3797
	No	21.1	1039	1121
Woman's education level	**None**	77.5	3815	3662
	Primary	5.2	258	292
	Secondary +	16.8	829	944
	Non-standard curriculum	.1	5	6
Total		100.0	4923	4921

Table 6: Percent distribution of children under 5 by background characteristics, Sierra Leone, 2000

		Percent	Number	Unweighted
Sex	**Male**	49.8	1377	1382
	Female	50.2	1386	1387
Region	**North**	47.0	1300	1050
	East	23.0	636	757
	South	12.4	342	361
	West	17.6	485	601
Area	**Urban**	25.2	697	778
	Rural	74.8	2067	1991
Age	**< 6 months**	9.6	262	270
	6-11 months	9.5	261	272
	12-23 months	19.9	547	550
	24-35 months	20.9	573	574
	36-47 months	22.8	626	614
	48-59 months	17.3	476	474
Mother's education level	**None**	84.3	2330	2269
	Primary	3.9	108	124
	Secondary	11.6	321	372
	Missing/DK	.2	5	4
Total		100.0	2764	2769

Table 7: Mean number of children ever born (CEB) and proportion dead by mother's age, Sierra Leone, 2000

		Mean number of CEB	Proportion dead	Number of women
	15-19	.492	.272	952
	20-24	1.758	.245	792
	25-29	3.044	.297	843
Age	**30-34**	4.582	.271	700
	35-39	5.968	.304	875
	40-44	6.626	.308	467
	45-49	7.025	.338	279
	Total	3.737	.255	615

Table 9: Percentage of children aged 36-49 months who are attending some form of organized early childhood education programme, Sierra Leone, 2000

		Attending programme	Number of children
Sex	**Male**	12.0	527
	Female	11.5	576
Region	**North**	4.3	562
	East	14.5	234
	South	10.4	117
	West	31.2	189
Area	**Urban**	21.3	265
	Rural	8.7	838
Age	**36-47 months**	7.7	626
	48-59 months	17.0	476
Mother's education level	**None**	8.0	941
	Primary	24.9	31
	Secondary	36.2	127
	Missing/DK	.0	4
Total		11.7	1103

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Table 10: Percentage of children entering first grade of primary school who eventually reach grade 5, Sierra Leone, 2000

		Percent in grade 1 reaching grade 2	Percent in grade 2 reaching grade 3	Percent in grade 3 reaching grade 4	Percent in grade 4 reaching grade 5	Percent who reach grade 5 of those who enter grade 1
S e x	**Male**	95.7	96.7	94.0	94.8	82.4
	Female	96.9	95.0	98.1	96.0	86.7
R e g i o n	**North**	100	95.6	100	79.7	76.2
	East	96.8	93.9	97.8	94.1	83.7
	South	89.9	93.6	88.7	92.0	68.6
	West	99.5	98.6	99.2	100	97.3
A r e a	**Urban**	99.5	97.6	98.6	97.4	93.3
	Rural	93.9	94.3	92.4	93.0	76.1
	Total	96.7	95.9	95.5	95.2	84.7

World Summit for Children Goal => Number 6

Table 11: Percentage of children of primary school age attending primary school, Sierra Leone, 2000

| | | Sex | | | | Total | |
| | | Male | | Female | | Attending | Number |
		% Attending	Number	% Attending	Number		
Region	**North**	31.4	1284	25.3	1193	28.5	2478
	East	39.2	742	31.5	743	35.3	1489
	South	48.1	498	48.8	451	48.4	949
	West	76.7	535	74.1	566	75.4	1101
Area	**Urban**	64.7	792	62.3	798	63.5	1590
	Rural	36.7	2267	31.5	2155	34.1	4428
Age	**5**	25.3	472	22.6	495	23.9	969
	6	42.5	420	35.1	440	38.7	859
	7	44.5	410	42.7	400	43.6	812
	8	46.3	398	42.9	389	44.6	788
	9	51.7	336	50.8	330	51.2	668
	10	47.1	444	42.7	388	45.1	832
	11	47.7	212	52.5	214	50.1	426
	12	53.3	367	42.0	297	48.3	664
Total		44.0	3059	39.8	2953	41.9	6017

World Summit for Children Goal => Number 6

Table 12: Percentage of the population aged 15 years and older that is literate, Sierra Leone, 2000

| | | Sex | | | | | | Total | | |
| | | Male | | | Female | | | | | |
		Literate	Not known	Number	Literate	Not known	Number	Literate	Not known	Number
Region	**North**	22.7	.7	2372	7.4	.8	2917	14.3	.8	5291
	East	30.7	1.4	1691	10.4	2.3	1861	20.0	1.9	3554
	South	38.1	.4	1219	19.2	.7	1292	28.4	.6	2512
	West	80.2	.7	1446	58.6	.5	1548	69.0	.6	2994
Area	**Urban**	66.4	.7	2149	44.5	.5	2248	55.2	.6	4397
	Rural	27.4	.9	4579	10.5	1.4	5370	18.2	1.2	9954
Age	**15-24**	46.9	1.2	2097	29.9	1.2	2191	38.2	1.2	4288
	25-34	44.9	.8	1459	23.2	1.0	1789	33.0	.9	3248
	35-44	43.4	.8	1149	18.2	.6	1490	29.2	.7	2639
	45-54	34.5	.5	889	10.4	1.5	1175	20.7	1.0	2065
	55-64	24.3	.7	552	9.1	1.1	598	16.4	.9	1150
	65+	17.7	.5	583	11.8	1.9	376	15.3	1.2	961
Total		39.8	.8	6728	20.5	1.1	7619	29.6	1.0	14351

World Summit for Children Goal => Number 7

Table 13: Percentage of the population with access to safe drinking water, Sierra Leone, 2000

		Main source of water													Total	Total with safe drinking water	Number of persons
		Piped into dwelling	Piped into yard or plot	Public tap	Tubewell/ borehole with pump	Protected dug well	Protected spring	Rain water collection	Bottled water	Unprotected dug well	Unprotected spring	Pond, river or stream	Tanker truck vendor	Other			
Region	**North**	.3	.4	3.0	16.1	8.9	.9	.0	.1	14.4	4.1	50.7	.1	.0	100.0	29.7	9682
	East	1.1	3.1	15.6	13.2	22.5	2.7	.2	.3	24.4	5.1	8.7	.0	2.1	100.0	58.4	5925
	South	.1	.2	11.5	20.3	22.4	7.5	.2	.2	5.8	3.2	26.6	.0	.3	100.0	61.5	4034
	West	8.7	31.9	41.4	.7	7.1	.8	.0	.0	1.0	1.5	2.8	1.3	1.6	100.0	90.3	4930
Area	**Urban**	7.1	22.7	28.1	2.6	12.5	1.5	.2	.0	9.3	2.2	9.8	.9	2.1	100.0	74.5	7144
	Rural	.1	1.0	9.8	17.3	14.6	2.8	.0	.2	14.2	4.3	34.1	.0	.4	100.0	45.6	17427
Total		2.2	7.3	15.1	13.0	14.0	2.4	.1	.1	12.7	3.7	27.0	.3	.9	100.0	54.0	24571

World Summit for Children Goal => Number 4

Table 14: Percentage of the population with access to sanitary means of excreta disposal, Sierra Leone, 2000

		Type of toilet facility								Total	Total with sanitary means of excreta disposal	Number of persons
		Flush to sewage system/ septic tank	Pour flush latrine	Improved pit latrine	Tradition al pit latrine	Open pit	Buck et	Other	No facilities / bush/ field			
R e g i o n	**North**	.8	1.0	2.4	48.9	24.8	.2	1.1	20.8	100.0	53.0	9682
	East	.2	1.0	2.8	57.6	4.2	.0	23.9	10.4	100.0	61.6	5925
	South	.4	.8	10.9	39.3	6.2	.0	11.0	31.4	100.0	51.0	4034
	West	17.1	2.7	6.0	69.4	2.5	.4	1.8	.1	100.0	94.8	4930
A r e a	**Urban**	12.6	2.7	3.0	69.9	3.8	.1	4.4	3.4	100.0	88.2	7144
	Rural	.3	.7	5.3	46.8	15.8	.2	10.0	21.0	100.0	52.8	17427
	Total	3.9	1.3	4.6	53.5	12.3	.2	8.4	15.9	100.0	63.1	24571

World Summit for Children Goal => Number 5

Table 15: Percentage of under-five children with missing height or weight, Sierra Leone, 2000

		Missing height or weight	Number of children
Sex	**Male**	9.7	1377
	Female	11.2	1386
Region	**North**	16.1	1300
	East	10.8	636
	South	.8	342
	West	1.5	485
Area	**Urban**	5.2	697
	Rural	12.2	2067
Age	**< 6 months**	33.8	262
	6-11 months	10.3	261
	12-23 months	8.5	547
	24-35 months	7.6	573
	36-47 months	8.1	626
	48-59 months	6.5	476
Mother's education level	**None**	11.0	2330
	Primary	9.1	108
	Secondary	7.3	321
Total		10.5	2764

Table 15a: Percentage of under-five children who are severely or moderately undernourished, Sierra Leone, 2000

		Weight for age: -2 SD	Weight for age: -3 SD	Height for age: -2 SD	Height for age: -3 SD	Weight for height: -2 SD	Weight for height: -3 SD	Number of children
Sex	**Male**	30.0	10.6	37.1	18.1	11.1	2.2	1120
	Female	24.5	6.7	30.7	13.5	8.5	1.6	1128
Region	**North**	29.0	8.5	36.2	16.5	10.8	1.7	1006
	East	31.9	12.9	36.9	19.2	8.8	2.3	502
	South	23.5	9.8	40.0	21.1	8.1	2.0	281
	West	20.4	3.7	21.7	7.2	9.9	1.8	458
Area	**Urban**	22.5	5.9	28.0	10.7	10.2	1.6	617
	Rural	29.0	9.7	36.1	17.7	9.7	2.0	1632
Age	**< 6 months**	7.6	2.4	11.4	4.0	7.3	1.2	140
	6-11 months	25.9	9.3	18.6	9.3	19.2	2.6	206
	12-23 months	34.1	11.1	33.5	13.3	17.0	2.1	448
	24-35 months	28.4	10.2	31.5	15.1	8.9	1.7	489
	36-47 months	26.9	6.6	43.0	19.3	6.3	2.3	537
	48-59 months	25.2	8.5	39.1	21.1	3.7	1.2	421
Mother's education level	**None**	28.4	9.4	36.1	16.7	10.2	2.0	1874
	Primary	32.2	10.7	29.6	13.6	9.1	1.9	89
	Secondary	16.9	3.4	19.8	9.0	7.4	.9	281
	Total	27.2	8.7	33.9	15.8	9.8	1.9	2248

Table 16: Percent of living children by breastfeeding status, Sierra Leone, 2000

		Exclusive breastfeeding		Solid foods		Breastfed		Breastfed	
		Children 0-3 months	Number of children	Children 6-9 months	Number of children	Children 12-15 months	Number of children	Children 20-23 months	Number of children
Sex	**Male**	2.0	100	57.7	97	84.8	132	44.7	76
	Female	2.9	70	46.5	86	85.2	128	57.7	78
Region	**North**	4.2	48	37.3	59	88.1	109	68.9	61
	East	1.7	59	57.4	61	86.7	75	59.4	32
	South	.0	28	64.0	25	71.8	39	31.8	22
	West	2.9	35	60.5	38	86.5	37	28.2	39
Area	**Urban**	2.2	45	47.9	48	87.5	56	31.9	47
	Rural	2.4	125	54.1	135	84.3	204	59.8	107
Mother's education level	**None**	2.9	140	50.7	144	86.1	216	58.1	124
	Primary	.0	9	60.0	10	92.9	14	40.0	5
	Secondary	.0	21	58.6	29	72.4	29	20.0	25
Total		2.4	170	52.5	183	85.0	260	51.3	154

World Summit for Children Goal => Number 16

Table 17: Percentage of households consuming adequately iodized salt, Sierra Leone, 2000

		Percent of households with no salt	Percent of households in which salt was tested	Result of test		Number of households interviewed
				< 15 PPM	15+ PPM	Total
Region	**North**	6.2	93.8	95.3	4.7	1396
	East	11.2	88.8	53.4	46.6	902
	South	4.2	95.8	62.8	37.2	771
	West	8.4	91.6	82.2	17.8	847
Area	**Urban**	7.3	92.7	72.3	27.7	1164
	Rural	7.5	92.5	78.5	21.5	2752
	Total	7.4	92.6	76.6	23.4	3916

World Summit for Children Goal => Number 14

Table 18: Percent distribution of children aged 6-59 months by whether they received a high dose of Vitamin A supplement in the last 6 months, Sierra Leone, 2000

		Received: within last 6 months	Received: prior to last 6 months	Received: not sure when	Not sure if received	Not received	Total	Number of children
Sex	**Male**	58.0	1.7	1.6	1.8	37.0	100.0	1232
	Female	58.4	2.1	1.2	2.6	35.7	100.0	1262
Region	**North**	59.7	1.3	1.3	2.4	35.3	100.0	1196
	East	71.4	.9	1.2	1.7	24.8	100.0	555
	South	40.0	.3	2.2	2.8	54.7	100.0	303
	West	50.3	5.7	1.3	1.8	40.9	100.0	440
Area	**Urban**	58.8	4.2	1.3	1.2	34.6	100.0	629
	Rural	58.1	1.1	1.4	2.5	36.9	100.0	1865
Age	**6-11 months**	62.4	.6	.3	.7	36.0	100.0	261
	12-23 months	59.1	1.0	.9	1.2	37.8	100.0	547
	24-35 months	52.7	1.9	1.9	2.9	40.6	100.0	573
	36-47 months	58.0	2.5	1.2	3.4	34.9	100.0	626
	48-59 months	61.0	2.7	2.3	1.8	32.2	100.0	476
Mother's education level	**None**	58.2	1.5	1.3	2.3	36.6	100.0	2104
	Primary	55.8	.9	1.7	2.3	39.4	100.0	91
	Secondary	58.5	5.2	1.6	1.2	33.4	100.0	294
	Total	58.2	1.9	1.4	2.2	36.3	100.0	2494

World Summit for Children Goal => Number 15

Table 19: Percentage of women with a birth in the last 12 months by whether they received a high dose of Vitamin A supplement before the infant was 8 weeks old, Sierra Leone, 2000

		Received Vitamin A supplement	Not sure if received	Number of women
Region	**North**	24.5	2.1	498
	East	55.4	2.1	239
	South	26.7	3.1	125
	West	26.6	1.6	101
Area	**Urban**	37.7	1.2	198
	Rural	31.3	2.4	766
Woman's education level	**None**	31.8	2.4	833
	Primary	41.3	1.7	47
	Secondary +	36.2	.0	84
Total		32.6	2.2	964

World Summit for Children Goal => Number 15

Table 20: Percentage of live births in the last 12 months that weighed below 2500 grams at birth, Sierra Leone, 2000

		Estimated number of live births below 2500 grams
Region	**North**	50.1
	East	55.9
	South	55.2
	West	49.2
Area	**Urban**	52.1
	Rural	52.6
Woman's education level	**None**	51.9
	Primary	56.2
	Secondary +	55.5
	Total	52.5

World Summit for Children Goal => Number 12

Table 20: Percentage of live births in the last 12 months that weighed below 2500 grams at birth, Country, Year

		Percent of live births weighed at birth	Number of live births
Region	**North**	.8	498
	East	3.2	239
	South	12.3	125
	West	29.7	101
Area	**Urban**	15.5	198
	Rural	3.4	766
Woman's education level	**None**	4.7	833
	Primary	9.0	47
	Secondary +	16.3	84
	Total	5.9	964

World Summit for Children Goal => Number 12

Table 21: Percentage of children 12-23 months immunized against childhood diseases at any time before the survey, Sierra Leone, 2000

	Percentage of children who received										No. Of Children
	BCG	DPT1	DPT2	DPT3	POLIO1	POLIO2	POLIO3	Measles	All	None	
Vaccinated at any time before the survey according to: Vaccination card	34.6	33.4	32.0	32.2	29.5	29.7	29.9	32.6	27.5		547
Mother's report	38.2	34.9	25.8	13.3	52.4	46.2	31.4	29.1	11.8	13.0	547
Either	72.8	68.3	57.8	45.5	81.9	75.9	61.3	61.7	39.3	87.0**	547

** Has some vaccinations through mothers' reports

Table 22: Percentage of children age 12-23 months currently vaccinated against childhood diseases, Sierra Leone, 2000

		BCG	DPT 1	DPT 2	DPT 3	Polio 1	Polio 2	Polio 3	Measles	All	None	% with health card	Number of children
Sex	**Male**	75.9	71.2	62.9	46.9	82.4	77.0	62.9	64.7	41.5	12.1	35.5	262
	Female	70.0	65.7	55.1	44.2	81.5	74.8	59.7	59.0	37.2	13.8	35.1	286
Region	**North**	62.8	60.9	49.7	36.3	79.9	74.4	60.6	51.1	30.7	16.4	27.5	257
	East	71.8	64.3	56.1	45.9	81.7	70.5	52.1	57.2	41.0	14.7	35.3	121
	South	88.8	85.1	77.6	59.2	83.8	80.1	65.3	81.4	50.6	8.7	43.3	77
	West	88.7	80.0	72.2	59.1	86.1	83.5	71.3	80.9	51.3	5.2	50.4	93
Area	**Urban**	89.8	82.6	72.3	53.6	89.1	85.0	70.2	77.1	46.8	6.5	42.9	131
	Rural	67.5	63.8	54.6	43.0	79.7	73.0	58.4	56.9	36.9	15.1	32.9	417
Mother's education level	**None**	70.2	65.8	55.2	43.4	81.4	75.0	60.0	58.9	37.5	13.4	34.1	454
	Primary	89.1	93.7	87.2	72.5	93.7	90.5	80.4	79.2	56.8	6.3	49.4	26
	Secondary	84.0	75.4	71.8	48.7	80.5	75.7	61.9	73.7	43.9	13.5	37.6	67
Total		72.8	68.3	58.8	45.5	81.9	75.9	61.2	61.7	39.3	13.0	35.3	547

Table 23: Percentage of under-five children with diarrhea in the last two weeks and treatment with ORS or ORT, Sierra Leone, 2000

		Had diarrhea in last two weeks	Number of children under 5	Breast milk	Gruel	Local acceptable	ORS packet	Other milk or infant formula	Water with feeding	Any recommended treatment	No treatment	Number of children with diarrhea
Sex	**Male**	27.3	1377	38.3	16.1	20.4	42.4	10.2	71.0	89.2	10.8	376
	Female	23.3	1386	38.3	12.5	17.1	41.1	9.0	59.2	82.4	17.6	323
Region	**North**	28.0	1300	40.6	13.4	21.2	29.1	6.4	75.6	86.7	13.3	364
	East	27.4	636	38.2	6.8	18.3	48.7	7.6	55.6	76.6	23.4	175
	South	15.3	342	41.6	9.2	16.4	63.8	12.5	47.1	92.7	7.3	52
	West	22.3	485	29.1	32.8	13.4	62.7	22.4	56.7	96.3	3.7	108
Area	**Urban**	21.6	697	34.4	25.9	18.9	54.4	19.0	64.0	93.1	6.9	151
	Rural	26.5	2067	39.4	11.3	18.9	38.3	7.1	65.9	84.2	15.8	548
Age	**< 6 months**	17.0	262	77.9	12.4	11.9	32.4	5.7	60.3	86.9	13.1	45
	6-11 months	35.5	261	71.7	17.1	14.5	47.1	18.5	60.5	85.9	14.1	93
	12-23 months	31.1	547	65.9	15.2	19.6	35.8	11.2	69.1	87.4	12.6	170
	24-35 months	26.7	573	25.7	12.4	16.1	46.5	7.0	64.3	87.1	12.9	153
	36-47 months	19.9	626	5.8	14.5	24.2	45.6	7.0	63.6	80.4	19.6	125
	48-59 months	22.3	476	3.2	15.4	22.6	39.5	8.7	70.9	88.1	11.9	106
Mother's education level	**None**	26.1	2330	37.8	13.6	18.6	40.4	8.2	66.0	85.4	14.6	607
	Primary	22.0	108	42.9	17.2	29.3	39.4	14.6	61.1	93.2	6.8	24
	Secondary	20.8	321	41.9	21.2	18.2	55.9	21.5	63.7	91.0	9.0	67
	Total	25.3	2764	38.3	14.4	18.9	41.8	9.7	65.5	86.1	13.9	699

Table 24: Percentage of under-five children with diarrhea in the last two weeks who took increased fluids and continued to feed during the episode, Sierra Leone, 2000

		Had diarrhea in last two weeks	Number of children under 5	Drank more	Drank the same or less	Ate somewhat less, same or more	Ate much less or none	Received increased fluids and continued	Number of children with diarrhea
Sex	**Male**	27.3	1377	57.0	38.5	45.5	51.9	29.4	376
	Female	23.3	1386	54.2	38.5	46.1	49.7	27.3	323
Region	**North**	28.0	1300	61.0	34.1	54.9	42.8	35.5	364
	East	27.4	636	40.8	52.7	36.1	58.4	17.7	175
	South	15.3	342	56.4	36.3	29.1	69.1	16.4	52
	West	22.3	485	61.9	31.3	38.8	57.5	27.6	108
Area	**Urban**	21.6	697	55.9	40.4	46.1	51.8	25.1	151
	Rural	26.5	2067	55.7	38.0	45.7	50.7	29.3	548
Age	**< 6 months**	17.0	262	40.0	53.4	38.6	56.8	14.2	45
	6-11 months	35.5	261	45.6	47.3	38.3	56.7	18.3	93
	12-23 months	31.1	547	58.2	37.8	45.5	51.8	29.3	170
	24-35 months	26.7	573	59.0	34.5	51.1	47.3	35.3	153
	36-47 months	19.9	626	53.1	39.0	44.0	52.8	26.0	125
	48-59 months	22.3	476	66.4	30.8	52.3	44.8	36.6	106
Mother's education level	**None**	26.1	2330	56.2	37.8	46.2	50.7	29.1	607
	Primary	22.0	108	46.6	53.4	47.2	49.1	29.5	24
	Secondary	20.8	321	55.3	39.8	42.0	54.4	22.4	67
Total		25.3	2764	55.7	38.5	45.8	50.9	28.4	699

World Summit for Children Goal => Number 23

Table 25: Percentage of under-five children with acute respiratory infection in the last two weeks and treatment by health providers, Sierra Leone, 2000

		Had acute respitory infection	Number of children under 5	Hospital	Health centre	Dispensary	Village health worker	MCH clinic	Mobile/outreach clinic	Private physician	Traditional healer	Other	Any appropriate provider	Number of children with ARI
Sex	**Male**	8.6	1377	18.3	19.4	8.7	5.4	1.0	2.9	2.1	1.0	3.4	52.1	119
	Female	8.7	1386	15.2	24.5	4.7	4.2	2.3	1.7	.7	2.0	4.9	48.4	121
Region	**North**	10.8	1300	16.7	15.8	6.8	5.1	1.7	.8	.0	2.5	3.4	40.4	141
	East	8.8	636	4.1	38.0	9.9	6.0	2.9	6.2	4.3	.0	2.9	68.4	56
	South	7.8	342	21.0	28.7	3.6	3.6	.0	.0	3.6	.0	10.2	53.3	27
	West	3.5	485	52.4	9.5	.0	.0	.0	4.8	.0	.0	4.8	66.7	17
Area	**Urban**	5.7	697	27.9	16.8	9.7	1.9	1.9	2.0	3.9	.0	10.9	57.2	39
	Rural	9.7	2067	14.5	23.0	6.1	5.3	1.6	2.3	.9	1.8	2.8	48.9	201
Age	**< 6 months**	6.2	262	32.7	20.1	12.1	5.4	5.4	5.4	9.4	.0	5.6	80.3	16
	6-11 months	13.1	261	20.2	33.8	2.5	.0	.0	2.5	.0	.0	.0	53.3	34
	12-23 months	10.0	547	15.6	25.7	10.7	7.5	.0	.0	1.8	2.2	1.4	59.5	55
	24-35 months	9.1	573	12.0	14.3	4.6	4.6	2.3	1.6	.0	.0	10.9	34.7	52
	36-47 months	6.0	626	11.7	25.3	7.6	7.8	3.2	3.2	2.3	3.2	2.3	51.5	37
	48-59 months	8.8	476	21.1	16.9	5.1	2.8	1.8	4.2	.0	2.8	4.1	46.9	42
Mother's education level	**None**	9.0	2330	15.2	22.5	6.5	5.1	1.9	2.2	.9	1.7	3.9	48.6	209
	Primary	9.9	108	.0	23.2	8.1	.0	.0	.0	14.1	.0	.0	45.4	11
	Secondary	6.4	321	40.9	16.6	8.0	4.2	.0	4.2	.0	.0	8.4	69.2	20
	Total	8.7	2764	16.7	22.0	6.7	4.8	1.7	2.3	1.4	1.5	4.1	50.2	240

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Table 26: Percentage of children 0-59 months of age reported ill during the last two weeks who received increased fluids and continued feeding, Sierra Leone, 2000

		Reported illness in last two weeks	Number of children under 5	Drank more	Drank the same or less	Ate somewhat less, same or more	Ate much less or none	Received increased fluids and continued eating	Number of sick children
Sex	**Male**	62.9	1377	55.5	42.6	49.6	49.3	30.2	866
	Female	62.1	1386	55.0	42.3	47.4	51.1	28.8	861
Region	**North**	66.6	1300	59.3	38.7	57.2	41.8	36.6	866
	East	64.8	636	42.0	55.3	40.0	57.7	18.7	412
	South	50.9	342	58.6	39.2	33.8	65.7	22.4	174
	West	56.6	485	60.3	37.1	42.9	55.6	27.9	274
Area	**Urban**	57.2	697	56.0	42.6	47.9	51.3	26.8	399
	Rural	64.3	2067	55.0	42.4	48.7	49.8	30.3	1328
Age	**< 6 months**	51.6	262	32.4	65.4	43.3	55.1	12.3	135
	6-11 months	72.4	261	49.8	46.7	46.0	51.5	26.2	189
	12-23 months	68.2	547	57.9	40.3	50.2	48.5	31.5	373
	24-35 months	61.3	573	57.7	39.5	46.3	53.0	29.3	351
	36-47 months	58.5	626	54.6	42.7	50.1	48.8	30.8	367
	48-59 months	62.7	476	63.4	35.6	50.9	48.1	35.6	298
Mother's education level	**None**	62.9	2330	54.2	43.4	49.1	49.7	29.8	1466
	Primary	62.2	108	55.0	45.0	49.3	49.4	29.1	67
	Secondary	60.1	321	63.5	34.8	44.0	54.7	27.4	193
	Total	62.5	2764	55.2	42.4	48.5	50.2	29.5	1727

Monitoring IMCI indicator

Table 27: Percentage of caretakers of children 0-59 months who know at least 2 signs for seeking care immediately, Sierra Leone, 2000

		Not able to drink/breastfeed	Becomes sicker	Develops a fever	Has fast breathing	Has difficult breathing	Has blood in stool	Is drinking poorly	Knows at least two signs	Number of caretakers
Region	**North**	6.8	53.6	76.9	26.3	26.3	41.9	8.2	82.0	1300
	East	33.1	34.5	91.2	35.6	46.2	66.8	9.7	90.8	636
	South	4.4	39.7	90.3	29.4	30.9	59.3	3.4	76.2	342
	West	6.7	26.0	80.7	13.6	9.5	16.5	3.0	47.3	485
Area	**Urban**	15.3	32.6	86.5	21.2	20.6	32.4	5.2	66.5	697
	Rural	11.6	46.0	81.1	28.4	31.2	49.7	7.7	80.9	2067
Mother's education level	**None**	12.6	43.6	82.6	27.9	29.4	46.9	7.6	79.6	2330
	Primary	18.2	45.3	86.4	19.1	33.1	43.0	2.3	69.5	108
	Secondary	10.4	34.3	80.5	19.6	20.3	34.7	4.9	62.5	321
Total		12.5	42.6	82.5	26.6	28.5	45.3	7.0	77.2	2764

Monitoring IMCI and Malaria Indicator

Table 28: Percentage of children 0-59 months of age who slept under an insecticide-impregnated bednet during the previous night, Sierra Leone, 2000

		Slept under a bednet			Bednet treated		
		Yes	**No**	**Number of children**	**Yes**	**No**	**Children who slept under a bednet**
Sex	**Male**	16.4	82.7	1377	10.9	82.4	229
	Female	14.3	84.7	1386	9.0	84.9	197
Region	**North**	17.5	81.5	1300	1.9	92.8	227
	East	13.2	85.3	636	17.3	77.7	85
	South	20.0	79.4	342	8.1	85.0	69
	West	8.8	90.5	485	40.7	44.4	44
Area	**Urban**	12.7	86.0	697	30.1	63.6	89
	Rural	16.2	82.9	2067	4.7	88.8	336
Age	**< 6 months**	17.3	82.7	262	15.4	73.1	44
	6-11 months	16.0	82.9	261	12.0	79.8	42
	12-23 months	15.0	83.4	547	7.8	85.6	82
	24-35 months	15.7	83.1	573	9.2	85.1	91
	36-47 months	15.7	83.2	626	10.4	86.7	99
	48-59 months	13.3	86.1	476	8.6	83.0	66
Total		15.3	83.7	2764	10.0	83.5	423

Monitoring IMCI and Malaria Indicator

**Table 29: Percentage of children 0-59 months of age who were ill with fever in the last two weeks
who received anti-malarial drugs, Sierra Leone, 2000**

		Had a fever in last two weeks	Number of children under 5	Paracetamol	Chloroquine	Fansidar	Other	Don't know	Any appropriate anti-malarial drug	Number of childern with fever
Sex	**Male**	46.1	1377	66.0	60.6	4.2	41.8	7.5	61.5	635
	Female	45.5	1386	66.8	59.2	4.5	43.8	6.0	60.4	630
Region	**North**	49.8	1300	57.3	52.7	1.5	43.0	10.6	53.2	647
	East	48.1	636	73.4	71.4	10.0	34.1	3.0	71.9	306
	South	35.3	342	82.7	68.8	2.3	53.3	1.6	69.6	121
	West	39.4	485	75.5	60.3	6.3	49.4	3.0	64.1	191
Area	**Urban**	43.9	697	77.8	58.6	6.9	46.7	7.1	61.0	306
	Rural	46.4	2067	62.8	60.3	3.5	41.5	6.6	60.9	960
Age	**< 6 months**	34.0	262	56.3	48.5	2.8	35.1	8.7	48.5	89
	6-11 months	50.7	261	78.3	67.1	2.0	40.8	2.2	67.1	132
	12-23 months	52.2	547	61.6	53.4	3.3	47.5	9.9	54.7	286
	24-35 months	45.9	573	65.9	60.5	6.6	38.4	8.1	61.6	263
	36-47 months	42.9	626	69.6	63.4	4.0	43.0	4.8	65.0	269
	48-59 months	45.7	476	65.7	63.4	5.3	44.9	5.7	64.5	218
Mother's education level	**None**	46.4	2330	65.1	58.9	4.2	41.6	6.8	59.7	1081
	Primary	53.5	108	73.1	66.3	10.5	43.8	9.2	69.7	58
	Secondary	39.3	321	74.2	65.5	2.6	52.0	5.4	67.3	126
	Total	45.8	2764	66.4	59.9	4.3	42.8	6.7	60.9	1266

Monitoring IMCI and Malaria Indicator

Table 30: Percentage of women aged 15-49 who know the main ways of preventing HIV transmission, Sierra Leone, 2000

		Heard of AIDS	Have only one faithful uninfected sex partner	Using a condom every time	Abstaining from sex	Knows all three ways	Knows at least one way	Doesn't know any way	Number of women
Region	**North**	18.4	5.7	4.2	3.8	1.8	7.4	92.6	1911
	East	77.4	50.3	47.0	48.7	43.0	52.7	47.3	1180
	South	61.2	26.7	24.0	25.5	19.5	29.9	70.1	788
	West	88.2	48.2	47.9	44.8	32.8	58.7	41.3	1044
Area	**Urban**	78.0	43.8	42.8	40.9	31.5	52.0	48.0	1497
	Rural	43.8	22.2	19.9	20.5	16.5	24.3	75.7	3426
Age	**15-19**	58.2	31.2	29.8	30.1	23.7	36.2	63.8	952
	20-24	59.8	33.0	31.3	29.0	23.5	37.4	62.6	792
	25-29	57.3	31.7	30.9	29.4	24.6	36.0	64.0	843
	30-34	53.3	28.6	26.2	26.7	21.2	32.0	68.0	700
	35-39	48.2	22.4	20.0	20.6	15.1	25.9	74.1	875
	40-44	47.6	24.7	23.0	23.9	19.1	27.3	72.7	467
	45-49	47.1	26.6	22.8	25.2	17.5	30.8	69.2	279
Woman's education level	**None**	45.2	22.3	20.0	20.5	16.5	24.7	75.3	3815
	Primary	78.3	41.4	38.9	38.1	30.6	46.8	53.2	258
	Secondary +	87.8	53.8	54.2	51.5	38.8	65.1	34.9	829
	Non-standard curriculum	100.0	69.8	45.3	84.9	45.3	84.9	15.1	5
Total		54.2	28.7	26.9	26.7	21.1	32.7	67.3	4923

Table 31: Percentage of women aged 15-49 who correctly identify misconceptions about HIV/AIDS, Sierra Leone, 2000

		Heard of AIDS	AIDS can't be transmitted by supernatural means	AIDS can't be transmitted by mosquito bites	A healthy looking person can be infected	Knows all three misconceptions	Knows at least one misconception	Doesn't correctly identify any misconception	Number of women
Region	North	18.4	8.5	5.3	8.7	3.5	11.4	88.6	1911
	East	77.4	50.1	44.9	50.7	37.0	59.0	41.0	1180
	South	61.2	31.1	19.5	23.2	10.3	37.1	62.9	788
	West	88.2	61.8	47.4	62.1	33.7	77.6	22.4	1044
Area	Urban	78.0	53.2	42.9	53.1	32.5	64.6	35.4	1497
	Rural	43.8	24.8	18.6	23.3	13.1	30.6	69.4	3426
Age	15-19	58.2	36.9	29.2	34.4	21.5	43.8	56.2	952
	20-24	59.8	37.5	29.2	36.1	21.3	46.2	53.8	792
	25-29	57.3	36.4	29.5	36.8	22.5	44.7	55.3	843
	30-34	53.3	32.4	24.7	31.0	16.8	40.6	59.4	700
	35-39	48.2	27.4	20.0	26.9	13.6	34.7	65.3	875
	40-44	47.6	28.3	24.2	29.2	18.9	34.8	65.2	467
	45-49	47.1	30.6	20.7	27.4	15.2	35.9	64.1	279
Woman's education level	None	45.2	25.2	19.3	23.7	13.7	31.0	69.0	3815
	Primary	78.3	47.5	33.6	44.4	22.9	60.2	39.8	258
	Secondary +	87.8	66.2	53.8	68.5	41.6	80.3	19.7	829
	Non-standard curriculum	100.0	84.9	84.9	69.8	69.8	84.9	15.1	5
Total		54.2	33.4	26.0	32.4	19.0	41.0	59.0	4923

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Table 32: Percentage of women aged 15-49 who correctly identify means of HIV transmission from mother to child, Sierra Leone, 2000

		Know AIDS can be transmitted from mother to child	Transmission during pregnancy possible	Transmission at delivery possible	Transmission through breastmilk possible	Knows all three	Did not know any specific way	Number of women
Region	**North**	9.2	8.2	7.1	7.8	6.3	91.1	1911
	East	58.9	57.2	57.0	55.4	53.0	41.6	1180
	South	20.5	19.0	16.8	18.3	15.3	79.6	788
	West	59.1	56.2	50.1	50.2	44.0	41.7	1044
Area	**Urban**	51.5	48.6	44.3	44.6	39.6	49.3	1497
	Rural	25.6	24.5	23.3	23.4	21.4	74.6	3426
Age	**15-19**	36.4	34.0	31.4	32.4	28.4	64.3	952
	20-24	37.7	36.7	33.8	33.8	30.9	62.5	792
	25-29	36.6	34.6	32.6	32.7	29.5	63.8	843
	30-34	30.7	29.1	25.9	26.3	22.7	69.6	700
	35-39	29.6	27.8	26.9	26.5	24.5	71.3	875
	40-44	27.8	27.0	25.6	25.5	23.5	72.2	467
	45-49	30.7	30.4	27.8	28.1	26.2	69.6	279
Woman's education level	**None**	26.3	25.0	23.9	24.2	22.2	74.1	3815
	Primary	47.4	45.9	43.5	44.5	40.2	52.6	258
	Secondary +	61.7	58.5	51.6	50.8	44.2	39.0	829
	Non-standard curriculum	60.4	60.4	60.4	60.4	60.4	39.6	5
	Total	33.5	31.9	29.7	29.9	26.9	66.9	4923

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Table 33: Percentage of women aged 15-49 who express a discriminatory attitude towards people with HIV/AIDS, Sierra Leone, 2000

		Believe that a teacher with HIV should not be allowed to work	Would not buy food from a person with HIV/AIDS	Agree with at least one discriminatory statement	Agree with neither discriminatory statement	Number of women
Region	**North**	8.1	.5	8.2	91.8	1911
	East	43.7	3.5	44.2	55.8	1180
	South	12.9	4.5	13.6	86.4	788
	West	32.6	14.0	34.8	65.2	1044
Area	**Urban**	32.3	10.6	33.8	66.2	1497
	Rural	18.3	2.1	18.8	81.2	3426
Age	**.00**	28.1	12.0	34.1	65.9	13
	15-19	24.7	5.1	25.2	74.8	952
	20-24	24.8	5.6	26.0	74.0	792
	25-29	23.7	4.4	24.3	75.7	843
	30-34	23.0	5.5	23.9	76.1	700
	35-39	18.6	3.3	19.1	80.9	875
	40-44	21.4	4.6	22.6	77.4	467
	45-49	19.1	3.9	19.5	80.5	279
Woman's education level	**None**	18.2	2.4	18.8	81.2	3815
	Primary	27.4	3.6	27.7	72.3	258
	Secondary +	41.2	15.3	42.8	57.2	829
	Non-standard curriculum	54.7	.0	54.7	45.3	5
Total		22.6	4.7	23.4	76.6	4923

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Table 34: Percentage of women aged 15-49 who have sufficient knowledge of HIV/AIDS transmission, Sierra Leone, 2000

		Heard of AIDS	Know 3 ways to prevent HIV transmission	Correctly identify 3 misconceptions about HIV transmission	Have sufficient knowledge	Number of women
Region	North	18.4	1.8	3.5	.5	1911
	East	77.4	43.0	37.0	33.0	1180
	South	61.2	19.5	10.3	7.1	788
	West	88.2	32.8	33.7	16.3	1044
Area	Urban	78.0	31.5	32.5	19.9	1497
	Rural	43.8	16.5	13.1	9.5	3426
Age	15-19	58.2	23.7	21.5	14.8	952
	20-24	59.8	23.5	21.3	13.8	792
	25-29	57.3	24.6	22.5	15.8	843
	30-34	53.3	21.2	16.8	10.8	700
	35-39	48.2	15.1	13.6	8.6	875
	40-44	47.6	19.1	18.9	12.1	467
	45-49	47.1	17.5	15.2	11.0	279
Woman's education level	None	45.2	16.5	13.7	10.1	3815
	Primary	78.3	30.6	22.9	15.3	258
	Secondary +	87.8	38.8	41.6	23.6	829
	Non-standard curriculum	100.0	45.3	69.8	30.2	5
Total		54.2	21.1	19.0	12.7	4923

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Table 35: Percentage of women aged 15-49 who know where to get an AIDS test and who have been tested, Sierra Leone, 2000

		Know a place to get tested	Have been tested	If tested, have been told result	Number of women
Region	**North**	2.2	1.4	31.8	1911
	East	8.0	2.1	65.4	1180
	South	8.7	2.2	54.8	788
	West	23.9	5.2	70.6	1044
Area	**Urban**	18.6	4.7	61.7	1497
	Rural	5.1	1.5	54.7	3426
Age	**15-19**	8.9	1.5	30.7	952
	20-24	8.6	2.4	46.3	792
	25-29	10.8	2.4	59.3	843
	30-34	9.8	3.5	66.7	700
	35-39	8.8	2.9	75.0	875
	40-44	8.8	2.4	60.2	467
	45-49	8.0	2.5	58.7	279
Woman's education level	**None**	4.5	1.3	55.0	3815
	Primary	12.4	2.1	47.4	258
	Secondary +	29.3	7.9	62.3	829
	Non-standard curriculum	54.7	24.5	100.0	5
	Total	9.2	2.5	58.7	4923

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Table 36a: Percentage of Sexually active women aged 15-49 who are using (or whose partner is using) a contraceptive method, Sierra Leone, 2000

							Current method												
		No method	Female steriliation	Male sterili ation	Pill	IUD	Inje ctio ns	Imp lant s	Con dom	Fe mal e con do m	Dia phr ag m/f oa m/j elly	Period c abstin nce	Ot her	Total	Any mode rn meth od	Any traditi onal metho d	Any metho d	Number of Sexually active women
Region	**North**	95.2	.2	.0	2.6	.1	1.1	.0	.0	.0	.1	.0	.6	100.0	4.2	.6	4.8	1141
	East	96.8	.1	.1	2.4	.0	.1	.1	.0	.1	.0	.2	.2	100.0	2.8	.4	3.2	902
	South	94.7	.5	.0	3.1	.0	.5	.0	.2	.0	.0	.6	.5	100.0	4.2	1.1	5.3	610
	West	79.5	.6	.0	13.1	.9	4.6	.2	.3	.0	.4	.1	.2	100.0	20.2	.3	20.5	734
Area	**Urban**	84.6	.2	.1	9.9	.6	2.8	.2	.2	.1	.2	.6	.6	100.0	14.3	1.2	15.4	1119
	Rural	95.9	.4	.0	2.4	.1	.8	.0	.0	.0	.1	.0	.3	100.0	3.8	.3	4.1	2268
Woman's education level	**None**	95.2	.2	.0	2.9	.0	1.0	.0	.0	.0	.1	.0	.4	100.0	4.3	.5	4.8	2622
	Primary	85.4	1.0	.0	6.0	.5	5.2	.0	.0	.0	.0	1.9	.0	100.0	12.8	1.9	14.6	154
	Secondary +	80.6	.7	.0	13.3	.9	2.6	.4	.4	.1	.3	.3	.3	100.0	18.7	.6	19.4	594
	Non-standard curriculum	64.4	.0	.0	35.6	.0	.0	.0	.0	.0	.0	.0	.0	100.0	35.6	.0	35.6	4
	Missing/DK	87.8	6.1	.0	6.1	.0	.0	.0	.0	.0	.0	.0	.0	100.0	12.2	.0	12.2	13
Total		92.1	.3	.0	4.9	.2	1.5	.1	.1	.0	.1	.2	.4	100.0	7.3	.6	7.9	3387

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Table 36: Percentage of married or in union women aged 15-49 who are using (or whose partner is using) a contraceptive method, Sierra Leone, 2000

		Current method															
		No method	Female steriliation	Male steriliation	Pill	IUD	Injections	Implants	Condom	Diaphragm /foam/j elly	Periodic abstinence	Other	Total	Any modern method	Any traditional method	Any method	Number of currently married women
Region	North	97.7	.1	.0	1.0	.1	.7	.0	.0	.1	.0	.3	100.0	2.0	.3	2.3	1735
	East	97.6	.1	.1	1.9	.0	.1	.1	.0	.0	.0	.2	100.0	2.3	.2	2.4	988
	South	95.9	.2	.0	2.4	.0	.5	.0	.2	.0	.6	.3	100.0	3.2	.9	4.1	637
	West	85.8	.4	.0	8.3	.9	3.7	.0	.3	.3	.0	.3	100.0	13.9	.3	14.2	542
Area	Urban	89.9	.2	.1	6.2	.5	1.8	.1	.2	.2	.4	.5	100.0	9.2	.9	10.1	958
	Rural	97.6	.2	.0	1.3	.0	.6	.0	.0	.0	.0	.2	100.0	2.2	.2	2.4	2944
Woman's education level	None	97.2	.1	.0	1.7	.0	.6	.0	.0	.1	.0	.2	100.0	2.5	.3	2.8	3313
	Primary	92.0	.6	.0	1.8	.0	4.7	.0	.0	.0	.9	.0	100.0	7.1	.9	8.0	135
	Secondary +	86.0	.4	.0	9.0	1.1	2.1	.2	.4	.2	.3	.4	100.0	13.3	.7	14.0	440
	Non-standard curriculum	100.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	100.0	.0	.0	.0	2
Total		95.7	.2	.0	2.5	.2	.9	.0	.1	.1	.1	.3	100.0	3.9	.4	4.3	3901

World Summit for Children Goal => Number 10

Table 37: Percentage of mothers with a birth in the last 12 months protected against neonatal tetanus, Sierra Leone, 2000

		Received at least 2 doses, last within 3 years	Received at least 3 doses, last within 10 years	Received at least 5 doses during lifetime	Protected against tetanus	Number of mothers
Region	**North**	42.8	2.1	.5	45.4	498
	East	68.7	.0	.0	68.7	239
	South	76.0	.0	.0	76.0	125
	West	70.3	.0	.0	70.3	101
Area	**Urban**	71.1	.0	.0	71.1	198
	Rural	52.6	1.3	.3	54.3	766
Woman's education level	**None**	54.1	1.2	.3	55.6	833
	Primary	64.2	.0	.0	64.2	47
	Secondary +	75.4	.0	.0	75.4	84
Total		56.4	1.1	.3	57.7	964

World Summit for Children Goal => Number 22

Table 38: Percent distribution of women aged 15-49 with a birth in the last year by type of personnel delivering antenatal ccare, Sierra Leone, 2000

		Doctor	Nurse/ midwife	Auxiliary midwife	Tradition al birth attendant	Other/ missing	No antenatal care received	Total	Any skilled personnel	Number of women
Region	**North**	7.8	43.9	1.3	18.1	3.7	25.1	100.0	52.9	498
	East	7.0	73.4	3.1	9.8	2.8	3.9	100.0	83.5	239
	South	6.5	77.2	.0	10.1	3.1	3.1	100.0	83.6	125
	West	37.5	46.9	1.6	4.7	1.6	7.8	100.0	85.9	101
Area	**Urban**	24.9	55.2	2.4	5.1	3.2	9.2	100.0	82.5	198
	Rural	6.8	56.0	1.4	15.8	3.2	16.7	100.0	64.2	766
Woman's education level	**None**	8.4	55.4	1.6	14.7	3.3	16.6	100.0	65.4	833
	Primary	19.6	63.6	.0	3.4	5.2	8.1	100.0	83.2	47
	Secondary +	26.2	56.3	2.9	8.8	1.2	4.6	100.0	85.5	84
Total		10.5	55.8	1.6	13.6	3.2	15.2	100.0	68.0	964

World Summit for Children Goals => Numbers 9, 11

Table 39: Percent distribution of women aged 15-49 with a birth in the last year by type of personnel assisting at delivery
Sierra Leone, 2000

		Doctor	Nurse/ midwife	Auxiliary midwife	Traditional birth attendant	Relative /friend	Other/ missing	*Total*	Any Skilled personnel	Number of women
Region	**North**	2.8	13.7	5.3	43.9	26.7	7.2	100.0	21.8	498
	East	2.1	59.3	4.2	31.6	.0	2.8	100.0	65.6	239
	South	2.8	52.0	2.3	33.5	3.9	5.5	100.0	57.2	125
	West	8.6	50.8	4.7	32.0	1.6	2.4	100.0	64.1	101
Area	**Urban**	7.2	48.6	5.2	22.1	4.9	12.1	100.0	60.9	198
	Rural	2.2	30.1	4.4	42.4	17.0	3.9	100.0	36.7	766
Woman's education level	**None**	2.7	30.4	4.6	40.4	16.1	5.9	100.0	37.6	833
	Primary	2.7	64.9	2.7	20.1	4.4	5.2	100.0	70.4	47
	Secondary +	9.1	51.5	5.8	27.2	4.2	3.2	100.0	66.4	84
Total		3.2	33.9	4.6	38.2	14.5	5.6	100.0	41.7	964

World Summit for Children Goal => Numbers 11

Table 40: Percent distribution of children aged 0-59 months by whether birth is registered and reasons for non-registration, Sierra Leone, 2000

		Birth is registered	Birth is not registered because:							Total	Number of children
			Costs too much	Must travel too far	Didn't know it should be registered	Late & didn't want to pay fine	Doesn't know where to register	Other	DK/ Missing		
Sex	**Male**	47.9	4.3	11.3	18.4	3.2	25.1	32.5	5.3	100.0	1377.3
	Female	45.7	5.1	11.5	19.1	1.0	28.0	30.1	5.2	100.0	1386.4
Region	**North**	27.2	2.5	10.2	24.1	2.7	30.4	24.6	5.5	100.0	1300.2
	East	49.9	3.0	8.6	6.4	.5	22.6	55.2	3.7	100.0	636.2
	South	66.6	27.4	22.2	12.4	.9	9.6	16.9	10.6	100.0	342.2
	West	81.2	5.3	21.3	14.9	3.2	21.3	33.0	1.1	100.0	485.1
Area	**Urban**	66.0	8.1	13.0	20.0	3.8	15.8	36.4	2.9	100.0	697.0
	Rural	40.3	4.0	11.1	18.5	1.8	28.5	30.3	5.7	100.0	2066.7
Age	**< 6 months**	42.9	4.1	11.0	22.8	.0	26.9	27.9	7.2	100.0	262.4
	6-11 months	47.0	2.9	17.2	17.4	2.7	20.4	34.5	4.9	100.0	261.5
	12-23 months	44.9	3.6	11.7	19.6	2.4	26.0	31.9	4.7	100.0	547.5
	24-35 months	50.1	6.7	10.8	19.0	1.6	26.2	29.2	6.3	100.0	572.7
	36-47 months	47.6	5.4	11.1	16.3	3.2	28.5	31.4	4.1	100.0	626.3
	48-59 months	46.3	3.8	9.5	18.2	1.8	28.2	33.1	5.3	100.0	476.4
Mother's education level	**None**	42.5	4.3	11.5	19.8	1.6	27.9	29.4	5.6	100.0	2329.8
	Primary	64.7	12.1	9.6	13.9	3.3	14.7	43.9	2.4	100.0	108.4
	Secondary	72.2	8.0	11.8	5.0	7.3	11.6	55.1	1.1	100.0	321.1
	Total	46.8	4.7	11.4	18.7	2.1	26.5	31.3	5.2	100.0	2763.7

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Table 41: Percentage of children 0-14 years of age in households not living with a biological parent, Sierra Leone, 2000

		Living with both parents	Living with neither: only father alive	Living with neither: only mother alive	Living with neither: both are alive	Living with neither: both are dead	Living with mother only: father alive	Living with mother only: father dead	Living with father only: mother alive	Living with father only: mother dead	Impossible to determine	Total	Not living with a biological parent	One or both parents dead	Number of children
Sex	**Male**	61.2	.9	2.9	9.4	2.4	8.7	5.1	5.3	1.4	2.7	100.0	15.5	12.7	5085
	Female	60.8	.9	2.1	11.2	2.5	8.9	5.1	4.8	1.0	2.7	100.0	16.7	11.5	5041
Region	**North**	71.6	.8	2.1	8.2	1.4	5.2	3.8	4.6	.9	1.3	100.0	12.5	8.9	4330
	East	59.3	.8	3.3	8.7	3.9	8.1	5.9	3.6	1.7	4.8	100.0	16.6	15.5	2368
	South	53.0	.9	3.2	12.2	2.9	7.8	5.3	8.0	1.5	4.6	100.0	19.2	13.9	1517
	West	45.2	1.3	2.1	15.3	2.5	18.6	7.0	5.5	.9	1.7	100.0	21.2	13.8	1916
Area	**Urban**	55.6	.9	2.6	12.3	2.4	13.0	5.1	5.2	1.1	1.7	100.0	18.2	12.1	2723
	Rural	62.9	.9	2.5	9.5	2.4	7.2	5.1	4.9	1.2	3.0	100.0	15.4	12.1	7409
Age	**0-4 years**	70.6	.3	.8	4.9	1.0	12.0	3.4	2.8	.6	3.6	100.0	6.9	6.0	3119
	5-9 years	60.6	1.0	2.9	11.8	2.4	7.1	5.5	5.2	1.4	2.0	100.0	18.1	13.2	4096
	10-14 years	51.1	1.4	3.9	13.9	4.0	7.7	6.3	7.1	1.5	2.7	100.0	23.3	17.2	2917
	Total	61.0	.9	2.5	10.3	2.4	8.8	5.1	5.0	1.2	2.7	100.0	16.1	12.1	10132

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Table 42: Percentage of children 5-14 years of age who are currently working, Sierra Leone, 2000

		Paid work	Unpaid work	Domestic work: < 4 hours/day	Domestic work: 4 or more hours/day	Currently working	Number of children
Sex	**Male**	2.0	47.9	73.6	9.4	71.9	3527
	Female	1.2	47.4	74.9	10.4	71.3	3480
Region	**North**	1.9	48.9	68.6	13.8	78.4	2839
	East	.7	45.3	70.8	9.7	70.2	1685
	South	2.3	38.7	78.3	8.7	66.0	1127
	West	1.3	55.4	86.7	2.9	63.7	1361
Area	**Urban**	2.7	50.8	80.5	6.6	65.9	1941
	Rural	1.1	46.5	71.8	11.1	73.8	5071
Age	**5-9 years**	1.4	42.7	72.8	7.3	65.6	4096
	10-14 years	1.8	54.7	76.3	13.5	80.1	2917
Total		1.6	47.7	74.2	9.9	71.6	7013

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