

*Monitoring the Situation of
Children and Women*

Findings from the
Sierra Leone
Multiple Indicator Cluster Survey
2005

PRELIMINARY REPORT

Revised August 2006

Multiple Indicator
Cluster Survey - 3

Statistics Sierra Leone

United Nations Children's
Fund - Sierra Leone



Table 1: Key MICS3 indicators

TOPIC	MICS3 INDICATOR NUMBER	INDICATOR	VALUE
Child Mortality	1	Under-five mortality rate	267 deaths per 1,000 live births
Nutrition	6	Underweight prevalence (2 SD ≤; 3 SD ≤)	31; 9 percent
	7	Stunting prevalence (2 SD ≤; 3 SD ≤)	40; 20 percent
	8	Wasting prevalence (2 SD ≤; 3 SD ≤)	9; 2 percent
	15	Exclusive breastfeeding rate (0-5 months)	8 percent
	16	Continued breastfeeding rate (12-15 months; 20-23 months)	88; 57 percent
	17	Timely complementary feeding rate (6-9 months)	52 percent
Child health	25	Tuberculosis immunization coverage	84 percent
	26	Polio immunization coverage	57 percent
	27	DPT immunization coverage	56 percent
	28	Measles immunization coverage	62 percent
	31	Children fully immunized at their first birthday	35 percent
	N/A	Children fully immunized at one-year (12-23 months) of age	54 percent
	22	Antibiotic treatment of suspected pneumonia	21 percent
	24	Solid fuels	99 percent
	37	Under-fives sleeping under insecticide-treated nets	5 percent
	38	Under-fives sleeping under mosquito nets	20 percent
Environment	39	Ant-malarial treatment (under-fives)	45 percent
	11	Use of improved drinking water sources	47 percent
	12	Use of improved sanitation facilities	30 percent
Reproductive health	21	Contraceptive prevalence	5 percent
	4	Skilled attendant at delivery	43 percent
	5	Institutional deliveries	19 percent
Education	55	Net primary school attendance rate	69 percent
	61	Gender parity index (primary; secondary)	1.01; 0.78 girls per boy
Child protection	62	Birth registration	48 percent
	67	Marriage before age 15, before age 18	27 / 62 percent
	68	Young women aged 15-19 currently married/in union	36 percent
	70	Polygyny	43 percent
HIV/AIDS, Sexual behaviour, and orphaned and vulnerable children	82	Comprehensive knowledge about HIV prevention among young people	18 percent
	83	Condom use with non-regular partners	20 percent
	85	Higher risk sex in the last year	43 percent
	77	School attendance of orphans versus non-orphans	0.78 orphans per non-orphan

Note: Definitions for the indicators listed in the table above can be found in Chapter 4: Table 22.

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I. BACKGROUND AND OBJECTIVES

INTRODUCTION

This preliminary report is based on the Sierra Leone Multiple Indicator Cluster Survey, conducted in 2005 by Statistics Sierra Leone with financial and technical support from UNICEF Sierra Leone. The survey was conducted, in large part, in order to monitor progress towards goals and targets emanating from recent international agreements that the Government of Sierra Leone is part of: the Millennium Declaration, adopted by all 191 United Nations Member States in September 2000, and the Plan of Action of A World Fit For Children, adopted by 189 Member States at the United Nations Special Session on Children in May 2002. Both of these commitments build upon promises made by the international community at the 1990 World Summit for Children.

In signing these international agreements, governments committed themselves to improving conditions for their children and to monitoring progress towards that end. UNICEF was assigned a supporting role in this task (see Box 1).

Box 1

A Commitment to Action: National and International Reporting Responsibilities

The governments that signed the Millennium Declaration and the World Fit for Children Declaration and Plan of Action also committed themselves to monitoring progress towards the goals and objectives they contained:

“We will monitor regularly at the national level and, where appropriate, at the regional level and assess progress towards the goals and targets of the present Plan of Action at the national, regional and global levels. Accordingly, we will strengthen our national statistical capacity to collect, analyse and disaggregate data, including by sex, age and other relevant factors that may lead to disparities, and support a wide range of child-focused research. We will enhance international cooperation to support statistical capacity-building efforts and build community capacity for monitoring, assessment and planning.” (A World Fit for Children, paragraph 60)

“...We will conduct periodic reviews at the national and sub-national levels of progress in order to address obstacles more effectively and accelerate actions...” (A World Fit for Children, paragraph 61)

The Plan of Action (paragraph 61) also calls for the specific involvement of UNICEF in the preparation of periodic progress reports:

“... As the world’s lead agency for children, the United Nations Children’s Fund is requested to continue to prepare and disseminate, in close collaboration with governments, relevant funds, programmes and the specialized agencies of the United Nations system, and all other relevant actors, as appropriate, information on the progress made in the implementation of the Declaration and the Plan of Action.”

Similarly, the Millennium Declaration (paragraph 31) calls for periodic reporting on progress:

“...We request the General Assembly to review on a regular basis the progress made in implementing the provisions of this Declaration, and ask the Secretary-General to issue periodic reports for consideration by the General Assembly and as a basis for further action.”

The Government of Sierra Leone (GoSL), in collaboration with its development partners, is implementing several policies and strategies aimed at accomplishing national and international goals. The GoSL has recently developed its Poverty Reduction Strategy, the main goals of which are in line with the Millennium Development Goals (MDGs). MICS3 has been identified as a major effort to generate valid and reliable data and information that will be used to monitor key indicators that are being tracked by the GoSL to ensure the realization of major international commitments that include World Fit for Children (WFFC) goals, the Millennium Development Goals (MDGs), the UNGASS on HIV/AIDS, and the Abuja targets for malaria. Roughly 20 of the 48 MDG indicators have been estimated in the MICS3, offering the largest single source of data for MDG monitoring. The MICS3 effort will also contribute to the development of a monitoring and evaluation system for Sierra Leone's National Programme for Food Security, Job Creation, Good Governance and Human Development.

This preliminary report presents selected results on some of the principal topics covered in the MICS3 survey and on a subset of indicators. The results in this report are preliminary and are subject to change as further analyses are conducted, although major changes are not expected. A comprehensive final report on the Sierra Leone MICS3 2005 survey is scheduled for publication in the third quarter of 2006.

SURVEY OBJECTIVES

The 2005 Sierra Leone Multiple Indicator Cluster Survey has as its primary objectives the following:

1. To provide up-to-date information for assessing the situation of children and women in Sierra Leone;
2. To furnish data needed for monitoring progress toward goals established by the Millennium Development Goals and the goals of *A World Fit For Children* (WFFC) as a basis for future action;
3. 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. SAMPLE AND SURVEY METHODOLOGY

SAMPLE DESIGN

The sample for the 2005 Sierra Leone MICS3 Survey was designed to provide estimates of health indicators at the national level, for urban and rural areas, and for the four regions—North, South, East and West—and the thirteen districts of Sierra Leone. The sample was selected in two stages using a stratified cluster sampling methodology. In the first stage, 320 enumeration areas (EAs) were selected, using probability proportional to size methodology, through systematic sampling from a sample frame of all EAs in Sierra Leone that was ordered by region

and, within regions, by district. Using the comprehensive EA-level household lists that had been developed in the 2004 Sierra Leone national census, a random sample of 25 households was drawn within each of the 320 selected EAs to yield an overall sample of 8,000 households. A household was defined as “a group of people who all eat from the same pot”. The resulting sample was theoretically self-weighting, although sample weights have been employed to adjust for minor variations among regions and rural/urban EAs with regards to the proportion of households, women, and children for whom the MICS3 interview was completed among sampled households found to be occupied and the eligible women and children who lived in them.

QUESTIONNAIRES

Three questionnaires were used in the survey: the Household Questionnaire, the Questionnaire for Individual Women, and the Questionnaire for Children Under Five. The questionnaires are based on the MICS3 model questionnaires. Within each interviewed household, information was collected about the household and the dwelling from the head-of-household or from another adult who lived in the household. Information was also collected from every woman of child-bearing age (defined as 15-49 years) and from the primary caretaker of every child aged less than 5 years of age.

The questionnaires included the following modules:

- **Household Questionnaire**
 - Household listing
 - Education
 - Water and sanitation
 - Household characteristics
 - Insecticide treated bednets
 - Support to children orphaned and made vulnerable by HIV/AIDS
 - Child labour
 - Salt iodization
 - Child discipline
 - Child disability
 - Maternal mortality
 - Cost and source of supplies

- **Questionnaire for Individual Women**
 - Child mortality
 - Tetanus toxoid
 - Maternal and newborn health
 - Marriage/Union
 - Contraception
 - HIV/AIDS
 - Female genital cutting
 - Sexual behaviour

- **Questionnaire for Children Under Five**
 - Birth registration and early learning
 - Vitamin A
 - Breastfeeding
 - Care of illness
 - Malaria
 - Immunization
 - Anthropometry

English is the only written language in Sierra Leone; for this reason, questionnaires were written in English and verbally translated by enumerators into the language preferred by the respondent (generally Krio, Timne, Mende or Limba), using standardized, pre-tested key words. The questionnaires were pre-tested in September 2005. Based on the results of the pre-test, modifications were made to the wording of the questions, the response categories, and the key words.

FIELDWORK AND PROCESSING

Fourteen supervisors and sixty-one enumerators were trained for 10 days in early October 2005. The data were collected by fourteen teams, each composed of one or two female enumerators, two or three male enumerators, one driver and a supervisor. The fieldwork began in October 2005 and concluded in November 2005.

Completed questionnaires were checked in the field by supervisors and then transported to Freetown, where data entry personnel checked each questionnaire to make sure that it had been clearly and correctly completed. Data were entered on thirty microcomputers using CSPro software. In order to ensure quality control, all questionnaires were double-entered and internal consistency checks were performed. Procedures and standard programs developed using CSPro software under the global MICS3 project and adapted to the Sierra Leone questionnaire were used throughout. Data entry and processing began in November 2005 and were completed in April 2006. Data were analysed using the SPSS software program and the model syntax and tabulation plans developed for this purpose.

SAMPLE COVERAGE

Of the 8,000 households selected for the sample, only 7,125 were found to be occupied. This surprisingly low rate of occupation is due to the following reasons:

1. The sample frame of households that was used to randomly select 25 households in each selected EA contained many households that consisted of people who had returned to their original homes at the time of the census only for the purpose of being registered there (for political reasons). Once the census was completed, they moved back to their “real homes” elsewhere. Sub-optimal performance of the task of verifying the presence of all households sampled for the MICS3 survey compounded this problem and led to many houses being classified as “not found / destroyed”.

2. Names and/or addresses on the lists of sampled households were not adequately descriptive to permit identification of the households.
3. Some households had, after the census, dissipated following the death of the head of household.
4. The diamond mining clusters in the Eastern province had household heads who were miners and had moved from their places of registration in search of new areas where diamonds could be found.
5. Sample frames in EAs in border villages along the Sierra Leone/Liberia border included households that had returned to Liberia for registration in their national elections.
6. During the verification of households, some communities did not provide accurate information on existing households, thinking that the households may benefit from possible humanitarian assistance after the MICS3 exercise. During data collection, such households did not meet the standard definition of households.

Of the 7,125 occupied households, 7,078 were successfully interviewed for a household response rate of 99.3 per cent. In the interviewed households, 9,257 eligible women (aged 15-49) were identified. Of these, 7,654 were successfully interviewed, yielding a response rate of 82.1 per cent. The response rate for the Questionnaire for Children Under Five was 88.9 per cent; mothers/caretakers of 5,246 children under five were successfully interviewed, from among 5,904 children under five who were identified in the interviewed households. Overall response rates of 82.1 percent and 88.3 percent are calculated for the women's and under-5's interviews respectively (Table 2).

III. RESULTS

CHILD MORTALITY

Key indicators	Estimates		West-Central Africa ¹
	2005 ² (MICS3)	2000 (MICS2)	2004
Infant mortality rate	158	170	109
Under-five mortality rate	267	286	191

One of the overarching goals of the MDGs and the World Fit for Children is to reduce infant and under-five mortality. Monitoring progress towards this goal is an important but difficult objective. Measuring childhood mortality may seem easy, but attempts using direct questions, such as "Has anyone in this household died in the last year?" give inaccurate results. On the other hand, using direct measures of child mortality from birth histories is time consuming and complicated. Demographers have therefore had to devise ways to measure childhood mortality indirectly. These "indirect methods" minimize the pitfalls of memory lapses, inexact or misinterpreted definitions, and poor interviewing technique.

¹ Source: *The State of the World's Children 2006*. UNICEF, UNICEF House, 3 UN Plaza, New York, NY 10017, USA. (SOWCR 2006)

² Note that the method used to produce estimates of UFM and IMR actually produces a retrospective estimate that pertains to 2002 (for MICS3) and 1997 (for MICS2).

The *infant mortality rate* (IMR) is the probability of dying before the first birthday. The *under-five mortality rate* (UFMR) is the probability of dying before the fifth birthday. In MICS3, the IMR and UFMR are calculated based on an indirect estimation technique; the so-called 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 five year age groups of women. The technique converts these data into probabilities of dying by taking account of both the mortality risks to which children are exposed and their length of exposure to the risk of dying.

<p>Millennium Development Goal</p> <p><u>Indicator</u> Under-five mortality rate</p> <p><u>Goal</u> 100 deaths per 1,000 live births by 2015</p>

Table 3 provides estimates of child mortality by various background characteristics. The IMR in Sierra Leone is estimated at 158 per thousand, while the U5MR is estimated to be 267 per thousand. The IMR and U5MR are approximately 20 and 14 percent higher, respectively, for males than females. Infant and under-5 mortality rates are lowest in the West and highest in the East and South. Mortality rates are similar across all wealth quintiles except for the richest quintile, where they are approximately 68 percent of the national average. Mortality rates are similarly low for children whose mothers have achieved a secondary education level.

Discussion: Child Mortality

Sierra Leone has the ignominious distinction of having an under-five mortality rate (UFMR) that is both the highest in the world and far higher than the regional norm of 191 deaths per 1,000 live births. The comparison of the 2005 and 2000 estimates of the UFMR should be made with care, as the methodology that is used to calculate the UFMR generates retrospective estimates. For example, the UFMR estimate generated during the 2000 MICS2 is actually an estimate of the UFMR in Sierra Leone during 1997. Similarly, the 2005 MICS3 has generated an estimate of the UFMR in 2002—the year when the conflict ended. It can thus be concluded that child mortality in Sierra Leone did not reduce from its astronomically high level between 1997 and 2002 substantially—although it perhaps should not have been expected to, given the conflict that was raging in the country during that time. The MDG for UFMR is to reduce the under-five mortality rate to 100 by 2015. While it is true that various interventions that are designed under the Sierra Leone Poverty Reduction Strategy Paper (PRSP) to support the achievement of this MDG are just now being put into place, this MICS3 result suggests that it will be very difficult for this MDG to be achieved. Efforts must be redoubled to fully and rapidly implement policies that are designed to integrate the country’s strategic approach to improving child survival, including the development and implementation of an integrated child survival strategy and scaling up the Community-Based Integrated Management of Child Illness initiative (CB-IMCI) in all districts of the country.

NUTRITIONAL STATUS

Key indicators	Estimates (percent)		West-Central Africa ³
	2005 (MICS3)	2000 (MICS2)	1996-2004
Underweight prevalence (2 SD ≤ / 3 SD ≤)	31 / 9	27 / 9	28 / 9
Stunting prevalence (2 SD ≤ / 3 SD ≤)	40 / 20	34 / 16	35 / --
Wasting prevalence (2 SD ≤ / 3 SD ≤)	9 / 2	10 / 2	10 / --
Exclusive breastfeeding rate (0-5 months)	8	2	20
Continued breastfeeding rate (12-15 months / 20-23 months)	88 / 57	85 / 51	-- / 48
Timely complementary feeding rate (6-9 months)	52	52	65

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. Under-nourishment in a population can be gauged by comparing children to a reference distribution. The reference population used here is the WHO/CDC/NCHS reference, which is recommended for use by UNICEF and the World Health Organization. Each of the three nutritional status indicators—*underweight*, *stunting*, and *wasting*—can be expressed in standard deviation units (z-scores) from the median of this reference population.

Millennium Development Goal

Indicator

Proportion of children under five- years that are underweight

Goal

12 percent by 2015

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 *moderately or severely underweight* while those whose weight-for-age is more than three standard deviations below the median are classified as *severely underweight*.

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 *moderately or severely stunted*. Those whose height-for-age is more than three standard deviations below the median are classified as *severely stunted*. 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 *moderately or severely wasted*, while those who fall more than three standard deviations below the median are *severely wasted*. 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.

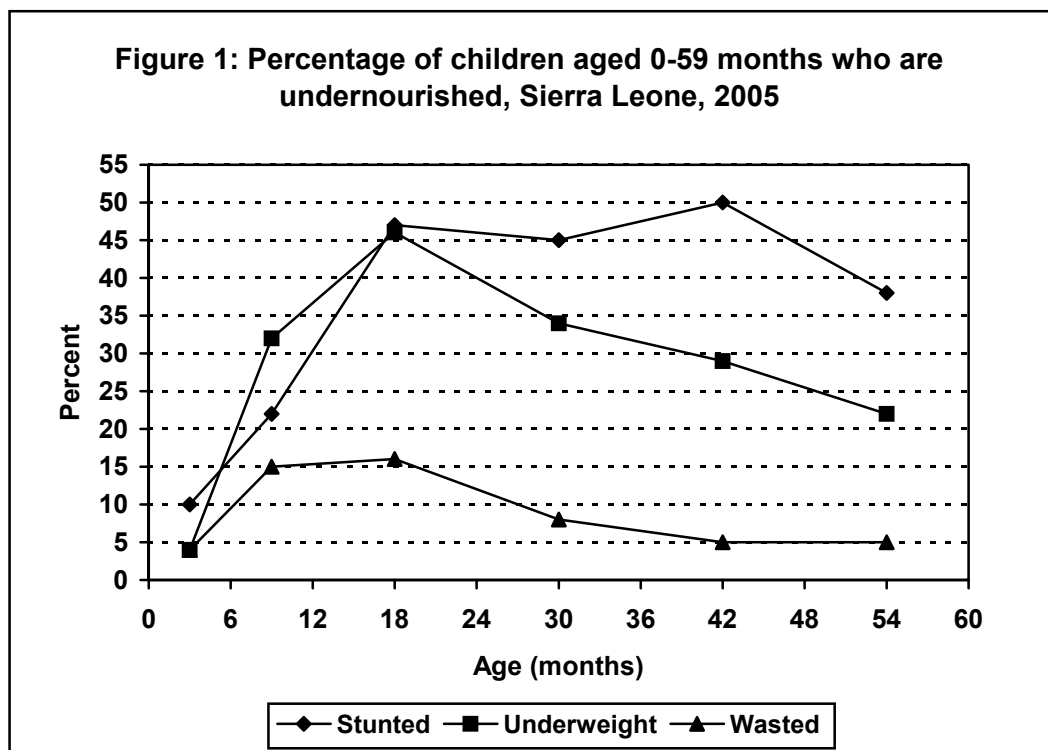
³ Source: [SOWCR 2006](#).

Table 4 shows percentages of children classified into each of these categories, based on the anthropometric measurements that were taken during fieldwork. Additionally, the table includes the percentage of children who are *overweight*, which takes into account those children whose weight-for-height is above 2 standard deviations from the median of the reference population.

In Table 4, children who were not weighed and measured (approximately 0.9 percent of children interviewed in the MICS3) and those whose measurements are outside a plausible range are excluded.

More than three in ten children (31 percent) under five years of age in Sierra Leone are *moderately underweight* and nine percent are classified as *severely underweight* (Table 4). Forty percent of children are *stunted* or too short for their age and nine percent are *wasted* or too thin for their height.

The three indicators of malnutrition are similarly high in the North, East and South regions and are markedly lower in the West. Those children whose mothers have secondary or higher education are less likely to be malnourished than children of mothers with no or primary-only education. Boys appear to be slightly more likely to be underweight, stunted, and wasted than girls. The age pattern shows that a higher percentage of children aged 12-23 months are undernourished according to all three indices in comparison to children who are younger and older, with the exception of a high level of stunting among children aged 36-47 months (Figure 1). This pattern is expected and is related to the age at which many children cease to be breastfed and begin to be more broadly exposed to contamination in water, food, and environment.



BREASTFEEDING

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, which can contribute to growth faltering and micronutrient malnutrition and is unsafe if clean water is not readily available. The World Fit for Children goal states that children should be exclusively breastfed for 6 months and continued breastfeeding with safe, appropriate and adequate complementary feeding up to 2 years of age and beyond.

In Table 5, the assessment of breastfeeding status is based on the reports of mothers/caretakers of children's consumption of food and fluids in the 24 hours prior to the interview. *Exclusively breastfed* refers to infants who received only breast milk and vitamins, mineral supplements, or medicine. The table shows exclusive breastfeeding of infants during the first six months of life (separately for 0-3 months and 0-5 months), as well as complementary feeding of children 6-9 months and continued breastfeeding of children at 12-15 and 20-23 months of age.

Approximately 10 and 8 percent of children aged less than four and six months, respectively, are exclusively breastfed—levels that should be considered unacceptably low. At age 6-9 months, 52 percent of children are receiving breast milk and solid or semi-solid foods. By age 12-15 months, 88 percent of children are still being breastfed and by age 20-23 months, 57 percent are still breastfed. More females than males are exclusively breastfed before six months of age while more males than females continue breast feeding beyond 20 months of age. Among regions, the North stands out as generally having the highest level of breastfeeding indicators, while the level of complementary feeding of children aged 6-9 months is highest in the South.

Discussion: Nutrition and Breastfeeding

The prevalence of *underweight*, *stunting* and *wasting* among children under five years of age in Sierra Leone has remained steady or deteriorated slightly since 2000; levels of these indicators are roughly in line with Western and Central African (WCA) norms. This slight decline in nutritional status may be due to the cessation of relief programs that provided food supplementation to vulnerable groups. The practice of exclusive breastfeeding in Sierra Leone has improved from the meagre level of 2 percent in 2000 but remains extremely low at 8 percent, comparing unfavourably with the WCA norm of 20 percent. MICS3 estimates of complementary feeding and continued breastfeeding rates remain virtually unchanged from 2000 and are similar to WCA norms.

There remains ample room for improvement of infant and young child feeding practices and promotion of growth monitoring and promotion in line with the life cycle of young children in Sierra Leone. Policy makers should focus on creating a conducive environment for rational food production, income generation, and implementation of the food security component of the PRSP. Programmatic approaches that integrate nutritional interventions into other child survival strategies are called for. The Family Package—which includes interventions such as insecticide treated bednets, exclusive breastfeeding, immunizations, complementary feeding, nutritional

supplements, etc.—should be promoted and introduced at the household level, especially through outreach services.

IMMUNIZATION

	Estimates (percent)			
	2005 (MICS3)	2005 (MICS3)	2000 (MICS3)	West-Central Africa ⁴ (2004)
Numerator	Imm. Status at first birthday	Imm. Status at time of survey	Imm. Status at time of survey	Unclear
Denominator	12-23 month-olds	12-23 month-olds	12-23 month-olds	Unclear
Column #	1	2	3	4
Tuberculosis immunization coverage	84	86	73	67
Polio immunization coverage	57	64	61	57
DPT immunization coverage	56	63	46	52
Measles immunization coverage	62	76	62	55
Fully immunized children	35	54	39	--
Yellow fever	60	75	--	--

Note: Only estimates in columns 2 and 3 are directly comparable.

According to UNICEF and WHO guidelines, a child should receive a BCG vaccination to protect against tuberculosis, three doses of DPT to protect against diphtheria, pertussis, and tetanus, three doses of polio vaccine, and a measles vaccination by the age of 12 months. All of these vaccinations are provided through the Sierra Leone Ministry of Health (MoH) and, together with the yellow fever vaccine, form the basic MoH EPI package in Sierra Leone. Caretakers of children under the age of five who were interviewed as part of the MICS3 were asked to show interviewers their children's vaccination cards. When these cards were available, interviewers copied vaccination information from the cards onto the MICS3 questionnaire. When cards were not available, vaccination status was assessed through a structured oral history taken from the caretaker.

Overall, interviewers were shown health cards for 53 percent of the children included in MICS3. The percentage of children aged 12 to 23 months who received each of the vaccinations is shown in Table 6 and Figure 2. The denominator for the estimates presented in the table and figure is comprised of 1075 children aged 12-23 months so that only children who are old enough to be fully vaccinated are counted. The numerator in this table includes only those children

Millennium Development Goal

Indicator

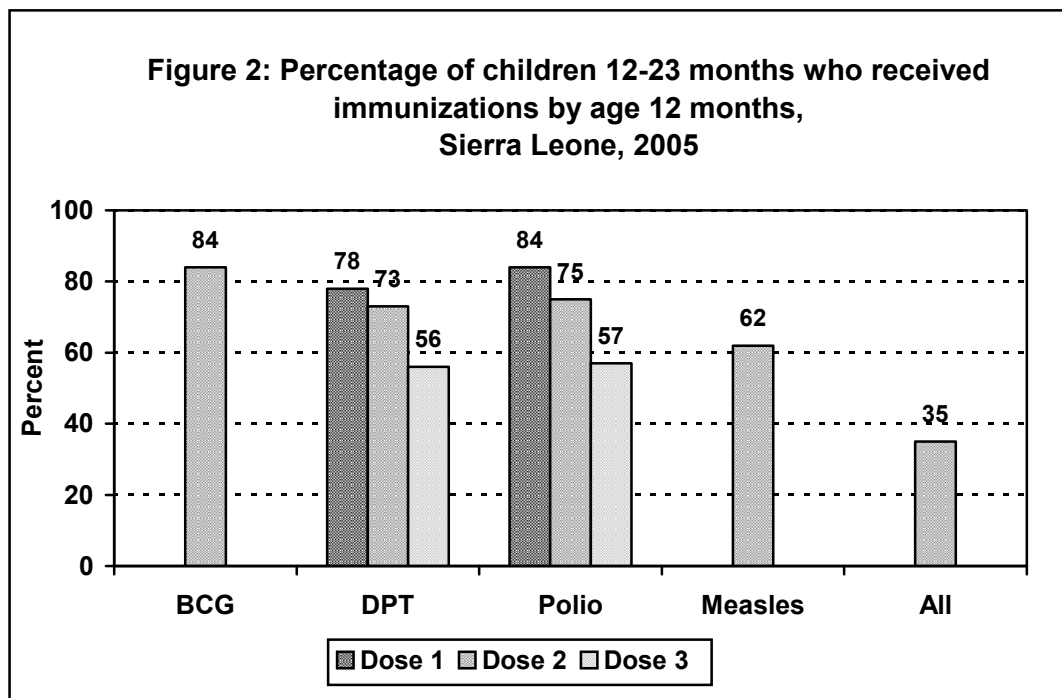
Percentage of children under one year immunized against measles

Goal

100 percent by 2015

⁴ Source: SOWCR 2006.

who were vaccinated before their first birthday; that is, those children who received timely vaccination. In the calculation of “timely vaccination”, the proportion of vaccinations given before the first birthday to children without health cards is assumed to be the same as for children with health cards.



Approximately 84 percent of children aged 12-23 months received a BCG vaccination by the age of 12 months and the first dose of DPT was given to 78 percent. The percentage declines for subsequent doses of DPT to 73 percent for the second dose and 56 percent for the third dose. Similarly, 84 percent of children received Polio 1 by age 12 months and this declines to 57 percent by the third dose. The coverage for measles vaccine by 12 months is, at 62 percent, higher than for OPV3 or DPT3. Coverage for yellow fever vaccine at age 12 months is 50 percent. The percentage of children aged 12-23 months who received all eight recommended vaccinations excluding yellow fever (BCG, DPT x 3, OPV x 3, and measles) by their first birthday is 35 percent.

Discussion: Immunization

The MICS3 has introduced a new approach to the measurement of immunization rates. Timely immunization—that is, completion of basic immunizations by an infant’s first birthday, as measured among 12-23 month-olds—is the basis of the MICS3 EPI assessment. This contrasts with the approach taken during MICS2, when indicators were defined based on current immunization status among surveyed 12-23 month-olds, thus aggregating the vaccination status of children of different ages in the calculation.

Estimates of timely immunization are not available from MICS2; it is therefore necessary to examine current immunization status as measured during MICS3 and MICS2 (columns 2 and 3 in table above) in order to examine trends in vaccination status over time. A comparison of these

data suggests that clear gains have been made in improving vaccination status of children in Sierra Leone during the past five years. This finding, along with data that show immunization rates in Sierra Leone to be 7-to-19 percent above regional norms, suggests that the EPI program in Sierra Leone is a relatively strong component of the health system. Vaccination rates in Sierra Leone are still far short of the UNICEF goal of 90 percent or the MDG for measles vaccination of 100 percent.

Policy recommendations to strengthen the EPI program include prioritizing the placement of adequate personnel at the community-level to carry out EPI programs and supporting the integration of EPI activities in the broader Integrated Child Survival Strategies. EPI program managers should continue to focus on strengthening outreach EPI services and establishing appropriate technology for cold chain maintenance.

ANTIBIOTIC TREATMENT OF CHILDREN WITH SUSPECTED PNEUMONIA

Key indicators	Estimates (percent)		West-Central Africa ⁵ 1998-2004
	2005 (MICS3)	2000 (MICS2)	
Antibiotic treatment of suspected pneumonia	21	--	--
Care seeking for suspected pneumonia	48	50	35

At the global level, pneumonia is the leading cause of death in children, and the use of antibiotics in under-5s with suspected pneumonia is an important intervention to reduce severe morbidity and mortality in children. In the MICS3 survey, a child with suspected pneumonia is defined as a child whose caretaker reported that s/he had an illness with a cough accompanied by rapid or difficult breathing and whose symptoms were due to a problem in the chest and a blocked nose. The analysis below was limited to children who had suspected pneumonia during the two weeks prior to the survey.

Table 7 presents data that describe the use of antibiotics for the treatment of suspected pneumonia in under-5s by sex, age, region, residence, and socioeconomic factors. In Sierra Leone, 21 percent of under-5 children with suspected pneumonia during the two weeks prior to the survey were treated with an antibiotic. The percentage treated with an antibiotic was highest (47 percent) in the Western Area and varied among the other regions from 27 percent in the East to 13 percent in the North. The table also shows that antibiotic treatment of suspected pneumonia is highest among children from the two highest wealth quintiles and among children whose mothers/caretakers have secondary education or higher.

Discussion: Antibiotic Treatment of Children with Suspected Pneumonia

As with timely vaccination in the previous section, antibiotic treatment of suspected pneumonia represents an indicator that was not measured in the 2000 MICS2, making it impossible to assess trends in this indicator over time. A related indicator—the percentage of children with ARI taken to an appropriate health provider—was measured in the MICS2, and its value has remained static over the past five years (see table above). The value of this latter indicator remains higher

⁵ Source: SOWCR 2006.

in Sierra Leone than the WCA norm, suggesting that programs to raise awareness of Sierra Leonean caretakers regarding the need to seek care for severe ARI have achieved some success.

Policy makers should seek to increase demand for ARI services while also ensuring that quality ARI services are provided at the nation’s community-level health facilities. The Community-Based Integrated Management of Childhood Illnesses (CB-IMCI) framework, which is currently being implemented in three districts in Sierra Leone, should be supported and scaled up in the remaining districts as quickly as feasible over the next several years in order to act to reduce severe ARI morbidity and mortality in children.

SOLID FUEL USE

Key indicators	Estimates (percent)		2004 Regional Norm: West-Central Africa
	2005 (MICS3)	2000 (MICS2)	
Solid fuels	99	--	--

Cooking with solid fuels (biomass and coal) leads to high levels of indoor pollution and is a major cause of ill-health in the world—particularly among under-5 children—through its contribution to acute respiratory illness.

Households in all areas and among almost all groups in Sierra Leone make nearly universal (99 percent) use of solid fuels for cooking purposes. Some households make use of charcoal—these households are mostly located in the Western Area and represent households that lie in the highest wealth quintile and/or where the household head has achieved secondary or higher education. Residents of the rest of the country cook almost exclusively with wood. Table 8 presents data regarding this indicator.

Discussion: Solid Fuel Use

The overwhelming reliance on solid fuels for cooking in Sierra Leone is due to the ready availability of inexpensive wood products and the comparatively high price and limited availability of alternative fuels. Given the dire economic conditions in Sierra Leone at this time, it is probably not realistic to expect people to change their fuel source. Efforts to reduce ARI through control of indoor pollution should therefore focus on promoting stoves that limit indoor pollution, such as closed stoves with chimneys (used by less than one percent of households in Sierra Leone) or open stoves with chimneys or hoods (used by nine percent of households).

MALARIA

Key indicators	Estimates (percent)		West-Central Africa ⁶
	2005 (MICS3)	2000 (MICS2)	1999-2004
Under-fives sleeping under insecticide-treated nets	5	2	2
Under-fives sleeping under mosquito nets	20	15	15
Ant-malarial treatment (under-fives)			
➤ Within 24 hours of onset of symptoms	45	--	--
➤ Any time	52	61	43

Malaria is a leading cause of death of children under age five in Sierra Leone. It also contributes to anaemia in children and is a common cause of school absenteeism. Preventive measures, especially the use of mosquito nets treated with insecticide (ITNs), can dramatically reduce malaria morbidity and 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 MICS3 questionnaire incorporates questions on the use of bednets, both at household level and among children under five years of age, as well as anti-malarial treatment, and intermittent preventive therapy for malaria. MICS3 results indicate that ITNs are available in only five percent of households in Sierra Leone.

Results indicate that 20 percent of children under the age of five slept under any mosquito net the night prior to the survey and 5 percent slept under an ITN (Table 9). Both ITN use as well as untreated bed net use among children under five declines steadily with increasing age of the child and there were no significant gender disparities in ITN / bed net use among children under five.

Questions on the prevalence of fever and its treatment were asked for all children under age five. Slightly more than one in three (35 percent) of children were ill with fever in the two weeks prior to the MICS3 (Table 10). Fever prevalence is highest among children aged 12-23 months (41 percent) and thereafter declines slowly with increasing age. The prevalence of fever is relatively similar across all levels of mother's education and wealth quintiles. Among regions, fever was least prevalent in the Western Area (26 percent) and most prevalent in the North (39 percent).

Among children who experienced fever in the two weeks prior to the survey, caretakers were asked to report all of the medicines that were given to their children to treat the fever, including both medicines given at home and medicines given or prescribed at a health facility. Overall, 52 percent of children with fever in the last two weeks were treated with an "appropriate" anti-malarial drug and 45 percent received anti-malarial drugs within 24 hours of onset of symptoms.

⁶ Source: [SOWCR 2006](#).

“Appropriate” anti-malarial drugs include Chloroquine, Fansidar, and artemisine combination drugs. In Sierra Leone, 46 percent of children with fever were given Chloroquine and 5 percent were given quinine. Only one percent received artemisine combination therapy. More than two-thirds of children with malaria (68 percent) were given other types of medicines that are not anti-malarials, including anti-pyretics such as paracetamol, aspirin or ibuprofen.

Overall, children with fever in the East (54 percent) and South (53 percent) are the most likely to have received an appropriate anti-malarial drug within 24 hours of the onset of symptoms while those in the North, where malaria is most prevalent, are the least likely (35 percent) to receive an appropriate anti-malarial drug in timely fashion. Urban children are slightly more likely than rural children to be treated appropriately as are the children of mothers with secondary or higher education. Little difference was noted between boys and girls receiving appropriate anti-malarial drugs.

Discussion: Malaria

One in six children in Sierra Leone takes malaria medication every two weeks. The use of mosquito nets—both ITNs as well as normal bednets—has increased slightly from 2000 due to the program that distributes ITNs free of charge to families with pregnant women and children. However, the percentage of households that use bednets is still low. These findings suggest that the people of Sierra Leone continue to emphasize a curative, rather than preventive, approach to malaria control among children.

Among the four regions of Sierra Leone, the North has the highest level of malaria morbidity and highest use of bednets but the lowest level of treatment of febrile children with an appropriate anti-malaria drug. These differences between the North and the other regions are less stark than during MICS2—when the North had the highest morbidity but lowest use of antibiotics and bednets—suggesting that the emphasis on targeting the Northern Region with additional resources to control malaria has achieved some success and should be continued.

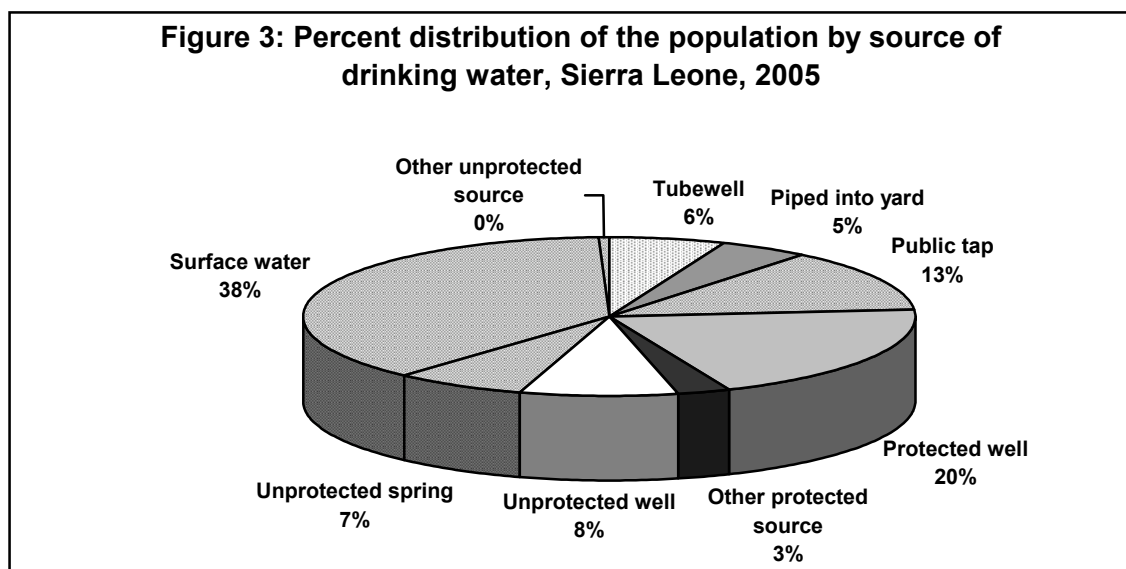
Policy makers and programmers should allocate more resources to interventions that prevent malaria. Roughly equal disease burden and bednet use in the East, South and North suggest that resources be distributed equitably among these three regions. ITNs must be made much more widely available to the public at low cost through a sustainable mechanism. This process could be aided by tax waivers for ITNs and additional funding to support an increase in the coverage of ITN distribution programs and other strategies to prevent malaria. On the curative side, malaria in children should be dealt with through an integrated approach to management of sick children—that is, through CB-IMCI, the roll-out of which should be prioritized.

WATER AND SANITATION

Key indicators	Estimates for Sierra Leone (percent)				West-Central Africa ⁷ 2002
	2005 (MICS3)	2004 (census)	2002 (SOWC)	2000 (MICS2)	
Use of improved drinking water sources	47	53	57	54	58
Use of improved sanitation facilities	30	--	39	63	35

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 effects on human health. In addition to its association with disease, good access to drinking water can 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 population by source of drinking water is shown in Table 11. The population using *improved drinking water sources* are those who use any of the following types of supply: piped water, public tap, borehole/tube well, protected well, protected spring or rainwater. Overall, 47 percent of the population has access to improved drinking water sources – 84 percent in urban areas and 32 percent in rural areas. Among regions, the situation is best in the largely urban Western Area (87 percent) and worst in the North, where only 30 percent of the population gets its drinking water from an improved source.



The sources of drinking water for the population of the North, South, and East follow similar patterns (Table 11). Surface water is the primary source of drinking water in all three regions,

⁷ Source: [SOWCR 2006](#).

especially in the North, where over half of the population gets their water from this unsafe source. Substantial proportions (15-18 percent) of the populations in these three regions get their drinking water from unprotected wells or springs. The primary improved water sources in these regions are public taps, tube wells, and protected wells. In the Western Area, the primary improved water source is piped water, whether it is piped into the dwelling, the yard, or at a public tap.

Inadequate disposal of human excreta and poor personal hygiene are associated with a range of diseases including diarrheal diseases and polio. *Improved sanitation facilities* include: flush toilets connected to sewage systems or septic tanks, other flush toilets, improved pit latrines, and traditional pit latrines with slabs. Thirty percent of the population of Sierra Leone lives in households that use improved sanitation facilities (Table 12). This percentage is 64 in urban areas and 17 percent in rural areas. Residents of the East and North are the least likely to use improved facilities; only 20 and 22 percent of the population there, respectively, use them. In the East and South most of the population uses rivers, bush, fields, or has no facilities. In contrast, in the North the most common facility is a pit latrine without slab or an open pit. 54 percent of the population in the Western Area uses a pit latrine with slab.

<p>Millennium Development Goal</p> <p><u>Indicator</u> Population with access to safe drinking water</p> <p><u>Goal</u> 82.5 percent by 2015</p>

Discussion: Water and Sanitation

The MICS3 estimates of Sierra Leonean population's access to improved sources of drinking water (47 percent) and sanitation facilities (30 percent) are lower than previous estimates. Enumerators were carefully trained on the different definitions of improved water and sanitation facilities and may have collected more accurate data than has been collected in the past.

Other reasons that the MICS3 estimates may be lower than previous estimates include the following:

1. There has been a gradual movement of population from urban (where improved sources are more readily available) to rural locations following the end of the conflict. The MICS2 survey was conducted in 2000 at the height of the war, when many people had moved temporarily to urban locations. There was massive destruction of water and sanitation facilities during the war until it ended in 2002.
2. Interviewers' access to remote and rural locations (where improved sources of water and sanitation are less readily available) in MICS2 was limited, which may have led to an overestimation of access to improved sources of water and sanitation in that survey.

The results above suggest that policy makers should consider allocating resources to provide potable water to rural communities while emphasizing sustainability through support to community-based water system maintenance structures. Water and sanitation programs in Sierra Leone should emphasize both the development of improved water sources as well as raising the public's awareness regarding good hygiene practices.

Policy makers should consider revitalizing and enforcing the GoSL act that stipulates that a house owner must first construct a latrine before building a house. Policies that provide incentives for the private sector to produce materials used to build basic sanitation facilities (e.g., latrine slabs, etc.) may also contribute to the improvement of the public's access to improved sanitary facilities. Programs that promote and facilitate the construction of low-cost family latrines in rural communities would help to raise the low level of households with access to improved sanitary facilities.

CONTRACEPTION

Key indicators	Estimates (percent)		West-Central Africa ⁸
	2005 (MICS3)	2000 (MICS2)	1996-2004
Contraceptive prevalence	5	4	17

Current use of contraception was reported by only 5 percent of women currently married or in union (Table 13). The most popular method is the pill which is used by 3 percent of married women in Sierra Leone. The next most popular method are injectable contraceptives which are used by 2 percent of married women.

Contraceptive prevalence is highest in the Western Area at 20 percent and ranges from two to four percent in the remaining regions. Adolescents are less likely to use contraception than older women. Only about 2 percent of married or in-union women aged 15-19 currently use a method of contraception compared to 4 percent of 20-24 year olds and a slightly higher percentage of older women.

Women's education level is strongly associated with contraceptive prevalence. 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 to 20 percent among women with secondary or higher education. The method mix is fairly constant across the different strata of women's educational status.

Discussion: Contraception

The astonishingly low contraceptive prevalence in Sierra Leone contributes directly to high birth rates as well as high rates of child and maternal mortality. The contraceptive prevalence in Sierra Leone even lags behind the low norms of the region (17 percent), suggesting that adequate efforts have not been made in Sierra Leone to promote contraception. Barriers to higher use of contraception in Sierra Leone include low awareness of the need for contraception, poor availability of contraceptives, and negative cultural perceptions regarding contraceptives.

The promotion and provision of contraceptives must be integrated into all appropriate aspects of the health services, particularly delivery, postnatal and outreach services. Research is needed in order to identify barriers to contraception use, messages that will effectively increase demand for

⁸ Source: SOWCR 2006.

contraceptives, types of contraceptives that Sierra Leoneans find acceptable, and culturally acceptable mechanisms to supply contraceptives to those who need them.

ASSISTANCE AT DELIVERY

Key indicators	Estimates (percent)		West-Central Africa ⁹
	2005 (MICS3)	2000 (MICS2)	1996-2004
Skilled attendant at delivery	43	42	45
Institutional deliveries	19	--	--

The provision of delivery assistance by skilled attendants can greatly improve outcomes for mothers and infants through the use of technically appropriate procedures as well as 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.

About 43 percent of births in Sierra Leone occurring in the year prior to the MICS survey were attended by skilled personnel (Table 14). This percentage is highest in the Western Area at 83 percent and lowest in the North at 25 percent. The more educated a woman is, the more likely she is to have delivered with the assistance of a skilled birth attendant. Increasing wealth is clearly associated with increasing use of skilled birth attendants.

Thirty-eight percent of births in Sierra Leone during the year prior to the MICS survey were delivered with assistance of a nurse or midwife. Auxiliary midwives attended 3 percent of births while doctors assisted with the delivery of 2 percent of births. The relative proportions of different types of skilled birth attendants used were similar across the four regions and varied primarily in magnitude. Among unskilled birth attendants, the most commonly used included traditional birth attendants (37 percent) and relative/friend (14 percent).

An estimated eighteen percent of all deliveries in Sierra Leone take place in health institutions, reflecting the low access of the population to health facilities where deliveries can be managed.

Discussion: Assistance at Delivery

The percentage of births attended by skilled birth attendants (SBAs) in Sierra Leone remains unchanged since last measured in 2000 and is in line with the regional value of 45 percent. Access to SBAs and health delivery services in institutions in Sierra Leone is limited by financial barriers (payments must be made to providers, even though delivery services are theoretically free of charge), difficulties reaching health facilities, perceptions that care is of poor quality, and a cultural preference for home births.

Policy makers in Sierra Leone need to finalize and ratify the Safe Motherhood Initiative policy that, among other things, stipulates that mother-friendly facilities should be developed. Health officials and administrators need to ensure that policies providing special facilities to vulnerable groups are achieved in the field. Health workers must receive supportive supervision to

⁹ Source: SOWCR 2006.

strengthen the quality of the services they provide and adequate remuneration if they are not to seek under-the-table payments for delivery.

PRIMARY SCHOOL ATTENDANCE

Key indicators	Estimates		West-Central Africa ¹⁰
	2005 (MICS3)	2000 (MICS2)	1996-2004
Net primary school attendance rate (%)	69	42	55
Gender parity index: ratio of girls : boys (primary; secondary)	1.01; 0.78	--	0.86; 0.8

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

Overall, 69 percent of children of primary school age in Sierra Leone are attending primary school or secondary school (Table 15). In urban areas, 85 percent of children attend school while in rural areas 63 percent attend. School attendance is highest in the Western Area at 89 percent and elsewhere ranges from 63 percent in the North to 72 percent in the East. There is no meaningful difference between male and female primary school attendance at any level or within any strata.

Millennium Development Goal

Indicator

Net primary school attendance rate

Goal

100 percent by 2015

The ratio of girls to boys attending primary and secondary education is provided in Table 16. The table shows that gender parity for primary school is 1.01, indicating virtually no difference in the attendance of girls and boys to primary school. However, the indicator drops to 0.78 at the national level for secondary education. This represents a rural/urban and rest-of-the-country/Freetown divide; the ratio is 0.64 in all three regions other than the Western Area (where it is 0.90) and 0.56 in rural areas as opposed to 0.82 in urban areas. Increasing wealth status of households appears to be strongly associated with increases in gender parity for secondary school attendance.

Discussion: Primary School Attendance

Primary school attendance in Sierra Leone has increased dramatically over the past five years and has now surged ahead of the regional norm. This is most likely due to improved access to education in areas that were held by the rebels at the time of the MICS2 survey as well as increased support to primary education throughout the country. Educational policy as it pertains to primary education appears to be achieving success and should be continued. Current policy calls for an effective coordination mechanism to be established as responsibility for educational

¹⁰ Source: SOWCR 2006.

programs is devolved from the Ministry of Education (MoE) to district and local councils. Organizations supporting primary education in Sierra Leone will need to work together with the government at all levels to ensure that the coordination mechanism functions effectively and resources are distributed equitably.

The gender parity index shows an encouraging situation at the primary level, with equivalent attendance rates for girls and boys. Although past figures are not available in Sierra Leone to assess trends, gender parity for primary education in Sierra Leone appears to be ahead of the rest of the region. Support for girls education has been strongest at the primary level and gender parity at the secondary level may have suffered as a result. The MoE needs to enforce the Girls Education policy—especially at the second and tertiary levels—and otherwise intensify efforts that promote secondary and tertiary-level girls education.

BIRTH REGISTRATION

Key indicators	Estimates (percent)		West-Central Africa ¹¹
	2005 (MICS3)	2000 (MICS2)	1999-2004
Birth registration	48	47	41

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 48 percent of children under-five years in Sierra Leone have been registered (Table 17). There are no significant variations in birth registration across sex or age categories. Increasing mother's education status is positively associated with birth registration status. Birth registration status varies sharply by region; the highest level of birth registration is found in the South (72 percent), followed by the West (67 percent), the East (45 percent), and the North (29 percent). Caretakers whose children's births had not been registered were asked why; common responses include "costs too much" (21 percent), "must travel too far" (15 percent), "didn't know child should be registered" (33 percent), and "doesn't know where to register" (20 percent).

Discussion: Birth Registration

Little progress has been made in birth registration in Sierra Leone over the past five years. The government should implement the official policy to integrate birth registration into the BCG vaccination process—84 percent of infants receive the BCG vaccination by their first birthday, and registering the births of most or all of these infants would dramatically boost the percentage of births that are registered and strengthen this important aspect of child's rights..

¹¹ Source: SOWCR 2006.

EARLY MARRIAGE AND POLYGyny

Key indicators	Estimates (percent)		West-Central Africa ¹²
	2005 (MICS3)	2000 (MICS2)	1986-2004
Marriage before age 15, before age 18	27 / 62	--	-- / 45
Young women aged 15-19 currently married/in union	36	--	--
Polygyny	43	--	--

Child marriage is a violation of human rights, compromising the development of girls and often resulting in early pregnancy and social isolation, with little education and poor vocational training reinforcing the gendered nature of poverty. Women married at younger ages are more likely to dropout of school, experience higher levels of fertility, domestic violence, and maternal mortality.

The percentage of women married at various ages is provided in Table 18. Twenty-seven percent of women interviewed during the MICS3 were married before fifteen years of age. Among different age strata of respondents, this indicator is lowest among women currently aged 15-19 years (15 percent), indicating that the practice of early marriage in Sierra Leone is declining. The percentage of women married before fifteen years of age is highest in rural areas and in households that are poorer and where the mother's educational status is lower.

Sixty-two percent of all women interviewed during the MICS3 were married before eighteen years of age while thirty-six percent of women respondents currently aged 15-19 years reported that they were currently married or in union. The patterns of these two indicators among different sub-populations (e.g., rural/urban, by region, etc.) are similar to those described in the paragraph above for marriage below fifteen years of age.

Polygyny is widely practiced in Sierra Leone. Forty-three percent of the women interviewed during the MICS3 who are currently married or in union reported that their husband/partner has another wife. Among regions, the practice of polygyny is by far the lowest in the Western Area (12 percent)—in the remaining regions, it ranges from 38 percent in the East to 53 percent in the North. The percentage of women whose partners are in polygynous relationships increases with the increasing age category of the women. Increasing women's educational status is associated with a decreasing percentage of women reporting polygyny. Women in the highest wealth quintile report the lowest prevalence of polygyny (27 percent). The percentage of women reporting polygyny in the remaining four quintiles is similar, ranging from 43 to 46 percent.

Discussion: Early Marriage and Polygyny

The data presented above paint a disturbing picture of early marriage and widespread polygyny. Local experts concur that cultural norms, early pregnancy and forced marriage are all likely contributing factors to early marriage and polygyny in Sierra Leone.

Efforts to estimate the indicators reported above have only recently begun at the global level, and the MICS3 survey has generated the first estimate of many of these indicators in Sierra Leone.

¹² Source: [SOWCR 2006](#).

Levels of marriage before age 18 are higher in Sierra Leone than the regional average, suggesting that this aspect of child protection has been inadequately addressed by policy makers and program managers.

The Government of Sierra Leone's Child Rights Bill makes marriage below the age of 18 illegal. Concerned organizations need to advocate for the passage of this act. Although legislation alone will not eliminate early marriage, the Child Rights Bill is an important first step that establishes an age for informed consent and responsibility. Policies are also required to prevent or discourage children and young women from entering into polygynous unions. A woman's educational status is positively correlated with a reduced probability that she will marry early or be in a polygynous union, suggesting that efforts to promote education of girls and young women may contribute to reducing these practices.

KNOWLEDGE OF HIV/AIDS TRANSMISSION AND CONDOM USE

Key indicators	Estimates (percent)		West-Central Africa ¹³ 1998-2004
	2005 (MICS3)	2000 (MICS2)	
Comprehensive knowledge about HIV prevention among young people	18	--	18
➤ Knowledge of 3 ways of prevention	35	21	--
➤ Rejection of 3 misconceptions	24	19	--
Condom use with non-regular partners	20	--	--
Higher risk sex in the last year	43	--	--

One of the most important prerequisites for reducing the rate of HIV infection is accurate knowledge of how HIV is transmitted and strategies for preventing transmission.. Correct information is the first step toward raising awareness and giving young people the tools to protect themselves from infection. Misconceptions about HIV are common and can confuse young people and hinder prevention efforts. Populations in different countries are likely to have variations in misconceptions although some appear to be universal (for example, that sharing food can transmit HIV or that mosquito bites can transmit HIV).

Table 19 presents the percentage of women aged 15-49 years who know 2 ways of preventing HIV transmission. The level of this indicator is fairly low at 44 percent. Eighty-one per cent of women living in the Western Area know 2 prevention methods; among women in the other three regions, the percentage of women who know two prevention methods ranges from 34 percent in the North to 42 percent in the South. As expected, the percentage of women who know two prevention methods increases with the woman's education level and wealth status.

A key indicator used to measure countries' responses to the HIV epidemic is the proportion of young people 15-24 years who have comprehensive correct knowledge of HIV: that is, who 1) know two methods of preventing HIV, 2) reject two misconceptions regarding HIV, and 3) know that a healthy looking person can have HIV. Only 18 percent of young women in this age category in Sierra Leone have comprehensive correct knowledge of HIV. Among all women

¹³ Source: SOWCR 2006.

aged 15-49 years, level of education, residence, and wealth levels are all highly associated with the level of comprehensive correct knowledge of HIV.

Promoting safer sexual behaviour is critical for reducing HIV prevalence. The use of condoms during sex, especially with non-regular partners, is especially important for reducing the spread of HIV. Globally, over half of new HIV infections are among young people 15-24 years; a change in behavior among this age group will thus be especially important to reduce new infections.

Condom use during sex with men other than husbands or live-in partners (non-marital, non-cohabiting men) was assessed in women 15-24 years of age who had sex with such a partner in the previous year (Table 20). Forty-three percent of women 15-24 years report having sex with a non-regular partner in the 12 months prior to the MICS. Among those women, only one in five report having used a condom when they had sex with the high-risk partner. The use of a condom during high-risk sex in was highest among women aged 15-24 years in the Western Area (31 percent) and the North (21 percent) and lowest in the East (11 percent). Women with secondary or higher education, woman living in urban areas, and women in the highest wealth quintile were more likely to use a condom with such a partner.

Discussion: Knowledge of HIV/AIDS Transmission and Condom Use

None of the MICS3 indicators presented in this section have been measured previously in Sierra Leone. Two components of comprehensive knowledge about HIV/AIDS—knowledge of 3 ways of prevention and rejection of 3 misconceptions—were measured in both MICS2 and MICS3 and are presented in the table above. The resulting comparison shows that there is an observed improvement in each component, although the overall percentage of women with comprehensive knowledge remains disturbingly low. HIV/AIDS prevention can be most effectively addressed at the policy level through the establishment of policies that empower women, such as girls education, income generation, etc.. IEC programs that seek to educate the public about HIV/AIDS should attempt to improve knowledge about both prevention as well as misconceptions and should be gender-sensitive with a specific focus on women.

Two indicators presented in the table above highlight the finding that young women aged 15-24 in Sierra Leone are at substantial risk of contracting HIV. High percentages of women in this age group engage in high-risk sex without the protection of a condom. Experts in Sierra Leone note that a lack of information on HIV/AIDS, poverty, lack of life skills, peer pressure, and lack of access to condoms all contribute to this dismal finding. High-risk sexual activity among this important target group increases the spread of HIV and must be combated directly. Enhanced enforcement of the National Youth Policy and Child Rights Bill should contribute to addressing this problem. Information regarding HIV/AIDS should be integrated into educational curricula at all appropriate levels and IEC programs that promote delayed sex and use of condoms should be intensified.

In summary, the data presented above suggest that HIV/AIDS interventions in Sierra Leone should be more vigorously implemented with a specific focus on women.

ORPHANS AND VULNERABLE CHILDREN SCHOOL ATTENDANCE

Key indicators	Estimates (percent)		Sub-Saharan Africa ¹⁴
	2005 (MICS3)	2000 (MICS2)	1998-2004
School attendance of orphans versus non-orphans (double orphans per non-orphan)	0.82	.71	0.83

As the HIV epidemic progresses, more and more children are becoming orphaned and vulnerable due to HIV and AIDS. Children who are orphaned or living away from their parents may be at increased risk of neglect or exploitation if the parents are not available to assist them.

Monitoring the variations in educational outcomes for children who have lost both parents (i.e., double orphans) versus children whose parents are alive (and who live with at least one of these parents) is one way to ensure that children's rights are being met even after their parents have died or are no longer able to care for them.

In Sierra Leone, 1.4 percent of children aged 10-14 years have lost both parents (Table 21). Among those children, only 63 per cent are currently attending school. Among children ages 10-14 who have not lost a parent and who live with at least one parent, 81 percent are attending school. These two figures can be used to form a ratio—*double orphans to non-orphans school attendance ratio*—that has a value of 0.82. This would suggest that double orphans are disadvantaged compared to children who are not orphans with respect to their access to educational opportunities.

Discussion: Orphans and Vulnerable Children School Attendance

The school attendance rate of orphans in Sierra Leone is in line with norms for the continent and illustrates the disadvantages faced by orphans in accessing opportunities available to other, less vulnerable children. The GoSL and its partners should ensure that policy on Orphans and Vulnerable Children is being followed and that communities are actively involved in programs to support orphans and other disadvantaged children.

¹⁴ Source: SOWCR 2006.

IV. TABLES

Table 2: Results of household and individual interviews

Numbers of households, women and children under 5 by results of the household, women's and under-five's interviews, and household, women's and under-five's response rates, Sierra Leone, 2005

	Area		Region				Total
	Rural	Urban	East	North	South	West	
Sampled households	5625	2375	1850	2850	2000	1300	8000
Occupied households	5086	2039	1604	2602	1761	1158	7125
Interviewed households	5053	2025	1600	2564	1758	1156	7078
Household response rate	99.4	99.3	99.8	98.5	99.8	99.8	99.3
Eligible women	6624	2633	2281	3548	2202	1226	9257
Interviewed women	5334	2320	1586	2971	1907	1190	7654
Women response rate	80.5	88.1	69.5	83.7	86.6	97.1	82.7
Women's overall response rate	80.0	87.5	69.4	82.5	86.5	96.9	82.1
Eligible children under 5	4670	1234	1478	2273	1638	515	5904
Mother/Caretaker Interviewed	4076	1170	1149	2099	1485	513	5246
Child response rate	87.3	94.8	77.7	92.3	90.7	99.6	88.9
Children's overall response rate	86.7	94.2	77.5	91.0	90.5	99.4	88.3

Table 3: Child mortality

Infant and under-five mortality rates [based on North method], Sierra Leone, 2005

		Infant Mortality Rate*	Under-five Mortality Rate**
Sex	Male	172	283
	Female	143	249
Region	East	166	280
	North	149	252
	South	189	317
	West	79	126
Area	Rural	165	279
	Urban	123	207
Mother's education	None	165	279
	Primary	146	247
	Secondary+	100	164
Wealth index quintiles	Poorest	159	268
	Second	172	290
	Middle	161	272
	Fourth	168	283
	Richest	108	179
Religion	Christian	158	267
	Muslim	158	267
Total		158	267

* MICS indicator 2; MDG indicator 14

** MICS indicator 1; MDG indicator 13

Table 4: Child malnourishment

Percentage of under-five children who are severely or moderately undernourished, Sierra Leone, 2005

	Weight for age: % below -2 SD	Weight for age: % below -3 SD*	Height for age: % below -2 SD	Height for age: % below -3 SD**	Weight for height: % below -2 SD	Weight for height: % below -3 SD***	Weight for height: % above +2 SD	Number of children
Sex								
Male	31.6	8.5	41.0	20.7	10.1	2.2	2.8	1852
Female	29.5	8.5	38.1	19.2	7.7	1.8	2.9	1899
Region								
East	34.4	7.8	38.9	21.9	11.5	1.8	2.2	971
North	33.9	11.1	44.4	22.8	8.1	2.2	2.6	1227
South	27.4	7.2	39.2	17.1	8.6	2.0	2.6	1132
West	20.5	5.8	28.1	14.7	6.0	1.5	5.5	421
Area								
Rural	33.0	9.1	42.1	22.0	9.4	2.0	2.5	2813
Urban	23.1	6.6	31.9	13.8	7.3	1.7	3.7	938
Age								
< 6 months	4.0	.5	10.4	2.7	3.5	.8	10.6	376
6-11 months	31.9	11.3	22.5	8.1	14.5	2.8	2.6	412
12-23 months	45.7	14.1	46.7	21.8	16.2	3.4	2.4	822
24-35 months	34.4	9.9	45.2	23.7	7.7	1.3	1.7	778
36-47 months	29.3	7.2	50.4	28.6	5.3	1.9	1.1	802
48-59 months	21.5	3.4	37.7	19.7	4.6	1.1	2.4	553
Mother's education								
None	32.0	8.8	41.9	21.9	8.8	1.7	2.5	2901
Primary	27.5	8.1	32.6	13.5	10.8	3.0	3.3	433
Secondary	23.6	7.0	30.0	12.5	7.6	2.6	4.7	413
wealth index quintiles								
Poorest	37.0	9.5	43.8	24.1	8.9	2.7	3.0	732
Second	32.1	8.2	43.6	23.1	8.5	1.5	2.6	811
Middle	31.2	9.4	41.0	21.2	10.7	2.3	2.7	796
Fourth	29.6	8.5	41.1	17.7	7.5	1.6	1.9	768
Richest	21.6	6.5	26.1	12.5	8.8	1.7	4.3	644
Religion of Household Head								
Christian	26.7	8.7	35.0	19.2	8.9	2.1	3.9	760
Muslim	31.5	8.4	40.7	20.1	8.9	1.9	2.6	2984
Other/Missing	45.8	.0	45.8	45.8	.0	.0	.0	7
Total	30.6	8.5	39.6	19.9	8.9	2.0	2.8	3751

* MICS indicator 6; MDG indicator 4

** MICS indicator 7

*** MICS indicator 8

Table 5: Breastfeeding

Percent of living children according to breastfeeding status at each age group, Sierra Leone, 2005

	Children 0-3 months		Children 0-5 months		Children 6-9 months		Children 12-15 months		Children 20-23 months	
	Percent exclusively breastfed	Number of children	Percent exclusively breastfed *	Number of children	Percent receiving breastmilk and solid/mushy food **	Number of children	Percent breastfed***	Number of children	Percent breastfed ***	Number of children
Sex										
Male	8.8	148	6.6	243	54.8	203	89.8	181	62.7	138
Female	11.1	145	8.5	259	49.4	170	85.5	194	51.1	130
Region										
East	10.2	77	7.1	126	51.3	77	91.8	113	55.5	53
North	14.4	115	12.4	197	49.1	153	91.4	134	69.7	119
South	4.6	85	2.6	147	61.0	115	82.7	107	46.7	73
West	5.3	17	2.7	33	37.5	29	65.2	21	29.6	24
Area										
Rural	9.5	256	7.6	427	54.7	297	88.7	305	61.4	206
Urban	12.9	37	7.6	76	42.9	75	82.7	70	42.7	62
Mother's education										
None	10.9	240	8.5	414	53.7	300	88.6	305	61.9	210
Primary	6.9	32	4.4	49	47.3	39	82.1	41	43.2	27
Secondary	4.1	22	2.3	39	46.3	33	84.7	29	34.4	30
Non-standard curriculum	.	0	.	0	.	0	.	0	100.0	1
wealth index quintiles										
Poorest	14.5	75	11.0	117	63.2	69	90.2	79	58.7	45
Second	7.6	77	9.0	121	43.2	84	85.4	93	66.7	59
Middle	5.2	60	3.5	115	58.9	92	92.8	82	65.9	61
Fourth	13.0	50	8.0	92	51.1	85	84.3	69	48.2	65
Richest	9.1	31	5.0	57	41.3	43	83.7	52	41.2	39
Religion of Household Head										
Christian	17.1	53	12.9	85	45.5	70	89.7	67	44.5	50
Muslim	8.0	240	6.3	416	53.8	302	87.1	307	59.9	218
Other/Missing	100.0	1	50.0	2	100.0	1	100.0	1	.	0
Total	9.9	294	7.6	503	52.3	373	87.6	375	57.0	268

* MICS indicator 15

** MICS indicator 17

*** MICS indicator 16

Table 6: Vaccinations in first year of life

Percentage of children aged 12-23 months immunized against childhood diseases at any time before the survey and before the first birthday, Sierra Leone, 2005

	BCG *	DPT 1	DPT 2	DPT 3 **	Polio 0	Polio 1	Polio 2	Polio 3 ****	Measles ****	Yellow Fever**	All *****	None	Number of children aged 12-23 months
Vaccination card	49.6	47.1	42.7	37.2	43.2	48.5	44.0	38.3	33.2	30.7	28.0	.1	1074
Mother's report	36.3	34.9	33.9	25.4	23.2	38.5	35.8	25.8	42.7	43.9	25.6	10.8	1074
Either	85.9	82.0	76.5	62.6	66.4	87.0	79.9	64.0	75.9	74.5	53.6	10.9	1074
Vaccinated by 12 months of age	84.0	78.3	72.8	55.5	65.2	84.1	75.1	57.0	62.4	59.9	35.0	10.9	1074

* MICS Indicator 25

** MICS Indicator 26

*** MICS Indicator 27

**** MICS Indicator 28 ; MDG Indicator 15

***** MICS Indicator 31

Table 7: Antibiotic treatment of pneumonia

Percentage of children aged 0-59 months with suspected pneumonia who received antibiotic treatment, Sierra Leone, 2005

		Percentage of children aged 0-59 months with suspected pneumonia who received antibiotics in the last two weeks *	Number of children aged 0-59 months with suspected pneumonia in the two weeks prior to the survey
Sex	Male	21.2	294
	Female	20.7	276
Region	East	27.3	147
	North	13.3	212
	South	19.8	177
	West	47.4	34
Area	Rural	18.4	476
	Urban	33.9	94
Age	0-11 months	15.0	162
	12-23 months	28.4	136
	24-35 months	19.7	100
	36-47 months	20.4	105
	48-59 months	21.7	65
Mother's education	None	19.2	466
	Primary	26.0	64
	Secondary	33.0	41
wealth index quintiles	Poorest	19.8	128
	Second	17.5	140
	Middle	13.0	119
	Fourth	26.8	131
	Richest	36.1	53
Religion of Household Head	Christian	30.3	92
	Muslim	19.1	478
Total		20.9	570

* MICS indicator 22

Table 8: Solid fuel use

Percent distribution of households according to type of cooking fuel, and percentage of households used solid fuels for cooking, Sierra Leone, 2005

	Type of fuel used for cooking										Solid fuels for cooking *	Total	Number of households		
	Electricity	Natural gas	Biogas	Kero-sine	Coal/lignite	Charcoal	Wood	Straw/shrubs/grass	Agricultural crop residue	Other					
Region															
East	.0	.0	.0	.0	.0	4.4	95.3	.2	.0	.2	100.0	99.8	1593		
North	.0	.0	.0	.0	.0	.7	98.9	.1	.1	.3	100.0	99.7	2585		
South	.1	.0	.0	.1	.0	1.4	98.3	.0	.0	.2	100.0	99.7	1749		
West	.2	.1	.3	2.5	.2	40.6	55.6	.0	.0	.6	100.0	96.4	1150		
Area															
Rural	.0	.0	.0	.0	.0	.6	99.1	.1	.0	.2	100.0	99.8	5052		
Urban	.1	.0	.1	1.4	.1	27.0	70.5	.1	.0	.5	100.0	97.7	2026		
Education of household head															
None	.0	.0	.0	.2	.0	3.6	95.8	.1	.0	.3	100.0	99.6	4959		
Primary	.0	.0	.0	.2	.0	5.9	93.7	.0	.0	.2	100.0	99.7	621		
Secondary +	.3	.0	.2	1.4	.1	24.6	72.8	.1	.0	.4	100.0	97.7	1454		
Non-standard curriculum	.0	.0	.0	.0	.0	2.4	97.6	.0	.0	.0	100.0	100.0	41		
Missing/DK	.0	.0	.0	33.0	.0	33.0	34.1	.0	.0	.0	100.0	67.0	3		
Poorest	.0	.0	.0	.0	.0	.0	100.0	.0	.0	.0	100.0	100.0	1519		
Second	.0	.0	.0	.0	.0	.0	99.8	.1	.0	.1	100.0	99.9	1493		
Middle	.0	.0	.0	.0	.0	.0	99.7	.0	.0	.3	100.0	99.7	1341		
Fourth	.0	.0	.0	.1	.0	1.6	97.7	.1	.2	.5	100.0	99.5	1319		
Richest	.3	.1	.2	2.1	.1	39.6	56.9	.1	.0	.6	100.0	96.7	1407		
Religion of Household Head															
Christian	.0	.0	.1	.7	.1	13.6	85.0	.1	.1	.4	100.0	98.9	1601		
Muslim	.1	.0	.0	.3	.0	6.6	92.6	.1	.0	.2	100.0	99.3	5458		
Other/Missing	.0	.0	.0	.0	.0	.0	89.5	.0	.0	10.5	100.0	89.5	19		
Total	.1	.0	.0	.4	.0	8.2	90.9	.1	.0	.3	100.0	99.2	7078		

* MICS indicator 24; MDG indicator 29

Table 9: Children sleeping under bednets

Percentage of children aged 0-59 months that slept under an insecticide treated net during the previous night, Sierra Leone, 2005

		Slept under a bednet *	Slept under an insecticide treated net **	Slept under an untreated net	Slept under a net but don't know if treated	Don't know if slept under a net	Did not sleep under a bednet	Number of children aged 0-59 months
Sex	Male	20.6	5.4	14.5	.8	.5	78.8	2605
	Female	19.8	5.2	13.6	1.0	.4	79.8	2639
Region	East	13.2	6.7	6.5	.1	.4	86.4	1300
	North	27.2	6.0	19.6	1.6	.7	72.1	2040
	South	21.3	4.2	16.5	.7	.3	78.3	1444
	West	5.5	1.8	3.5	.2	.2	94.3	460
Area	Rural	21.7	5.3	15.5	.9	.5	77.8	4144
	Urban	14.5	5.3	8.6	.6	.5	85.0	1101
Age	0-11 months	24.8	7.4	16.5	.9	.4	74.9	1016
	12-23 months	21.2	6.3	13.8	1.2	.5	78.3	1074
	24-35 months	20.0	5.1	14.1	.8	.6	79.4	1069
	36-47 months	18.0	4.6	12.7	.7	.6	81.4	1181
	48-59 months	17.0	2.9	13.4	.7	.3	82.7	884
wealth index quintiles	Poorest	14.1	3.7	9.4	1.1	.4	85.5	1109
	Second	19.2	4.2	13.9	1.0	.6	80.2	1231
	Middle	26.6	5.7	20.0	.9	.5	72.9	1156
	Fourth	22.1	6.4	15.1	.6	.6	77.4	1020
	Richest	18.5	7.5	10.5	.5	.3	81.2	729
Religion of Household Head	Christian	14.7	5.6	8.4	.8	.4	84.9	995
	Muslim	21.5	5.2	15.4	.9	.5	78.0	4240
	Other/Missing	32.0	21.3	.0	10.7	.0	68.0	9
Total		20.2	5.3	14.1	.9	.5	79.3	5245

* MICS indicator 38

** MICS indicator 37; MDG indicator 22

Table 10: Treatment of children with anti-malarial drugs
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, 2005

Note: this table is presented over two pages due to its large size

	Had a fever in last two weeks	Number of children aged 0-59 months	Children with a fever in the last two weeks who were treated with:						Any appropriate anti-malarial drug within 24 hours of onset of symptoms *	Number of children with fever in last two weeks
			Anti-malarials: SP/Fansidar	Anti-malarials: Chloroquine	Anti-malarials: Armodiaquine	Anti-malarials: Quinine	Anti-malarials: Artemisinin based combinations	Anti-malarials: Quinine		
Sex	Male	2605.2	1.1	46.5	1.6	4.4	0.9	45.7	924	
	Female	2639.5	1.3	45.8	2.2	6.1	1.4	44.3	906	
Region	East	1300.0	1.0	54.3	4.4	11.9	2.6	53.9	455	
	North	2040.0	1.1	40.3	1.0	1.6	0.6	35.3	789	
	South	1444.4	1.2	50.6	1.2	6.0	0.6	52.9	469	
	West	460.3	2.3	35.9	0.8	0.8	1.5	44.3	118	
Area	Rural	4143.9	0.7	45.7	1.8	5.1	0.7	44.0	1451	
	Urban	1100.7	3.0	47.7	2.1	6.0	3.1	49.1	379	
Age	0-11	1015.9	0.0	43.6	2.3	5.9	1.7	44.0	361	
	12-23	1074.4	1.5	50.6	2.9	5.8	1.6	49.9	437	
	24-35	1069.4	1.6	44.9	1.2	4.3	0.3	42.9	371	
	36-47	1181.1	1.5	46.5	1.4	4.8	1.5	45.5	380	
	48-59	884.4	1.1	44.4	1.5	5.0	0.7	41.4	275	
Mother's education	None	4226.4	0.8	43.8	1.8	5.0	0.8	42.2	1464	
	Primary	541.4	2.8	57.5	1.6	7.6	2.0	53.7	206	
	Secondary	472.8	2.4	53.1	3.2	4.3	3.0	59.7	158	
wealth index quintiles	Poorest	1108.7	0.6	45.3	3.3	6.4	0.6	44.7	370	
	Second	1231.2	0.5	40.4	1.4	3.4	0.5	35.1	393	
	Middle	1155.8	0.7	43.6	1.0	3.9	1.2	42.2	434	
	Fourth	1019.6	1.8	52.3	1.5	4.7	0.7	52.2	387	
	Richest	729.3	3.2	51.2	2.8	9.7	3.6	54.9	246	
Religion of Household Head	Christian	995.4	1.4	55.5	4.0	7.4	0.8	55.5	340	
	Muslim	4240.1	1.1	44.0	1.4	4.8	1.2	42.6	1487	
Total	34.9	5244.7	1.2	46.1	1.9	5.2	1.2	45.0	1830	

Table 10: Treatment of children with anti-malarial drugs (continued from previous page)

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, 2005

		Children with a fever in the last two weeks who were treated with:										
		Anti-malarials: Other Anti-malarial	Any appropriate anti-malarial drug	Other medications:			Other medications:			Other medications:	Any appropriate anti-malarial drug within 24 hours of onset of symptoms *	Number of children with fever in last two weeks
		malarial	drug	Paracetamol/ Panadol/ Acetaminophan	Aspirin	Ibuprofen	Other medications:	Other medications:	Other medications:	Don't know		
Sex	Male	3.9	51.9	69.5	23.9	1.3	25.0	6.6	45.7	924		
	Female	3.9	51.8	66.6	18.2	2.4	25.1	7.4	44.3	906		
Region	East	3.1	61.0	73.6	23.8	0.8	25.3	3.5	53.9	455		
	North	3.2	44.8	59.4	19.8	1.0	19.2	12.0	35.3	789		
	South	4.4	56.6	76.6	23.6	4.8	30.3	3.1	52.9	469		
	West	9.9	45.0	71.0	8.4	0.0	42.0	2.3	44.3	118		
Area	Rural	2.7	50.4	65.6	20.3	1.8	22.7	8.2	44.0	1451		
	Urban	8.5	57.6	77.4	23.9	2.0	33.7	2.5	49.1	379		
Age in Months	0-11	5.8	50.9	63.8	20.3	1.1	26.6	10.4	44.0	361		
	12-23	2.7	56.8	69.1	21.7	1.4	23.8	6.9	49.9	437		
	24-35	3.6	49.0	67.9	21.5	1.8	26.0	5.6	42.9	371		
	36-47	4.1	52.1	70.5	19.8	2.9	28.0	5.8	45.5	380		
Mother's education	48-59	3.5	49.7	69.5	22.1	2.2	20.1	6.0	41.4	275		
	None	3.4	48.7	66.6	19.5	1.8	23.0	8.0	42.2	1464		
	Primary	2.4	63.3	73.2	27.7	3.3	32.5	4.9	53.7	206		
wealth index quintiles	Secondary	10.7	66.5	74.5	26.1	0.0	33.5	0.6	59.7	158		
	Poorest	2.7	49.1	61.8	20.0	1.6	23.6	8.6	44.7	370		
	Second	1.8	43.8	59.8	17.1	0.7	21.4	8.9	35.1	393		
	Middle	2.8	48.8	69.4	23.3	2.4	22.4	8.2	42.2	434		
	Fourth	4.5	58.6	73.8	20.8	2.3	25.1	5.6	52.2	387		
Religion of HH Head	Richest	10.0	63.5	79.5	25.1	2.4	37.6	1.5	54.9	246		
	Christian	5.8	62.0	73.6	25.6	2.0	23.5	3.4	55.5	340		
Total	Muslim	3.5	49.6	66.8	20.0	1.8	25.4	7.8	42.6	1487		
	Total	3.9	51.9	68.1	21.0	1.8	25.0	7.0	45.0	1830		

MICS indicator 39; MDG indicator 22

Table 11: Use of improved water sources

Percent distribution of household population according to main source of drinking water and percentage of household members using improved drinking water sources, Sierra Leone, 2005 (Note: this table is presented over two pages due to its large size)

	Piped into dwelling	Piped into yard or plot	Public tap/standpipe	Improved sources					Improved source of drinking water	Number of household members
				Tubewell/borehole	Protected well	Rainwater collection	Protected spring			
Region										
East	0.5	3.7	14.9	5.4	26.8	0.0	0.4	51.8	9793	
North	0.3	0.6	4.7	2.5	20.9	0.2	0.9	30.2	17282	
South	0.0	0.0	9.0	16.8	19.3	0.0	0.9	46.0	9798	
West	9.5	28.1	39.6	0.0	7.9	0.0	1.5	86.6	5846	
Area										
Rural	0.1	0.9	6.7	7.5	15.9	0.1	0.6	31.8	30626	
Urban	5.2	15.1	28.3	2.6	30.8	0.0	1.5	83.6	12092	
None	0.6	2.8	9.7	5.7	18.6	0.1	0.8	38.3	30563	
Primary	0.9	3.9	13.0	9.4	23.7	0.1	0.8	51.9	3669	
Secondary +	5.6	13.7	24.4	5.8	24.0	0.0	1.3	74.8	8196	
Non-standard curriculum	0.0	0.0	8.4	12.8	22.3	0.0	0.0	43.6	272	
Missing/DK	25.8	15.5	0.0	0.0	58.7	0.0	0.0	100.0	19	
wealth index quintiles										
Poorest	0.0	0.0	0.9	2.6	7.0	0.0	0.2	10.8	8542	
Second	0.0	0.1	4.2	5.1	13.4	0.0	0.5	23.3	8544	
Middle	0.1	0.8	7.4	11.0	23.4	0.2	0.6	43.5	8542	
Fourth	0.1	2.9	20.1	9.1	30.0	0.1	1.3	63.7	8546	
Richest	7.6	20.9	31.4	2.7	26.8	0.1	1.7	91.2	8545	
Religion of Household Head										
Christian	2.8	7.0	15.0	5.1	16.1	0.2	1.3	47.5	9143	
Muslim	1.2	4.4	12.2	6.4	21.2	0.0	0.8	46.2	33482	
Other/Missing	0.0	0.0	10.8	0.0	29.0	0.0	0.0	39.8	93	
Total	1.6	4.9	12.8	6.1	20.1	0.1	0.9	46.5	42719	

MICS indicator 11; MDG indicator 30

Table 11: Use of improved water sources (continued from previous page)

Percent distribution of household population according to main source of drinking water and percentage of household members using improved drinking water sources, Sierra Leone, 2005

	Unimproved sources										Unimproved source of drinking water	Number of household members
	Unprotected well	Unprotected spring	Tanker-truck	Cart with small tank/drum	Surface water	Bottled water	Other					
Region	7.8	8.8	0.0	0.0	31.3	0.3	0.0	0.0	0.0	0.0	48.2	9793
East	10.7	4.6	0.0	0.1	54.1	0.1	0.1	0.1	0.1	0.1	69.8	17282
North	7.7	9.9	0.0	0.1	36.3	0.0	0.0	0.0	0.0	0.0	54.0	9798
South	3.6	2.4	0.0	0.0	5.9	0.0	0.0	1.5	0.0	0.0	13.4	5846
West	8.8	8.5	0.0	0.1	50.7	0.1	0.1	0.1	0.1	0.1	68.2	30626
Rural	7.3	1.4	0.0	0.1	6.5	0.3	0.7	0.7	0.7	0.7	16.4	12092
Urban	9.3	7.0	0.0	0.1	45.1	0.2	0.2	0.2	0.2	0.2	61.7	30563
None	6.4	7.4	0.0	0.2	34.1	0.0	0.0	0.1	0.1	0.1	48.1	3669
Primary	6.1	4.5	0.0	0.1	13.7	0.1	0.1	0.1	0.1	0.1	25.2	8196
Secondary +	4.4	0.0	0.0	0.0	52.0	0.0	0.0	0.0	0.0	0.0	56.4	272
Non-standard curriculum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19
Missing/DK	7.8	11.8	0.0	0.1	69.4	0.1	0.1	0.1	0.1	0.1	89.2	8542
Poorest	7.9	8.0	0.0	0.0	60.7	0.1	0.1	0.1	0.1	0.1	76.7	8544
Second	12.0	6.7	0.0	0.1	37.4	0.1	0.1	0.1	0.1	0.1	56.5	8542
Middle	10.3	4.8	0.0	0.2	20.5	0.4	0.2	0.2	0.2	0.2	36.3	8546
Fourth	3.9	1.0	0.0	0.1	2.9	0.0	0.1	0.1	0.1	0.1	8.8	8545
Richest	5.6	7.5	0.0	0.1	39.0	0.1	0.1	0.1	0.1	0.1	52.5	9143
Christian	9.2	6.2	0.0	0.1	37.9	0.1	0.1	0.1	0.1	0.1	53.8	33482
Muslim	0.0	10.7	0.0	0.0	49.5	0.0	0.0	0.0	0.0	0.0	60.2	93
Other/Missing	8.4	6.5	0.0	0.1	38.2	0.1	0.1	0.1	0.1	0.1	53.5	42719
Total												

MICS indicator 11; MDG indicator 30

Table 12: Use of sanitary means of excreta disposal

Percent distribution of household population according to type of toilet used by the household and the percentage of household members using sanitary means of excreta disposal, Sierra Leone, 2005

	Improved sanitation facility							Percentage of population using sanitary means of excreta disposal *	Number of households members
	Flush to piped sewer system	Flush to septic tank	Flush to pit (latrine)	Ventilated Improved Pit latrine (VIP)	Pit latrine with slab	Composting toilet			
Region	East 0.00	0.85	1.44	0.85	16.38	0.00	19.52	9792.6	
	North 0.14	0.12	0.25	0.95	20.59	0.30	22.36	17282	
	South 0.00	0.77	0.26	0.40	30.43	0.00	31.86	9797.7	
	West 3.69	10.65	2.02	0.41	53.81	0.00	70.59	5846.3	
Area	Rural 0.10	0.14	0.20	0.89	15.63	0.17	17.12	30626	
	Urban 1.74	6.29	2.21	0.33	53.78	0.00	64.35	12092	
	None 0.08	0.56	0.27	0.62	21.03	0.17	22.73	30563	
Education of household head	Primary 0.00	1.25	0.65	1.53	29.15	0.00	32.58	3668.7	
	Secondary + 2.48	7.13	2.72	0.80	45.06	0.00	58.20	8195.9	
	Non-standard curriculum 2.20	0.00	0.00	0.00	31.49	0.00	33.69	271.75	
	Missing/DK 25.81	0.00	0.00	0.00	74.19	0.00	100.00	19.279	
wealth index quintiles	Poorest 0.00	0.00	0.00	0.48	0.46	0.14	1.08	8542.2	
	Second 0.01	0.00	0.00	0.84	5.64	0.21	6.70	8544.5	
	Middle 0.00	0.00	0.00	0.95	20.58	0.11	21.64	8541.8	
	Fourth 0.05	0.11	0.40	1.09	41.87	0.15	43.66	8545.6	
	Richest 2.75	9.29	3.45	0.28	63.58	0.00	79.35	8544.8	
Religion of Household Head	Christian 1.45	3.80	1.10	1.50	26.71	0.00	34.57	9143.2	
	Muslim 0.32	1.36	0.68	0.52	26.35	0.16	29.38	33482	
Total	0.56	1.88	0.77	0.73	26.43	0.12	30.49	42719	

* MICS Indicator 12; MDG Indicator 31

Table 13: Use of sanitary means of excreta disposal

Percent distribution of household population according to type of toilet used by the household and the percentage of household members using sanitary means of excreta disposal, Sierra Leone, 2005

	Unimproved sanitation facility						Percentage of population using sanitary means of excreta disposal *	Number of households members
	Flush to somewhere else	Pit latrine without slab/open pit	Bucket	Hanging toilet/hanging latrine	No facilities or bush or field	Other		
Region								
	0.00	30.03	0.00	9.35	40.49	0.60	19.52	9793
	0.06	45.57	0.04	2.62	25.74	3.56	22.36	17282
	0.08	12.28	0.00	0.91	51.64	3.22	31.86	9798
	0.99	24.24	0.00	0.31	2.88	1.00	70.59	5846
Area								
	0.11	33.69	0.02	3.88	42.19	2.97	17.12	30626
	0.35	25.79	0.00	2.38	5.96	1.16	64.35	12092
	0.09	34.08	0.02	3.68	36.42	2.94	22.73	30563
	0.27	26.74	0.00	3.20	35.33	1.88	32.58	3669
Education of household head								
	0.49	23.99	0.00	2.86	13.61	0.86	58.20	8196
	0.00	26.74	0.00	0.00	35.90	3.66	33.69	272
	0.00	29.03	0.00	3.21	64.31	2.38	1.08	8542
	0.00	34.69	0.00	3.39	51.90	3.31	6.70	8544
	0.05	41.60	0.08	6.61	25.97	3.94	21.64	8542
	0.12	33.93	0.00	3.84	16.34	2.10	43.66	8546
	0.72	18.01	0.00	0.23	1.15	0.54	79.35	8545
Religion of Household Head								
	0.24	26.28	0.08	2.16	35.03	1.64	34.57	9143
	0.16	32.87	0.00	3.82	31.08	2.67	29.38	33482
Total	0.18	31.45	0.02	3.46	31.93	2.45	30.49	42719

* MICS Indicator 12: MDG Indicator 31

Table 14: Use of contraception

Percentage of women aged 15-49 years married or in union who are using (or whose partner is using) a contraceptive method, Sierra Leone, 2005

	Not using any method	Female steril		Male steril		Pill	IUD	Inject	Impl	Cond	Diap/foam/jelly	LAM	# of women 15-49
		0.1	0.0	0.0	2.6								
East	96.2	0.1	0.0	0.0	2.6	0.0	0.0	0.7	0.0	0.0	0.1	0.0	1476
North	95.6	0.0	0.0	0.0	1.4	0.0	0.0	0.8	0.0	0.0	0.0	1.4	2509
South	98.0	0.1	0.0	0.0	1.2	0.0	0.0	0.8	0.0	0.0	0.0	0.0	1483
West	79.7	0.1	0.0	0.0	9.6	0.4	7.5	0.8	1.3	0.0	0.0	0.0	609
Rural	97.7	0.0	0.0	0.0	0.8	0.0	0.4	0.0	0.0	0.0	0.0	0.7	4707
Urban	84.4	0.1	0.0	0.0	8.1	0.3	5.0	0.4	0.6	0.2	0.2	0.2	1369
15-19	98.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.3	0.0	0.0	0.8	396
20-24	96.3	0.0	0.0	0.0	2.0	0.0	0.5	0.0	0.0	0.0	0.0	0.8	871
25-29	95.8	0.1	0.0	0.0	1.8	0.1	1.0	0.1	0.2	0.1	0.1	0.4	1587
30-34	91.1	0.0	0.0	0.0	4.2	0.0	3.3	0.2	0.3	0.1	0.7	0.7	1053
35-39	94.1	0.1	0.1	0.1	3.5	0.0	1.2	0.1	0.1	0.0	0.0	0.5	1145
40-44	94.1	0.2	0.0	0.0	1.8	0.3	1.9	0.1	0.0	0.0	0.0	0.8	642
45-49	96.3	0.2	0.0	0.0	1.3	0.0	2.0	0.2	0.0	0.0	0.0	0.0	384
Age													
0	98.5	0.0	0.0	0.0	0.7	0.0	0.0	0.3	0.0	0.0	0.0	0.3	586
1	96.5	0.0	0.0	0.0	1.8	0.1	0.5	0.1	0.2	0.0	0.0	0.4	931
2	93.6	0.0	0.0	0.0	3.2	0.1	1.8	0.2	0.1	0.0	0.0	0.8	1150
3	93.2	0.1	0.0	0.0	3.1	0.0	1.8	0.2	0.4	0.2	0.2	0.7	1049
4+	94.3	0.1	0.0	0.0	2.5	0.0	1.8	0.0	0.0	0.0	0.0	0.6	2361
None	96.6	0.0	0.0	0.0	1.4	0.0	0.8	0.1	0.1	0.0	0.0	0.6	4973
Primary	92.2	0.0	0.0	0.0	3.3	0.0	3.0	0.3	0.3	0.0	0.0	0.5	557
Secondary +	79.7	0.4	0.0	0.0	11.7	0.7	5.7	0.2	0.6	0.4	0.0	0.0	536
Poorest	98.0	0.1	0.0	0.0	0.3	0.0	0.6	0.0	0.0	0.0	0.0	0.7	1248
Second	99.0	0.1	0.0	0.0	0.3	0.0	0.2	0.0	0.0	0.0	0.0	0.2	1365
Middle	97.5	0.0	0.0	0.0	1.2	0.0	0.5	0.0	0.1	0.0	0.0	0.5	1311
Fourth	93.1	0.0	0.1	0.1	2.9	0.0	1.8	0.1	0.3	0.0	0.0	1.3	1176
Richest	82.9	0.2	0.0	0.0	9.3	0.4	5.2	0.5	0.4	0.2	0.2	0.2	976
wealth index quintiles													
Christian	91.7	0.3	0.0	0.0	4.4	0.3	2.2	0.2	0.1	0.0	0.0	0.2	1186
Muslim	95.5	0.0	0.0	0.0	2.0	0.0	1.3	0.1	0.2	0.0	0.0	0.7	4875
Household Head													
Total	94.7	0.1	0.0	0.0	2.5	0.1	1.4	0.1	0.1	0.1	0.0	0.6	6077

* MICS indicator 21; MDG indicator 19C

Table 15: Use of contraception

Percentage of women aged 15-49 years married or in union who are using (or whose partner is using) a contraceptive method, Sierra Leone, 2005

	Period abstain	With-draw	Other	Any modern	Any trad	Any method	Number of women currently married or in union
East	0.1	0.1	0.2	3.5	0.3	3.8	1476
North	0.0	0.0	0.5	2.4	2.0	4.4	2509
South	0.0	0.0	0.0	2.0	0.0	2.0	1483
West	0.1	0.0	0.4	19.8	0.6	20.3	609
Rural	0.0	0.0	0.2	1.3	1.0	2.3	4707
Urban	0.1	0.0	0.6	14.7	0.9	15.6	1369
15-19	0.0	0.0	0.5	0.7	1.2	2.0	396
20-24	0.0	0.1	0.2	2.5	1.2	3.7	871
25-29	0.1	0.0	0.3	3.3	0.9	4.2	1587
30-34	0.0	0.0	0.2	8.1	0.8	8.9	1053
35-39	0.1	0.0	0.2	5.1	0.8	5.9	1145
40-44	0.0	0.0	0.9	4.2	1.7	5.9	642
45-49	0.0	0.0	0.0	3.7	0.0	3.7	384
0	0.0	0.0	0.2	1.0	0.5	1.5	586
1	0.1	0.1	0.1	2.7	0.8	3.5	931
2	0.0	0.0	0.2	5.4	0.9	6.4	1150
3	0.1	0.0	0.3	5.8	1.0	6.8	1049
4+	0.0	0.0	0.5	4.6	1.1	5.7	2361
None	0.0	0.0	0.3	2.4	1.0	3.4	4973
Primary	0.0	0.0	0.3	6.9	0.9	7.8	557
Secondary +	0.4	0.0	0.4	19.6	0.7	20.3	536
Poorest	0.1	0.1	0.1	1.0	1.0	2.0	1248
Second	0.0	0.0	0.2	0.6	0.4	1.0	1365
Middle	0.0	0.0	0.3	1.7	0.8	2.5	1311
Fourth	0.0	0.0	0.5	5.2	1.8	6.9	1176
Richest	0.2	0.0	0.5	16.2	0.9	17.1	976
Christian	0.2	0.1	0.3	7.5	0.8	8.3	1186
Muslim	0.0	0.0	0.3	3.6	1.0	4.5	4875
Total	0.0	0.0	0.3	4.3	1.0	5.3	6077

MICS indicator 21; MDG indicator 19C

Table 16: Assistance during delivery

Percent distribution of women aged 15-49 with a birth in two years preceding the survey by type of personnel assisting at delivery, Sierra Leone, 2005

	Person assisting at delivery								Delivered in health facility **	Number of women who gave birth in preceding two years	
	Medical doctor	Nurse/midwife	Auxiliary midwife	Traditional birth attendant	Community health worker	Relative/friend	Other/missing	No attendant			
Region											
East	1.8	61.6	3.2	25.5	1.4	3.7	0.8	1.9	66.6	26.4	561
North	2.4	20.4	2.2	43.3	1.9	25.1	1.5	3.3	25	13.7	976
South	1.6	34.4	4.3	45.7	1.7	8.1	2.4	1.9	40.2	15.3	672
West	6.2	71.5	5.2	9.3	0.5	5.2	0	2.1	82.9	34.2	166
Area											
Rural	1.6	30.4	2.8	44.3	1.7	15.2	1.5	2.5	34.8	15.5	1894
Urban	5	66.4	4.9	9.9	1.5	8.5	1.5	2.2	76.4	30.9	480
Age											
15-19	2.8	43.5	2.8	33.7	1.4	10.7	3.1	2.1	49	19.2	228
20-24	1.7	39.8	3.1	38.1	1.9	12.1	1.2	2.1	44.6	20.4	496
25-29	2.5	36.1	3.4	38.4	1.5	14.3	1.2	2.6	42	19.3	755
30-34	2.4	37.3	2.5	35.7	3.1	14	3	1.9	42.2	18.6	362
35-39	2.2	35	4.5	38.6	0.8	15	0	3.7	41.8	16.3	360
40-44	3.1	37.7	2.4	37	0	16	0.7	3.1	43.2	14.3	129
45-49	0	35.5	0	34.7	2.3	22.6	5	0	35.5	14.2	44
Education											
None	1.4	33.4	3.2	40.7	1.7	15.2	1.6	2.8	38	16.1	1919
Primary	3.9	49.1	2.6	30.3	0.4	10.3	1.8	1.6	55.5	25.8	231
Secondary +	8.4	63.2	4.1	16.2	2	4.3	1	0.9	75.7	33.6	218
wealth index quintiles											
Poorest	1.4	24	1.8	46.5	1.7	19.6	2.4	2.7	27.2	10.3	481
Second	1.3	30.7	2	45	2	15.7	1.4	1.9	34	12.6	546
Middle	1.5	33.3	2.7	41.8	1.5	14.3	1.3	3.5	37.5	20.3	529
Fourth	2.1	43.6	4.2	33.4	1.8	11.1	1.4	2.5	49.9	22.6	505
Richest	7.1	68.8	6.7	8.9	0.7	5.5	1	1.4	82.6	32.4	313
Religion of Household											
Christian	3.6	43.5	3.5	34.4	2.4	8.7	0.7	3.3	50.5	23.9	428
Muslim	2	36.5	3.1	37.9	1.5	14.9	1.7	2.3	41.7	17.5	1943
Total	2.3	37.7	3.2	37.4	1.6	13.8	1.5	2.5	43.2	18.6	2375

* MICS indicator 4; MDG indicator 17

** MICS indicator 5

Table 17: Primary school net attendance ratio

Percentage of children of primary school age attending primary school or secondary school (NAR), Sierra Leone, 2005

		Male		Female		Total	
		Net attendance ratio	Number of children	Net attendance ratio	Number of children	Net attendance ratio	Number of children
Region	East	71.6	804	72.3	831	72.0	1635
	North	63.0	1837	62.6	1653	62.8	3490
	South	67.1	853	68.3	799	67.7	1652
	West	89.3	510	88.6	508	89.0	1018
Area	Rural	62.7	2948	63.5	2712	63.1	5660
	Urban	86.4	1055	84.3	1080	85.3	2135
Age	6	53.1	792	54.8	774	53.9	1566
	7	62.7	771	69.6	706	66.0	1476
	8	72.0	697	71.6	702	71.8	1399
	9	79.6	522	75.9	541	77.7	1062
	10	74.7	824	73.7	744	74.3	1568
	11	81.1	398	78.8	325	80.1	723
Mother's education	None	65.0	3224	65.6	3061	65.3	6285
	Primary	81.6	352	84.1	321	82.8	673
	Secondary + Non-standard curriculum	89.5	420	87.0	409	88.3	828
	Missing/DK	20.0	5	.	0	20.0	5
		.0	2	50.0	2	25.0	4
wealth index quintiles	Poorest	53.8	842	55.0	754	54.4	1596
	Second	62.1	790	62.4	737	62.2	1527
	Middle	65.2	829	67.3	796	66.2	1625
	Fourth	78.3	815	74.8	730	76.7	1545
	Richest	87.5	728	87.3	774	87.4	1502
Religion of Household Head	Christian	70.3	834	74.3	849	72.3	1683
	Muslim	68.5	3162	68.1	2937	68.3	6099
	Other/Missing	71.6	7	33.4	6	54.0	13
Total		68.9	4003	69.4	3792	69.2	7795

* MICS indicator 55; MDG indicator 6

Table 18: Education gender parity

Ratio of girls to boys attending primary education and ratio of girls to boys attending secondary education, Sierra Leone, 2005

		Primary school net attendance ratio (NAR), girls	Primary school net attendance ratio (NAR), boys	Gender parity index (GPI) for primary school NAR*	Secondary school net attendance ratio (NAR), girls	Secondary school net attendance ratio (NAR), boys	Gender parity index (GPI) for secondary school NAR*
Region	East	72.3	71.6	1.01	11.0	17.2	.64
	North	62.6	63.0	1.00	8.2	12.8	.64
	South	68.3	67.1	1.02	9.2	14.6	.64
	West	88.6	89.3	.99	51.2	56.9	.90
Area	Rural	63.5	62.7	1.01	5.1	9.0	.56
	Urban	84.3	86.4	.98	36.3	44.4	.82
Mother's education	None	65.6	65.0	1.01	11.9	14.9	.80
	Primary	84.1	81.6	1.03	17.2	19.8	.87
	Secondary +	87.0	89.5	.97	42.4	50.4	.84
wealth index quintiles	Poorest	55.0	53.8	1.02	2.4	6.3	.38
	Second	62.4	62.1	1.01	3.5	7.5	.47
	Middle	67.3	65.2	1.03	5.1	9.9	.52
	Fourth	74.8	78.3	.96	16.7	23.8	.70
	Richest	87.3	87.5	1.00	41.2	47.4	.87
Religion of Household Head	Christian	74.3	70.3	1.06	19.2	29.0	.66
	Muslim	68.1	68.5	.99	16.1	19.3	.83
Total		69.4	68.9	1.01	16.8	21.4	.78

* MICS Indicator 61; MDG Indicator 9

Table 19: Birth registration

Percent distribution of children aged 0-59 months by whether birth is registered and reasons for non-registration, Sierra Leone, 2005

	Birth is registered *	Don't know if birth is registered	Number of children aged 0-59 months	Birth is not registered because:						Number of children aged 0-59 months without birth registration		
				Costs too much	Must travel too far	Didn't know child should be registered	Late, didn't want to pay fine	Doesn't know where to register	Other		Don't know	Missing
Sex												
Male	47.6	1.3	2605	21.4	13.5	32.6	3.1	20.1	7.8	1.6	.1	1331
Female	48.0	1.6	2639	20.0	16.0	32.8	3.3	19.7	6.6	1.5	.0	1329
Region												
East	44.6	1.3	1300	28.6	15.2	20.2	4.4	17.7	11.9	1.9	.0	704
North	28.6	1.6	2040	15.1	14.9	40.7	1.1	23.2	3.3	1.6	.0	1424
South	71.8	1.4	1444	23.1	16.1	34.9	7.0	13.1	5.3	.3	.3	387
West	67.3	1.4	460	30.4	6.8	8.7	8.1	16.2	26.7	3.1	.0	144
Area												
Rural	44.2	1.4	4144	19.4	15.5	34.2	3.0	20.5	6.0	1.4	.0	2253
Urban	61.5	1.5	1101	27.7	10.3	24.8	4.3	16.7	13.9	2.3	.0	407
Age												
0-11 months	44.4	1.0	1016	19.0	14.4	32.0	3.1	18.6	10.4	2.5	.0	555
12-23 months	49.8	.5	1074	20.9	13.7	35.6	3.1	19.1	5.8	1.8	.0	534
24-35 months	49.9	1.7	1069	20.0	14.3	33.7	2.6	21.2	7.1	1.2	.0	518
36-47 months	48.4	2.2	1181	24.9	13.4	31.3	3.8	19.5	6.2	.7	.2	583
48-59 months	46.3	1.8	884	18.2	18.8	30.1	3.4	21.6	6.4	1.5	.0	459
Mother's education												
None	44.9	1.5	4226	20.0	15.0	33.6	3.1	20.7	6.0	1.5	.0	2266
Primary	53.0	1.5	541	27.7	12.4	33.0	2.4	15.1	9.0	.4	.0	246
Secondary	68.4	.6	473	19.6	14.0	17.7	5.8	15.8	22.7	4.4	.0	147
wealth index quintiles												
Poorest	45.6	1.3	1109	18.9	16.0	35.1	3.3	18.4	6.7	1.7	.0	588
Second	45.3	1.9	1231	23.1	16.8	31.3	2.2	19.3	5.9	1.4	.0	650
Middle	44.3	1.3	1156	16.5	13.6	38.2	3.1	22.6	5.7	.3	.2	629
Fourth	46.4	1.5	1020	21.4	15.5	32.3	3.5	20.6	4.8	1.9	.0	531
Richest	63.1	1.0	729	27.4	8.0	18.5	5.3	17.1	20.0	3.7	.0	262
Religion of Household Head												
Christian	59.6	.8	995	30.0	22.8	13.8	5.3	16.2	10.8	1.0	.0	394
Muslim	45.1	1.6	4240	19.1	13.3	35.9	2.9	20.5	6.6	1.6	.0	2266
Total	47.8	1.4	5245	20.7	14.7	32.7	3.2	19.9	7.2	1.5	.0	2660

* MICS Indicator 62

Table 20: Early marriage and polygyny

Percentage of women aged 15-49 in marriage or union before their 15th birthday, percentage of women aged 20-49 in marriage or union before their 18th birthday, percentage of women aged 15-19 currently married or in union, and the percentage of married or in union women in a polygynous marriage or union, Sierra Leone, 2005

		Percentage married before age 15 *	Number of women aged 15-49 years	Percentage married before age 18 *	Number of women aged 20-49 years	Percentage of women 15-19 years married/in union **	Number of women aged 15-19 years	Percentage of women aged 15-49 years in polygynous marriage/union ***	Number of women aged 15-49 currently married/in union
Region	East	27.3	1839	62.5	1581	33.5	258	38.2	1476
	North	34.1	2965	69.4	2543	42.2	422	53.1	2509
	South	22.2	1820	63.3	1545	41.1	275	41.7	1483
	West	15.7	1023	37.4	875	12.2	148	11.9	609
Area	Rural	30.5	5475	67.6	4766	46.7	709	47.1	4707
	Urban	18.6	2171	47.0	1777	16.3	394	26.9	1369
Age	15-19	15.4	1103	.	0	35.9	1103	35.9	396
	20-24	27.7	1168	55.6	1168	.	0	34.6	871
	25-29	32.3	1785	64.2	1785	.	0	42.1	1587
	30-34	31.7	1177	65.2	1177	.	0	43.4	1053
	35-39	27.4	1253	64.4	1253	.	0	43.6	1145
	40-44	26.9	711	62.7	711	.	0	50.5	642
	45-49	22.1	450	53.9	450	.	0	50.8	384
Education	None	31.0	5632	67.0	5077	60.1	554	45.8	4973
	Primary	22.0	841	57.8	596	20.9	244	34.5	557
	Secondary +	12.4	1152	35.6	856	3.4	297	20.8	536
wealth index quintiles	Poorest	31.0	1482	65.9	1306	44.1	176	42.9	1248
	Second	31.8	1556	70.5	1376	50.7	180	45.9	1365
	Middle	31.6	1517	67.9	1326	45.8	190	47.8	1311
	Fourth	25.6	1510	61.7	1262	39.2	248	45.7	1176
	Richest	16.3	1582	43.1	1273	13.8	309	26.6	976
Religion of Household Head	Christian	27.2	1678	56.3	1440	20.0	238	29.5	1186
	Muslim	27.2	5950	63.7	5087	40.1	863	45.7	4875
	Other/Missing	23.3	18	54.8	16	100.0	2	44.8	16
Total		27.2	7647	62.0	6543	35.9	1103	42.6	6077

* MICS Indicator 67

** MICS Indicator 68, *** MICS Indicator 70

Table 21: Comprehensive knowledge of HIV/AIDS transmission

Percentage of women aged 15-49 years who have comprehensive knowledge of HIV/AIDS transmission, Sierra Leone, 2005

		Knows 2 ways to prevent HIV transmission	Correctly identify 3 misconceptions about HIV transmission	Have comprehensive knowledge (identify 2 prevention methods and 3 misconceptions) *	Number of women
Region	East	41.4	23.1	17.4	1839
	North	33.8	15.1	7.6	2965
	South	41.6	20.1	13.8	1820
	West	80.8	61.7	54.5	1023
Area	Rural	35.5	15.3	9.9	5475
	Urban	64.6	47.5	37.6	2171
Age 15-24	15-19	46.4	27.2	20.1	1103
	20-24	46.5	28.6	20.2	1168
Age 15-49	15-24	46.5	27.9	20.1	2271
	25-29	42.6	23.0	16.5	1785
	30-34	47.2	27.6	21.0	1177
	35-39	42.2	23.5	16.3	1253
	40-44	39.6	16.9	12.3	711
	45-49	36.8	18.7	14.6	450
Education	None	36.7	17.1	11.2	5632
	Primary	51.9	26.3	19.5	841
	Secondary +	72.3	58.6	48.1	1152
	Non-standard curriculum	47.7	52.8	29.1	22
wealth index quintiles	Poorest	27.0	14.3	9.6	1482
	Second	31.7	14.7	9.1	1556
	Middle	38.9	17.0	10.7	1517
	Fourth	51.8	24.3	17.5	1510
	Richest	68.3	50.9	40.8	1582
Religion of Household Head	Christian	47.0	31.5	25.2	1678
	Muslim	42.9	22.5	15.7	5950
	Other/Missing	40.6	.0	.0	18
Total		43.8	24.4	17.7	7647

* MICS Indicator 82; MDG Indicator 19b

Table 22: Condom use at last high-risk sex

Percentage of young women aged 15-24 who had high risk sex in the previous year and who used a condom at last high risk sex, Sierra Leone, 2005

	Ever had sex	Had sex in the last 12 months	Had sex with more than one partner in the last 12 months	Number of women aged 15-24	Percent who had sex with non-marital, non-cohabiting partner *	Number of women aged 15-24 years who had sex in last 12 months	Percent who used a condom at last sex with a non-marital, non-cohabiting partner **	Number of women aged 15-24 years who had sex in last 12 months with a non-marital, non-cohabiting partner
Region								
East	76.9	72.5	3.9	545	38.3	395	11.2	151
North	77.1	66.8	3.0	856	35.5	572	20.8	203
South	82.5	71.3	3.2	547	41.0	390	18.1	160
West	78.1	72.5	4.8	322	72.0	234	30.6	168
Area								
Rural	79.5	69.8	2.7	1506	31.2	1051	16.4	328
Urban	76.7	70.6	5.1	765	65.7	540	24.2	355
Age								
15-19	63.2	57.2	3.4	1103	55.2	632	20.4	348
20-24	93.0	82.2	3.6	1168	34.9	960	20.5	335
Education								
None	84.4	74.3	3.1	1357	27.2	1009	16.3	275
Primary	67.4	59.5	3.5	397	49.4	236	13.7	117
Secondary +	72.1	67.9	4.8	503	84.6	342	27.2	289
Non-standard curriculum	54.8	32.4	.0	13	48.2	4	.0	2
wealth index quintiles								
Poorest	77.6	66.8	1.9	389	31.8	260	13.5	83
Second	81.2	70.8	2.3	405	27.5	286	17.7	79
Middle	80.3	70.3	3.7	424	33.4	298	16.2	99
Fourth	80.1	72.4	4.2	482	42.4	349	15.3	148
Richest	74.6	69.6	4.7	571	69.0	397	27.7	274
Religion of Household Head								
Christian	75.0	67.7	4.0	503	55.5	341	27.1	189
Muslim	79.5	70.7	3.4	1764	39.6	1246	18.0	493
Other/Missing	100.0	100.0	.0	4	23.9	4	.0	1
Total	78.5	70.1	3.5	2271	42.9	1591	20.4	683

* MICS Indicator 85

** MICS Indicator 83; MDG Indicator 19a

Table 23: School attendance of orphaned and vulnerable children

School attendance of children aged 10-14 years by orphan status and vulnerability due to AIDS, Sierra Leone, 2005

	Percent of children whose mother and father have died	School attendance rate of children whose mother and father have died	% of children of whom both parents are alive and child is living with at least one parent	School attendance rate of children of whom both parents are alive and child is living with at least one parent	Double orphans to non-orphans school attendance ratio*	Percent of children who are orphaned or vulnerable due to AIDS	School attendance of children who are orphaned or vulnerable due to AIDS	Percent of children who are not orphans or vulnerable due to AIDS	School attendance of children who are not orphans or vulnerable due to AIDS	OVC vs non-OVC school attendance ratio	Total number of children aged 10-14 years
Sex											
	1.9	66.1	67.2	80.6	.82	30.5	73.5	69.5	80.7	.91	2742
	2.2	61.3	64.2	72.4	.85	28.5	68.3	71.5	72.5	.94	2800
Region											
	2.4	76.0	66.7	78.8	.96	39.5	71.3	60.5	77.1	.93	1021
	2.0	60.1	69.9	70.1	.86	29.1	65.9	70.9	69.7	.95	2512
	2.5	53.9	60.5	74.9	.72	29.2	70.8	70.8	75.1	.94	1016
	1.4	71.4	59.1	94.9	.75	20.3	89.1	79.7	92.6	.96	992
Area											
	2.3	58.3	69.8	69.7	.84	30.9	62.7	69.1	68.6	.91	3601
	1.6	77.5	57.9	91.9	.84	26.7	88.8	73.3	90.4	.98	1940
wealth index quintiles											
	1.8	38.9	72.1	58.5	.66	28.5	49.8	71.5	56.8	.88	986
	2.5	56.5	70.8	66.4	.85	31.3	60.0	68.7	65.0	.92	926
	2.2	68.0	69.3	76.1	.89	28.1	69.3	71.9	75.3	.92	1000
	2.5	70.2	63.5	83.2	.84	32.4	78.2	67.6	83.7	.93	1222
	1.6	77.4	57.0	94.6	.82	27.3	88.6	72.7	92.2	.96	1408
Religion of Household Head											
	2.3	62.1	65.1	77.2	.80	28.6	75.5	71.4	78.5	.96	1253
	2.0	64.0	65.8	76.3	.84	29.7	69.9	70.3	75.9	.92	4274
	.0	.	64.2	88.9	.	28.6	25.1	71.4	90.1	.28	14
Total	1.4	63.0	65.0	80.8	.82	29.0	56.8	71.0	81.5	.72	5542

* MICS Indicator 77; MDG Indicator 20

Table 24: Indicator definitions

#	INDICATOR	NUMERATOR	DENOMINATOR
1	Under-five mortality Rate¹⁵	Probability of dying by exact age 5 years	
4	<i>Skilled attendant at delivery</i>	Number of women 15-49 with a birth in the 2 years preceding the survey who were attended during childbirth by skilled health personnel	Total number of women surveyed aged 15-49 years with a birth in 2 years preceding the survey
5	<i>Institutional deliveries</i>	Number of women 15-49 with a birth in the 2 years preceding the survey who were delivered in health facility	Total number of women surveyed aged 15-49 years with a birth in 2 years preceding the survey
6	<i>Underweight prevalence</i>	Number of children under 5 years of age who fall below -2 standard deviations (SDs) from the median weight-for-age of the NCHS/WHO standard (moderate and severe); number who fall below -3 SDs (severe)	Total number of children under five years of age weighed
7	<i>Stunting prevalence</i>	Number of children under 5 years of age who fall below -2 standard deviations (SDs) from the median height-for-age of the NCHS/WHO standard (moderate and severe); number who fall below -3 SDs (severe)	Total number of children under five years of age measured
8	<i>Wasting prevalence</i>	Number of children under 5 years of age who fall below -2 standard deviations (SDs) from the median weight-for-height of the NCHS/WHO standard (moderate and severe); number who fall below -3 SDs (severe)	Total number of children under five years of age weighed and measured
11	<i>Use of improved drinking water sources</i>	Number of household members living in households using improved sources of drinking water	Total number of household members in households surveyed
12	<i>Use of improved sanitation facilities</i>	Number of household members using improved sanitation facilities	Total number of household members in households surveyed
15	<i>Exclusive breastfeeding rate</i>	Number of infants less than 6 months (and less than 4 months) of age who are exclusively breastfed	Total number of infants 0-5 (and 0-3) months old surveyed

¹⁵ The under-five and infant mortality rates are obtained via a calculation (for which a software program is available) which uses as input a table on numbers of women, children ever born, and children surviving, by age of mother. Numbers for this table are obtained from the Child Mortality Module.

#	INDICATOR	NUMERATOR	DENOMINATOR
16	<i>Continued breastfeeding rate</i>	Number of infants 12-15 months, and 20-23 months of age who are currently breastfeeding	Total number of children aged 12-15 months; children aged 20-23 months surveyed
17	<i>Timely complementary feeding rate</i>	Number of infants 6-9 months old who are receiving breast milk and complementary foods	Total number of infants 6-9 months old surveyed
21	<i>Contraceptive prevalence</i>	Number of women currently married or in union aged 15-49 years who are using (or whose partner is using) a contraceptive method (either modern or traditional)	Total number of women aged 15-49 years who are currently married or in union
22	<i>Antibiotic treatment of suspected pneumonia</i>	Number of children 0-59 months old with suspected pneumonia in the previous 2 weeks receiving antibiotics	Total number of children aged 0-59 months old with suspected pneumonia in the previous 2 weeks
24	<i>Solid fuels</i>	Number of residents in households that use solid fuels (wood, charcoal, crop residues and dung) as the primary source of domestic energy to cook	Total number of residents in households surveyed
25	<i>Tuberculosis immunization coverage</i>	Number of 12-23 month-olds receiving BCG vaccine before first birthday ¹⁶	Total number of children aged 12-23 months surveyed
26	<i>Polio immunization coverage</i>	Number of 12-23-month-olds receiving OPV3 vaccine before first birthday	Total number of children aged 12-23 months surveyed
27	<i>DPT immunization coverage</i>	Number of 12-23 month-olds receiving DPT3 vaccine before first birthday	Total number of children aged 12-23 months surveyed
28	<i>Measles immunization coverage</i>	Number of 12-23 month-olds receiving measles vaccine before first birthday	Total number of children aged 12-23 months surveyed
31	<i>Fully immunized children</i>	Number of 12-23 month-olds receiving DPT1-3, OPV-1-3, BCG and measles before first birthday	Total number of children aged 12-23 months surveyed
37	<i>Under fives sleeping under insecticide treated nets</i>	Number of children aged 0-59 months who slept under an insecticide treated mosquito net the previous night ¹⁷	Total number of children aged 0-59 months surveyed

¹⁶ Total number of 12-23 month olds vaccinated with BCG, (OPV3, DPT3, Measles, HepB, or HiB) before 12 months, as validated by card or mother's recall. To estimate the number of children without a card to have received vaccine before 1st birthday the proportion of vaccinations given during the first year of life is assumed to be the same as for the proportion of children with a card that received the vaccine before 1st birthday.

#	INDICATOR	NUMERATOR	DENOMINATOR
38	<i>Under fives sleeping under mosquito nets</i>	Number of children aged 0-59 months who slept under a mosquito net the previous night ¹⁸	Total number of children aged 0-59 months surveyed
39	<i>Anti-malarial treatment (under fives)</i>	Number of children aged 0-59 months reported to have fever in previous 2 weeks who were treated with an appropriate anti-malarial within 24 hours of onset	Total number of children aged 0-59 months reported to have fever in previous two weeks
55	<i>Net primary school attendance rate</i>	Number of children of primary-school age currently attending primary school	Total number of children of primary school age surveyed.
61	<i>Female to male education ratio</i>	Proportion of girls in primary, secondary, and tertiary education	Proportion of boys in primary, secondary, and tertiary education
62	<i>Birth registration</i>	Number of children aged 0-59 months whose births are reported registered	Total number of children aged 0-59 months surveyed
67	<i>Marriage before age 15, 18</i>	Number of women who were first married/in union by exact age 15, 18 by age groups.	Total number of women aged 15-49, 20-49 surveyed, respectively, by age groups
68	<i>Young women aged 15-19 currently married or in union</i>	Number of women aged 15-19 currently married or in union	Total number of women aged 15-19 surveyed
70	<i>Polygyny</i>	Number of women in a polygynous union	Total number of women aged 15-49 currently married or in union surveyed
77	<i>Orphans vs. non-orphans school attendance</i>	Proportion of double orphans (both mother and father dead) aged 10-14 years attending school	Proportion of children aged 10-14 years, both of whose parents are alive, who is living with at least one parent, and who is attending school
82	<i>Comprehensive knowledge about HIV prevention among young people</i>	Number of women aged 15-24 who correctly identify 2 ways of avoiding HIV infection and reject 3 common misconceptions	Total number of women aged 15-24 surveyed

¹⁷ Malaria module,

(1) long-lasting net (ML12=11 OR 12) OR

(2) pre-treated net obtained in the previous 12 months ((ML12=21 OR 22) AND ML11<12) OR

(3) other net obtained in the previous 12 months and already treated (ML11<12 AND ML13=1) OR

(4) net was treated within the last 12 months (ML14=1 AND ML15 <12).

¹⁸ Malaria module, ML10=1.

#	INDICATOR	NUMERATOR	DENOMINATOR
83	<i>Condom use with non-regular partners</i>	Number of women aged 15-24 reporting the use of a condom during sexual intercourse with their last non-marital, non-cohabiting sex partner in the previous 12 months	Total number of women aged 15-24 surveyed who had a non-marital, non-cohabiting partner in the previous 12 months
85	<i>Higher risk sex in the last year</i>	Number of sexually active women aged 15-24 who have had sex with a non-marital, non-cohabitating partner in the previous 12 months	Total number of women aged 15-24 who were sexually active in the previous 12 months