

# Multiple Indicator Cluster Survey

## Model Full Report

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## Foreword and Acknowledgements

## Executive Summary

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

### *Infant and Under Five Mortality*

- Distortions in the MICS data on deaths among children preclude obtaining estimates of very recent mortality rates. The data suggest that the infant mortality rate was 45 per 1000 and the under five mortality rate was 52 per 1000 around 1993.

### *Education*

- Eighty nine percent of children of primary school age in [Country] are attending primary school. School attendance in the South is significantly lower than in the rest of the country at 52 percent. At the national level, there is virtually no difference between male and female primary school attendance.
- More than two thirds of children who enter the first grade of primary school eventually reach grade five.
- The vast majority (88 percent) of the population over age 15 years is literate. The percentage literate declines from 93 percent among those aged 15-34 to 65 percent among the population aged 65 and older.

### *Water and Sanitation*

- Eighty nine percent of the population has access to safe drinking water – 98 percent in urban areas and 78 percent in rural areas. The situation in the South is considerably worse than in other regions; only 31 percent of the population in this region gets its drinking water from a safe source.
- Ninety two percent of the population of [Country] is living in households with sanitary means of excreta disposal.

### *Child Malnutrition*

- Nine percent of children under age five in [Country] are underweight or too thin for their age. Thirteen percent of children are stunted or too short for their age and three percent are wasted or too thin for their height.
- Children whose mothers have secondary or higher education are the least likely to be underweight and stunted compared to children of mothers with less education.

### *Breastfeeding*

Approximately 12 percent of children aged under four months are exclusively breastfed, a level considerably lower than recommended. At age 6-9 months, 25 percent of children are receiving breast milk and solid or semi-solid foods. By age 20-23 months, only 12 percent are continuing to breastfeed.

### *Salt Iodization*

- Seventy eight percent of households in [Country] have adequately iodized salt. The percentage of households with adequately iodized salt ranges from 57 percent in the South to 89 percent in the Central region.

### *Vitamin A Supplementation*

- Within the six months prior to the MICS, 14 percent of children aged 6-59 months received a high dose Vitamin A supplement. Approximately 6 percent did not receive a supplement in the last 6 months but did receive one prior to that time.
- The mother's level of education is related to the likelihood of Vitamin A supplementation. The percentage receiving a supplement in the last six months increases from six percent among children whose mothers have no education to 16 percent among children of mothers with secondary or higher education.
- Only about 12 percent of mothers with a birth in the year before the MICS received a Vitamin A supplement within eight weeks of the birth

### *Low Birth weight*

- Approximately 12 percent of infants are estimated to weigh less than 2500 grams at birth. This percentage is somewhat higher than the average for the Latin America and Caribbean region.

### *Immunization Coverage*

- Eighty seven 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 84 percent. The percentage declines for subsequent doses of DPT to 79 percent for the second dose, and 75 percent for the third dose.
- Similarly, 87 percent of children received Polio 1 by age 12 months and this declines to 83 percent by the third dose.
- The coverage for measles vaccine is lower than for the other vaccines at 24 percent, primarily because only about 40 percent of children get the vaccine before their first birthday.
- Slightly over half of children had all eight recommended vaccinations in the first 12 months of life.
- Male and female children are vaccinated at roughly the same rate.
- Vaccination coverage is highest among children whose mothers have secondary or higher education. The education differences are greatest for the third doses of DPT and Polio, suggesting that drop out rates are higher among children with less educated mothers.

### *Diarrhea*

- Approximately six in ten children with diarrhea received one or more of the recommended home treatments (i.e., were treated with ORS or RHF).
- Only 25 percent of children with diarrhea received increased fluids and continued eating as recommended.

### *Acute Respiratory Infection*

- Four percent of under five children had an acute respiratory infection in the two weeks prior to the survey. Approximately 56 percent of these children were taken to an appropriate health provider.

### *IMCI Initiative*

- Among under five children who were reported to have had diarrhea or some other illness in the two weeks preceding the MICS, 16 percent received increased fluids and continued eating as recommended under the IMCI programmed.
- Seventeen percent of mothers know at least two of the signs that a child should be taken immediately to a health facility.

### *Malaria*

- In the areas of [Country] with the highest level of malaria risk, 72 percent of under five children slept under a bednet the night prior to the survey interview. However, only about five percent of the bednets used are impregnated with insecticide.
- Approximately 56 percent of children with a fever in the two weeks prior to the MICS interview were given Paracetamol to treat the fever and 53 percent were given Chloroquine while less than 1 percent were given Fansidar. A relatively large percentage of children (25 percent) were given some other medicine.

### *HIV/AIDS*

- Thirty seven percent of women aged 15-49 know all three of the main ways to prevent HIV transmission – having only one uninfected sex partner, using a condom every time, and abstaining from sex.
- Thirty nine percent of women correctly identified three misconceptions about HIV transmission – that HIV can be transmitted through supernatural means, that it can be transmitted through mosquito bites, and that a healthy looking person cannot be infected.
- Sixty percent of women of reproductive age in [Country] know a place to get tested for AIDS and about 12 percent have been tested.
- The percentage of women who have sufficient knowledge of HIV transmission and the percentage who know where to get tested for HIV increases dramatically with the level of education.

### *Contraception*

- Current use of contraception was reported by 45 percent of married or in union women. The most popular method is the pill which is used by one in four married women followed by female sterilization, which accounts for 10 percent of married women.

### *Prenatal Care*

- Three out of four women with recent births in [Country] are protected against neonatal tetanus. The vast majority of these women received two or more doses of tetanus toxoid within the last three years.
- Virtually all women in [Country] receive some type of prenatal care and 75 percent receive antenatal care from skilled personnel (doctor, nurse, midwife).

### *Assistance at Delivery*

- A doctor, nurse, or midwife delivered about 77 percent of births occurring in the year prior to the MICS survey. This percentage is highest in the South Central region at 99 percent and lowest in the South at 21 percent.

### *Birth Registration*

- The births of 94 percent of children under five years in [Country] have been registered. There are no significant variations in birth registration across sex, age, or education categories.

### *Orphanhood and Living Arrangements of Children*

- Overall, 64 percent of children aged 0-14 are living with both parents. Children who are not living with a biological parent comprise 7 percent and children who have one or both parents dead amount to 4 percent of all children aged 0-14.
- The situation of children in the South differs from that of other children. In the South, less than half of children live with both parents. Thirty six percent live with their mother only

although their father is alive and a relatively large proportion (10 percent) are living with neither parent.

*Child Labor*

- About two percent of children aged 5-14 years engage in paid work. About twice as many – 4 percent – participate in unpaid work for someone other than a household member.
- Slightly more than half of children engage in domestic tasks, such as cooking, fetching water, and caring for other children, for less than four hours a days while 25 percent spend more than four hours a day on such tasks.

## Summary Indicators

World Summit for Children Indicators		
Under-five mortality rate	Probability of dying before reaching age five	52 per 1000
Infant mortality rate	Probability of dying before reaching age one	45 per 1000
Underweight prevalence	Proportion of under-fives who are too thin for their age	9 percent
Stunting prevalence	Proportion of under-fives who are too short for their age	13.0 percent
Wasting prevalence	Proportion of under fives who are too thin for their height	3.3 percent
Use of safe drinking water	Proportion of population who use a safe drinking water source	88.9 percent
Use of sanitary means of excreta disposal	Proportion of population who use a sanitary means of excreta disposal	91.6 percent
Children reaching grade five	Proportion of children entering first grade of primary school who eventually reach grade five	68.6 percent
Net primary school attendance rate	Proportion of children of primary school age attending primary school	88.9 percent
Literacy rate	Proportion of population aged 15+ years who are able to read a letter or newspaper	87.7 percent
Antenatal care	Proportion of women aged 15-49 attended at least once during pregnancy by skilled personnel	74.4 percent
Contraceptive prevalence	Proportion of married women aged 15-49 who are using a contraceptive method	44.5 percent
Childbirth care	Proportion of births attended by skilled health personnel	76.8 percent
Birth weight below 2.5 kg.	Proportion of live births that weigh below 2500 grams	12.0 percent
Iodized salt consumption	Proportion of households consuming adequately iodized salt	78.0 percent
Children receiving Vitamin A supplementation	Proportion of children aged 6-59 months who have received a Vitamin A supplement in the last 6 months	13.8 percent
Mothers receiving Vitamin A supplementation	Proportion of mothers who received a Vitamin A supplement before infant was 8 weeks old	11.6 percent
Exclusive breastfeeding rate	Proportion of infants aged less than 4 months who are exclusively breastfed	12.4 percent
Timely complementary feeding rate	Proportion of infants aged 6-9 months who are receiving breast milk and complementary food	25.0 percent
Continued breastfeeding rate	Proportion of children aged 12-15 months and 20-23 months who are breastfeeding	38.1 percent (12-15) 12.2 percent (20-23)
DPT immunization coverage	Proportion of children immunized against diphtheria, pertussis and tetanus by age one	77.2 percent
Measles immunization coverage	Proportion of children immunized against measles by age one	57.9 percent
Polio immunization coverage	Proportion of children immunized against polio by age one	80.2 percent
Tuberculosis immunization coverage	Proportion of children immunized against tuberculosis by age one	88.4 percent
Children protected against neonatal tetanus	Proportion of one year old children protected against neonatal tetanus through immunization of their mother	77.0
ORT use	Proportion of under-five children who had diarrhea in the last 2 weeks who were treated with oral rehydration salts or an appropriate household solution	61.0 percent
Home management of diarrhea	Proportion of under-five children who had diarrhea in the last 2 weeks and received increased fluids and continued feeding during the episode	24.8 percent

Care seeking for acute respiratory infections	Proportion of under-five children who had ARI in the last 2 weeks and were taken to an appropriate health provider	56.1 percent
Preschool development	Proportion of children aged 36-59 months who are attending some form of organized early childhood education program	40.1 percent
<b>Indicators for Monitoring Children's Rights</b>		
Birth registration	Proportion of under-five children whose births are reported registered	94.2 percent
Children's living arrangements	Proportion of children aged 0-14 years in households not living with a biological parent	7.3 percent
Orphans in household	Proportion of children aged 0-14 years who are orphans living in households	0.2 percent (both parents) 3.6 percent (one parent)
Child labor	Proportion of children aged 5-14 years who are currently working	30.7 percent
<b>Indicators for Monitoring IMCI and Malaria</b>		
Home management of illness	Proportion of under-five children reported ill during the last 2 weeks who received increased fluids and continued feeding	15.5 percent
Care seeking knowledge	Proportion of caretakers of under-five children who know at least 2 signs for seeking care immediately	17.4 percent
Bednets	Proportion of under-five children who sleep under an insecticide impregnated bednet	3.4 percent (high risk areas only)
Malaria treatment	Proportion of under five children who were ill with fever in the last 2 weeks who received anti-malarial drugs	53.7 percent
<b>Indicators for Monitoring HIV/AIDS</b>		
Knowledge of preventing HIV/AIDS	Proportion of women who correctly state the 3 main ways of avoiding HIV infection	37.4 percent
Knowledge of misconceptions of HIV/AIDS	Proportion of women who correctly identify 3 misconceptions about HIV/AIDS	38.5 percent
Knowledge of mother to child transmission	Proportion of women who correctly identify means of transmission of HIV from mother to child	32.2 percent
Attitude to people with HIV/AIDS	Proportion of women expressing a discriminatory attitude towards people with HIV/AIDS	51.7 percent
Women who know where to be tested for HIV	Proportion of women who know where to get a HIV test	60.1 percent
Women who have been tested for HIV	Proportion of women who have been tested for HIV	11.5 percent

## **I. Introduction**

### ***Background of the Survey***

At the World Summit for Children held in New York in 1990, the government of [Country] pledged itself to a Declaration and Plan of Action for Children. Subsequently, a National Programmed of Action for Children was developed and implemented. [Describe National Programmed of Action.]

The Plan of Action also called for the establishment of mechanisms for monitoring progress toward the goals and objectives set for the year 2000. Toward this end, UNICEF has developed a core set of 75 indicators of specific aspects of the situation of children in coordination with other international organizations. A MICS survey was conducted in 1985 to measure progress at mid-decade. The 2000 [Country] MICS survey has been implemented to provide end-decade information on many of the indicators. Information on other indicators will be derived from the vital registration system and various disease monitoring systems.

The [Country] MICS was conducted by the Central Office of Statistics. Funding was provided by the [Country] UNICEF office. [Describe other organizational details.]

This report presents results on the principal topics covered in the survey and on the World Summit indicators.

### ***[Country] Background***

[Describe the basic demographic and health situation of [Country]. Outline major public health initiatives. Describe any significant events that may have affected the MICS results, such as civil unrest, a natural disaster, or economic decline.]

### ***Survey Objectives***

The 2000 [Country] Multiple Indicator Cluster Survey has as its primary objectives:

- To provide up-to-date information for assessing the situation of children and women in [Country] at the end of the decade and for looking forward to the next decade;
- To furnish data needed for monitoring progress toward goals established at the World Summit for Children and a basis for future action;
- To contribute to the improvement of data and monitoring systems in [Country] and to strengthen technical expertise in the design, implementation, and analysis of such systems.

## **II. Survey Methodology**

### ***Sample Design***

The sample for the [Country] Multiple Indicator Cluster Survey (MICS) was designed to provide estimates of health indicators at the national level, for urban and rural areas, and for five regions: Central, South Central, East, West, and South. The sample was selected in two stages. At the

first stage, 123 census enumeration areas were selected with probability proportional to size. After a household listing was carried out within the selected enumeration areas, a systematic sample of 4671 households was drawn. Because the sample was stratified by region, it is not self-weighting. For reporting national level results, sample weights are used. Full technical details of the sample are included in Appendix A.

### **Questionnaires**

The questionnaires for the [Country] MICS were based on the MICS Model Questionnaire with some modifications and additions. A household questionnaire was administered in each household, which collected various information on household members including sex, age, literacy, marital status, and orphanhood status. The household questionnaire also includes education, child labor, water and sanitation, and salt iodization modules. In addition to a household questionnaire, questionnaires were administered in each household for women age 15-49 and children under age five. For children, the questionnaire was administered to the mother or caretaker of the child. The questionnaire for women contains the following modules:

- Child mortality
- Tetanus toxoid
- Maternal and newborn health
- Contraceptive use
- HIV/AIDS.

The questionnaire for children under age five includes modules on:

- Birth registration and early learning
- Vitamin A
- Breastfeeding
- Care of Illness
- Malaria
- Immunization
- Anthropometry.

From the MICS model English version, the questionnaires were translated into two languages: A and B. The questionnaires were pretested during November 1999. Based on the results of the pretest, modifications were made to the wording and translation of the questionnaires. For the full questionnaires, see Appendix B.

### **Fieldwork and Processing**

The field staff was trained for five days in early January 2000. Five teams collected the data; each was comprised of four interviewers, one driver, and a supervisor. The MICS Coordinator provided overall supervision. The field work began in January 2000 and concluded in March 2000.

Data were entered on four microcomputers using the EpiInfo software. [Describe country-specific details.] In order to ensure quality control, all questionnaires were double entered and internal consistency checks were performed. Procedures and standard programs developed under MICS and adapted to the [Country] questionnaire were used throughout. Data processing began in February 2000 and finished in April 2000.

### III. Sample Characteristics and Data Quality

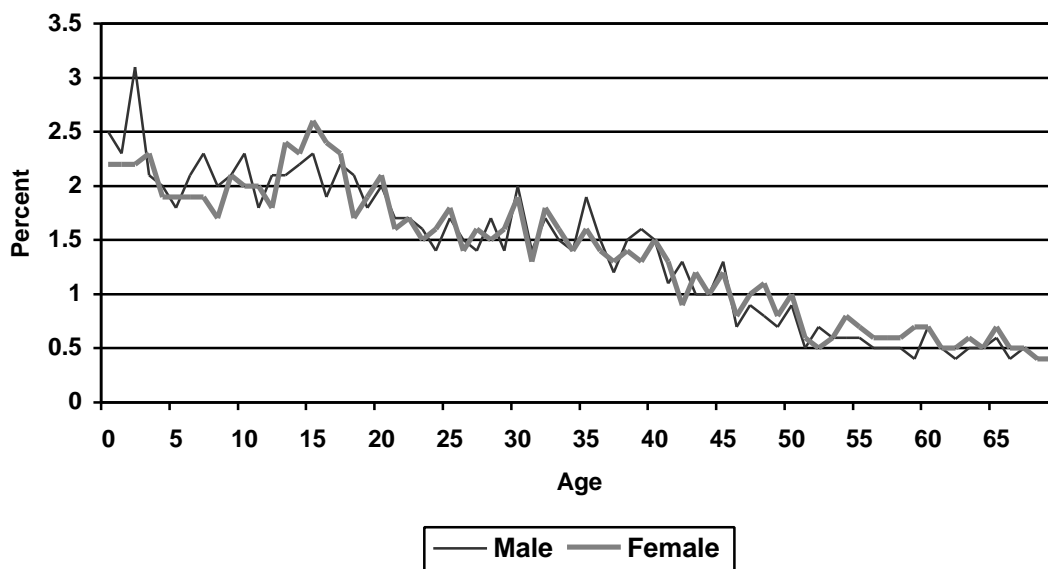
#### **Response Rates**

Of the 4671 households selected for the [Country] MICS sample, 4577 were found to be occupied (Table 1). Of these, 4285 were successfully interviewed for a household response rate of 94 percent. The response rate was higher in rural areas (97 percent) than in urban areas (91 percent). In the interviewed households, 4236 eligible women aged 15-49 were identified. Of these, 3965 were successfully interviewed, yielding a response rate of 90 percent. In addition, 1957 children under age five were listed in the household questionnaire. Of these, questionnaires were completed for 1831 children for a response rate of 94 percent.

#### **Age Distribution and Missing Data**

As shown in Table 2 and Figure 1, the single year age distribution of household members by sex exhibits some distortions centered around age 15 for females and on age two for males. There appears to be significant heaping of women on ages 14-17 and perhaps a slight dearth of women ages 18-19. For both sexes, some digit preference is evident for ages ending in 0 and 5, a pattern typical of populations in which ages are not always known.

**Figure 1: Single year age distribution of the household population by sex, Country, Year**



As a basic check on the quality of the survey data, the percentage of cases missing information on selected questions is shown in Table 3. Fewer than one percent of household members have missing information on their level of education but three percent are missing data on the year of education. Among female respondents, 0.2 percent did not report a complete birth date (i.e., month and year). Three percent of women who had a birth in the 12 months prior to the survey did not report the date of their last tetanus toxoid injection. These low levels of missing data suggest that there were not significant problems with the questions or the fieldwork.

The data on weight and height are the most likely among the selected information to be missing. Approximately five percent of children are missing this information, which may be the result of

the child not being present, refusal, or some other reason. By international standards, this percentage is relatively low in comparison to other surveys in which anthropometric measurements are taken (Sommerfelt and Boerma, 1994).

### ***Characteristics of the Household Population***

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

Table 4 presents the percent distribution of households in the sample by background characteristics. About 56 percent of the households (2395 households) are urban and 44 percent (1890 households) are rural. The Central region comprises the largest of the five regions with 42 percent of households while South Central is next largest with 22 percent. The remaining regions each contain between 9 and 15 percent of households. Most of the households have between two and five members. Thirty seven percent of the households contain at least one child under age five and 79 percent contain at least one woman age 15-49.

Table 5 shows the characteristics of female respondents aged 15-49. Women age 15-19 comprise the greatest percentage of the sample at 21 percent. This percentage declines steadily across age groups until age 45-49 where it is nine percent. This pattern is typical of countries in the region. Approximately 64 percent of women in the sample are married and 67 percent have ever had a birth. The majority of women have had at least some secondary education while only seven percent have had no education.

Table 6 shows the characteristics of children under age five. Fifty three percent of the children are male and 47 percent are female. Approximately 13 percent of mothers of children under age five have no education, a percentage that is almost two times greater than the overall percentage of women with no education in the sample. Note that, for children whose mothers did not live in the household, the education of the child's caretaker is used. There are slightly more children aged under six months than aged 6-11 months, a pattern which is unexpected.

## **IV. Results**

### ***A. Infant and Under-Five Mortality***

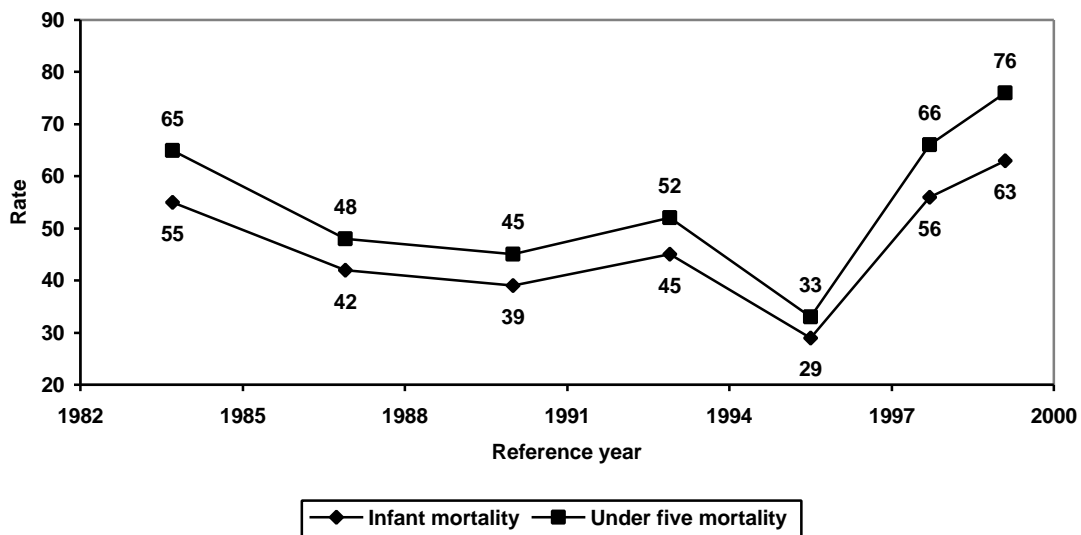
The *infant mortality rate* is the probability of dying before the first birthday. The *under five mortality rate* is the probability of dying before the fifth birthday. In MICS, infant and under five mortality rates are calculated based on an indirect estimation technique (the Brass method). The data used in the estimation are: the mean number of children ever born for five year age groups of women from age 15 to 49, and the proportion of these children who are dead, also for 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.

The data used for mortality estimation are shown in Table 7. The mean number of children ever born rises from 0.16 among 15-19 year olds to 4.18 among 45-49 year olds as expected. However, the proportion of children dead has an irregular pattern. In particular, the proportion of children dead among women aged 25-29 is low and the proportions among younger women appear to be too high. This pattern may be affected by the age heaping noted in Figure 1 above.

If some women in their twenties underreported their ages but reported the births and deaths of their children correctly then the deaths would effectively be moved downward toward age 15. In addition, an examination of sex ratios at birth (not shown) suggests that the births of girls may have been underreported among women age 15 to 19 for whom the sex ratio of births is 1.21 but the ratios are in the plausible range of 1.03 to 1.08 for the remaining age groups.

Mortality estimates were obtained using the United Nations QFIVE program. Based on previous estimates of infant and child mortality for [Country], the East model life table was selected as most appropriate. Estimates of infant and under five mortality for several reference years are plotted in Figure 2. The estimate for reference year 1995 based on the reports of women aged 25-29 is clearly too low while the estimates based on the reports of women aged 20-24 and 15-19 for more recent years are clearly too high and, in any case, use of estimates based on the two youngest age groups is not usually recommended. Plausible estimates for the most recent years thus cannot be obtained from these data. The estimates for 1993 (precisely 1992.9) appear to be the most recent figures that can be used with some confidence although they may be slight overestimates of mortality given the downward trend evident in the three previous estimates (Table 8).

**Figure 2: Estimates of infant and under five mortality based on indirect estimation, Country, Year**



### **B. Education**

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

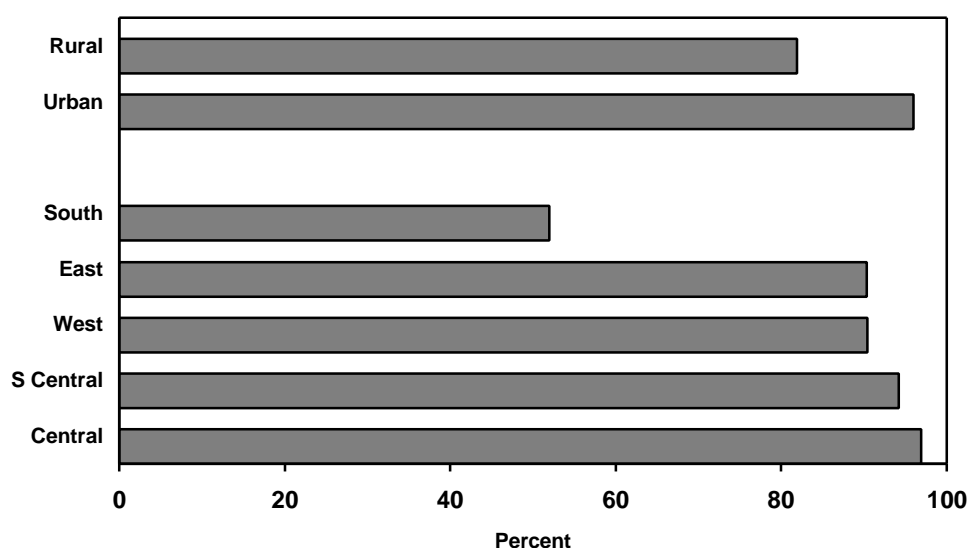
### Early childhood education

Four in ten children aged 36-59 months are attending an organized early childhood education programmed, such as kindergarten or community childcare with organized learning activities (Table 9). Approximately equal percentages of girls and boys are attending these programmes. There are large variations according to region ranging from one percent of children in the South to 55 percent in the Central region. In addition, children in urban areas are almost twice as likely to attend early learning activities as children in rural areas. Relatively few children attend at age three (36-47 months) while the majority of children attend at age four (48-59 months). Finally, the education of the mother is strongly related to the likelihood that a child will attend an early childhood education programmed. The percentage of children attending increases from 16 percent to 50 percent as the mother's education increases from none to secondary or higher education.

### Basic education

Overall, 89 percent of children of primary school age in [Country] are attending primary school (Table 10). In urban areas, 96 percent of children attend school while in rural areas 82 percent attend. School attendance in the South is significantly lower than in the rest of the country at 52 percent. At the national level, there is virtually no difference between male and female primary school attendance.

**Figure 3: Percentage of children of primary school age attending primary school, Country, Year**



More than two thirds of children who enter the first grade of primary school eventually reach grade five (Table 11). However, there are large regional and urban-rural disparities in the achievement of grade five. Approximately 87 percent of urban children who enter grade one reach grade five compared to slightly more than half of children in rural areas. In the West, only 58 percent of those who enter grade one reach grade five while in the South, the comparable percentage is 23. The main difference between the South and other regions is that only 52 percent of those entering grade one reach grade two. In subsequent grades, the percentage of

children continuing schooling remains lower in the South than in other areas although the differences are not as great.

## **Literacy**

The vast majority of the population over age 15 years in [Country] is literate (Table 12). The *literate* population includes those who are reported to read 'easily or with difficulty'. Overall, females are slightly less likely than males to be literate (85 vs. 91 percent). The percentage literate is lower in the West and East regions than in the Central and South Central regions. It is also substantially lower in the South than in other regions, which is partially the result of a relatively high percentage of household members with unknown literacy status. Literacy declines with increasing age. The percentage literate declines from 93 percent among those aged 15-34 to 65 percent among the population aged 65 and older.

## **C. Water and Sanitation**

### **Use of drinking water**

Safe drinking water is a basic necessity for good health. Unsafe drinking water can be a significant carrier of diseases such as trachoma, cholera, typhoid, and schistosomiasis. Drinking water can also be tainted with chemical, physical and radiological contaminants with harmful effects on human health. In addition to its association with disease, access to drinking water may be particularly important for women and children, particularly in rural areas, who bear the primary responsibility for carrying water, often for long distances.

Over half of the population uses drinking water from that is piped into their dwelling and 20 percent used water piped into their yard or plot. Rainwater collection and rivers and streams are also important sources of drinking water.

The source of drinking water for the population varies strongly by region (Table 13). In the Central region, 94 percent of the population uses drinking water that is piped into their dwelling or into their yard or plot. In the South Central and West regions, 69 and 82 percent respectively use piped water. In contrast, only about 54 percent of those residing in the East and less than 10 percent of those in the South have piped water. In the East, the second most important source of drinking water is rainwater collection whereas in the South, more than two thirds use river or stream water (an unsafe source) and most of the remainder use collected rainwater.

The population using *safe drinking water* sources are those who use any of the following types of supply: piped water, public tap, borehole/tubewell, protected well, protected spring or rainwater. Overall, 76 percent of the population has access to safe drinking water – 93 percent in urban areas and 56 percent in rural areas. The situation in the South is considerably worse than in other regions; only 9 percent of the population in this region gets its drinking water from a safe source.

### **Use of sanitation**

Inadequate disposal of human excreta and personal hygiene is associated with a range of diseases including diarrheal diseases and polio. *Sanitary means of excreta disposal* include: flush toilets connected to sewage systems or septic tanks, other flush toilets, improved pit latrines, and traditional pit latrines. Ninety two percent of the population of [Country] is living in households with sanitary means of excreta disposal (Table 14). This percentage is 99 in urban areas and 82 percent in rural areas. Residents of the South are much less likely than others to use sanitary means of excreta disposal. Most of this population uses rivers, bush, fields, or has no facilities.

In contrast, the most common facilities in other areas of the country are flush toilets with connection to a sewage system or septic tank.

#### **D. Child Malnutrition**

##### **Nutritional status**

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

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

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.

In Table 15, children who were not weighed and measured (approximately 6 percent of children) and those whose measurements are outside a plausible range are excluded. In addition, a small number of children whose birth dates are not known are excluded.

Almost one in ten children under age five in [Country] are underweight and two percent are classified as severely underweight (Table 8). Thirteen percent of children are stunted or too short for their age and three percent are wasted or too thin for their height.

Children in the South are more likely to be underweight and stunted than other children. In contrast, the percentage wasted is highest in the South Central region. Those whose mothers have secondary or higher education are the least likely to be underweight and stunted compared to children of mothers with less 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 (Figure 2). This pattern is expected and is related to the age

at which many children cease to be breastfed and are exposed to contamination in water, food, and environment.

### Breastfeeding

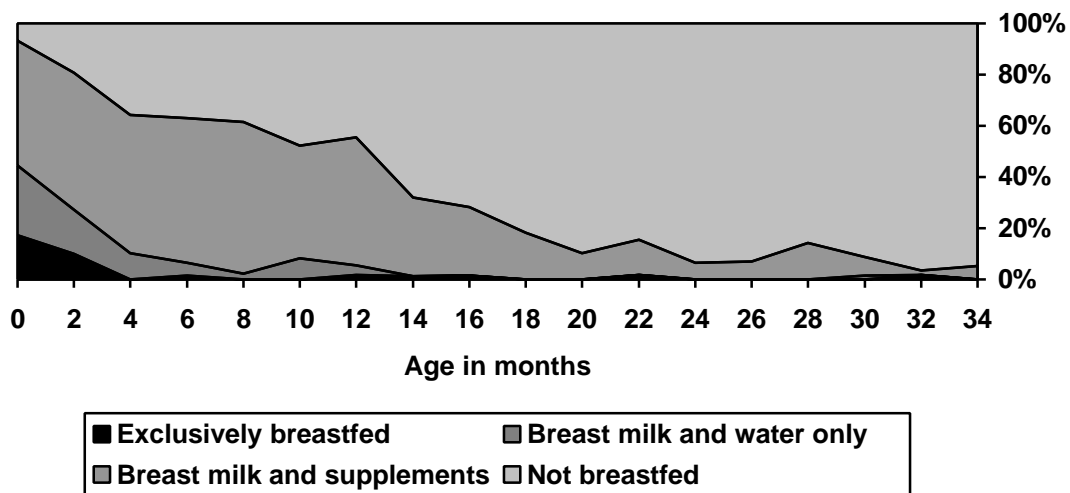
Breastfeeding for the first few years of life protects children from infection, provides an ideal source of nutrients, and is economical and safe. However, many mothers stop breastfeeding too soon, and there are often pressures to switch to infant formula, which can contribute to growth faltering and micronutrient malnutrition and is unsafe if clean water is not readily available. The World Summit for Children goal states that children should be exclusively breastfed for four to six months, that breastfeeding should be complemented with appropriate foods from the age of around six months, and that children continue to be breastfed for two or more years.

In Table 16, breastfeeding status is based on women’s reports of children’s consumption in the 24 hours prior to the interview. *Exclusive breastfeeding* refers to children who receive only breast milk and vitamins, mineral supplements, or medicine. *Complementary feeding* refers to children who receive breast milk and solid or semi-solid food. The last two columns of the table include children who are continuing to be breastfed at one and at two years of age. Percentages according to region and mother’s education are not shown due to small sample sizes. For the same reason, the sex and urban-rural residence breakdowns should be interpreted with caution.

Approximately 12 percent of children aged less than four months are exclusively breastfed, a level considerably lower than recommended. At age 6-9 months, 25 percent of children are receiving breast milk and solid or semi-solid foods. By age 12-15 months, 38 percent of children are still being breastfed and by age 20-23 months, 12 percent are still breastfed.

Figure 3 shows the detailed pattern of breastfeeding status by the child’s age in months. Even at the earliest ages, the majority of children are receiving liquids or foods other than breast milk. The percentage of children exclusively breastfed diminishes rapidly to close to zero after three months. By the end of one year, fewer than half of children are still breastfed.

**Figure 4: Percent distribution of living children by breastfeeding status, Country, Year**



## **Salt iodization**

A deficiency of iodine in the diet causes goitre, an enlargement of the thyroid gland, and can cause brain damage due to such a deficiency before birth or during infancy or childhood. The iodization of salt is a low-cost way of preventing iodine deficiency disorders (IDD). In MICS, interviewers tested household salt for iodine levels by means of a testing kit. *Adequately iodized salt* contains 15 ppm (parts per million) of iodine or more.

Approximately 98 percent of households had salt that was tested during the MICS (Table 17). Among households in which salt was tested, 78 percent had adequately iodized salt. The percentage of households with adequately iodized salt ranges from 57 percent in the South to 89 percent in the Central region. Eighty one percent of urban households had adequately iodized salt compared to 74 percent of rural households.

## **Vitamin A supplementation**

Vitamin A deficiency (VAD) can cause eye damage and blindness in children. It also impairs children's immune systems, increasing their chances of dying of common childhood diseases and undermines the health of pregnant and lactating women. Yet it can be easily prevented by vitamin A supplementation, food fortification or dietary change. Based on UNICEF/WHO guidelines, the [Country] Ministry of Health recommends that children aged 6-11 months be given one high dose Vitamin A capsules a year and children aged older than one year be given two capsules. In some parts of the country, Vitamin A capsules are linked to immunization services and are given when the child has contact with these services after six months of age. It is also recommended that mothers take a Vitamin A supplement within eight weeks of giving birth due to increased Vitamin A requirements during pregnancy and lactation.

Within the six months prior to the MICS, 14 percent of children aged 6-59 months received the high dose Vitamin A supplement (Table 18). Approximately 6 percent did not receive the supplement in the last 6 months but did receive one prior to that time. Fewer than one percent of children received a Vitamin A supplement at some time in the past but their mother/caretaker was unable to specify when. Vitamin A supplementation coverage is lower in the South than in other regions.

The age pattern of Vitamin A supplementation shows that supplementation in the last six months rises from 17 percent among children aged 6-11 months to 21 percent among children aged 12-23 months and then declines steadily with age to eight percent among the oldest children.

The mother's level of education is also related to the likelihood of Vitamin A supplementation. The percentage receiving a supplement in the last six months increases from six percent among children whose mothers have no education to 14 percent of those whose mothers have primary education and 15 percent among children of mothers with secondary or higher education.

Only about 12 percent of mothers with a birth in the year before the MICS received a Vitamin A supplement within eight weeks of the birth (Table 19). This percentage is highest in the Central and West regions at 15-16 percent and lowest in the South at 2 percent. Vitamin A coverage increases with the education of the mother but it is still only about 13 percent among women with secondary or higher education.

## **Low birth weight**

Infants who weigh less than 2500 grams (2.5 kg.) at birth are categorized as low birth weight babies. Since many infants are not weighed at birth and those who are weighed may be a biased

sample of all births, reported birth weight cannot be used to estimate the prevalence of low birthweight among all children. Therefore, the percentage of births weighing below 2500 grams is estimated from two items in the questionnaire: the mother's assessment of the child's **size** at birth (i.e., very small, smaller than average, average, larger than average, very large) and the mother's recall of the child's **weight** or the weight as recorded on a health card if the child was weighed at birth. Seventy nine percent of births in the [Country] MICS were weighed at birth.

First, the two items are cross-tabulated for those children who were weighed at birth to obtain the proportion of births in each category of **size** who weighed less than 2500 grams. This proportion is then multiplied by the total number of children falling in the size category to obtain the estimated number of children in each size category who were of low birth weight. The numbers for each size category are summed to obtain the total number of low birth weight children. This number is divided by the total number of live births to obtain the percentage with low birth weight.

In [Country], approximately 12 percent of infants are estimated to weigh less than 2500 grams at birth (Table 20). This percentage is somewhat higher than the average for the Latin America and Caribbean region (9 percent) (UNICEF, 2000). The prevalence of low birth weight births varies slightly across regions but does not vary much urban and rural areas or by mother's education.

## **E. Child Health**

### **Immunization coverage**

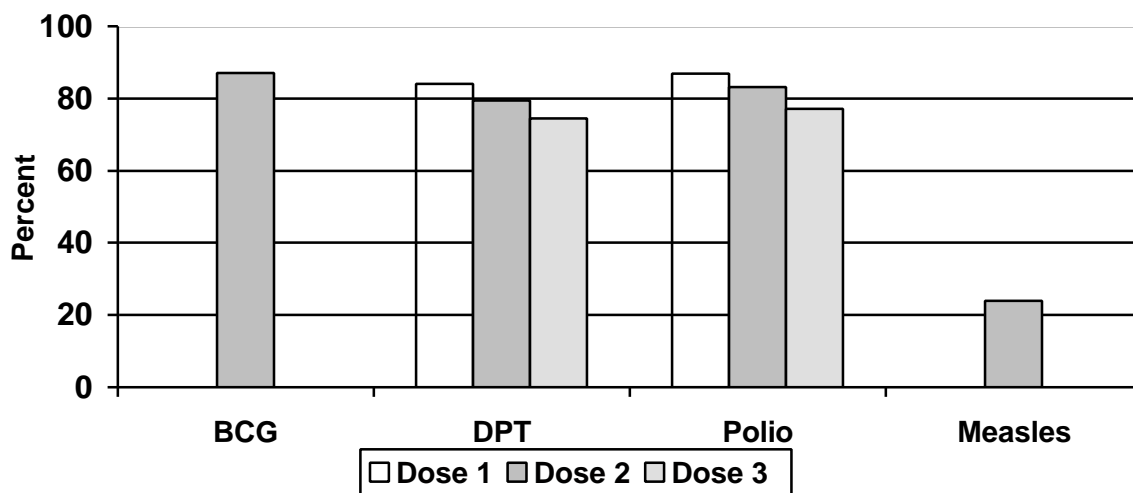
According to UNICEF and WHO guidelines, a child should receive a BCG vaccination to protect against tuberculosis, three doses of DPT to protect against diphtheria, pertussis, and tetanus, three doses of polio vaccine, and a measles vaccination by the age of 12 months. In MICS, mothers were asked to provide vaccination cards for children under the age of five. Interviewers copied vaccination information from the cards onto the MICS questionnaire. Mothers were also probed to report any vaccinations the child received that did not appear on the card. Overall, 86 percent of children had health cards. If the child did not have a card, the mother was read a short description of each vaccine and asked to recall whether or not the child had received it and, for DPT and Polio, how many times.

Table 21 shows the percentage of children aged 12 to 23 months who received each of the vaccinations. The denominator for the table is comprised of children aged 12-23 months so that only children who are old enough to be fully vaccinated are counted. In the top panel, the numerator includes all children who were vaccinated at any time before the survey according to the vaccination card or the mother's report. In the bottom panel, only those who were vaccinated before their first birthday are included. For children without vaccination cards, the proportion of vaccinations given before the first birthday is assumed to be the same as for children with vaccination cards.

Approximately 87 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 84percent. The percentage declines for subsequent doses of DPT to 79 percent for the second dose, and 75 percent for the third dose (Figure 4). Similarly, 87 percent of children received Polio 1 by age 12 months and this declines to 77 percent by the third dose. The coverage for measles vaccine by 12 months is lower than for the other vaccines at 24 percent. This is primarily because, although 61 percent of children received the vaccine, only around 40 percent received it by their first birthday. As a result, the

percentage of children who had all eight recommended vaccinations by their first birthday is low at only 19 percent.

**Figure 5: Percentage of children aged 12-23 months who received immunizations by age 12 months, Country Year**



In Table 22, the percentage of children age 12-23 months currently vaccinated against childhood diseases is shown according to background characteristics. Unlike the previous table, the estimates in this table refer to children who received the vaccinations by the time of the survey, even if they did not occur prior to the age of 12 months.

Male and female children are vaccinated at roughly the same rate. Urban children are more likely to be vaccinated than rural children. Regional breakdowns are based on small numbers of cases and should be viewed with caution, but it appears that the West region has the highest coverage rates for most vaccinations and the highest percentage of children who have received all of the recommended vaccinations. The West also has the highest percentage of children with health cards at 96 percent. Vaccination coverage is highest among children whose mothers have secondary or higher education. The education differences are greatest for the third doses of DPT and Polio, suggesting that drop out rates are higher among children with less educated mothers.

### Diarrhea

Dehydration caused by diarrhea is a major cause of mortality among children in [Country]. Home management of diarrhea – either through oral rehydration salts (ORS) or a recommended home fluid (RHF) - can prevent many of these deaths. Preventing dehydration and malnutrition by increasing fluid intake and continuing to feed the child are also important strategies for managing diarrhea.

In the MICS questionnaire, mothers (or caretakers) were asked to report whether their child had had diarrhea in the two weeks prior to the survey. If so, the mother was asked a series of questions about what the child had to drink and eat during the episode and whether this was more or less than the child usually ate and drank. Overall, 14 percent of under five children had

diarrhea in the two weeks preceding the survey (Table 23). Diarrhea prevalence was significantly higher in the South at 25 percent than in other regions. The peak of diarrhea prevalence occurs in the weaning period, among children age 6-23 months.

Table 23 also shows the percentage of children receiving various types of recommended liquids during the episode of diarrhea. Since mothers were able to name more than one type of liquid, the percentages do not necessarily add to 100. One in four children received breast milk while they had diarrhea. Children under age 12 months are especially likely to have received breast milk. About 27 percent of children received gruel and 34 percent received ORS. Children of mothers with secondary education appear to be less likely than other children to receive ORS and breast milk, but more likely to receive gruel. Approximately six in ten children with diarrhea received one or more of the recommended home treatments (i.e., were treated with ORS or RHF).

Slightly less than one third of under five children with diarrhea drank more than usual while 64 percent drank the same or less (Table 24). About 71 percent at somewhat less, the same, or more than usual while 25 percent ate much less than usual or none. Overall, only 25 percent of children with diarrhea received increased fluids and continued eating as recommended.

### **Acute respiratory infection**

Acute lower respiratory infections, particularly pneumonia, are one of the leading causes of child deaths in [Country]. In the MICS questionnaire, children with acute respiratory infection are defined as those who had an illness with a cough accompanied by rapid or difficult breathing and whose symptoms were due to a problem in the chest, or both a problem in the chest and a blocked nose, or whose mother did not know the source of the problem. Only four percent of under five children had an acute respiratory infection in the two weeks prior to the survey according to these criteria (Table 25). Of these, 38 percent were taken to a doctor for treatment, and 14 percent were taken to a nurse or health assistant. Five percent each were taken to a specialist or family member, friend, or neighbor. Fewer than five percent were taken to any other type of health provider. Overall, almost 56 percent of children with ARI were taken to an appropriate health provider (i.e., doctor, specialist, nurse/health assistant, hospital).

### **IMCI initiative**

The Integrated Management of Childhood Illnesses (IMCI) is a programme developed by UNICEF and WHO that combines strategies for control and treatment of five major killers of children – acute lower respiratory tract infections, diarrheal dehydration, measles, malaria, and malnutrition. The programme focuses on the improvement of case management skills by health workers, improvement of the health system, and improvement of family and community practices in the prevention and early management of childhood illnesses. Appropriate home management of illness is one component of IMCI. The approach teaches mothers that appropriate home management of diarrhea or any other illness requires giving more fluids and continuing to feed sick children as they are normally fed.

Table 26 presents information on the drinking and eating behavior of sick children. Almost half of children were reported to have had diarrhea or some other illness in the two weeks preceding the survey. Of these, 21 percent drank more liquids during the illness and 76 percent continued eating (i.e., ate somewhat less, the same, or more). Overall, only 16 percent of ill children received increased fluids and continued eating as recommended under the IMCI programme.

Promoting knowledge among caretakers about when it is appropriate to seek care for ill children is another important component of the IMCI programme. In the [Country] MICS, mothers or

caretakers of children were asked to name all of the symptoms that would cause them to take a child to a health facility right away. The most common response, given by 73 percent of mothers, was that they would take their child to a health facility right away if he/she developed a fever (Table 27). Fourteen percent said that the child becoming sicker would cause them to take the child to a health facility and 11 percent mentioned difficulty breathing. Between 4 and 7 percent of mothers cited an inability to breastfeed, fast breathing, blood in stools, and drinking poorly as reasons for taking a child to a health facility right away.

Among the regions, mothers in the South and, to a lesser extent, in the West are more likely than mothers in other regions to know the signs for seeking care immediately. Overall, 34 percent of mothers in the South know at least two signs for seeking care compared to 22 percent in the West, 18 percent in the Central region, and 10 percent or less in the remaining two regions. These regional differences are also reflected in the urban-rural and educational differentials. Rural mothers and those with no education were more likely to mention at least two signs for seeking care than other mothers.

## **Malaria**

Malaria is a leading cause of death of children under age five in [Country]. It also contributes to anemia in children and is a common cause of school absenteeism. Preventive measures, especially the use of mosquito nets treated with insecticide, can dramatically reduce malaria mortality rates among children. In areas where malaria is common, international recommendations suggest treating any fever in children as if it were malaria and immediately giving the child a full course of recommended antimalarial 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 MICS questionnaire incorporates questions on the use of bednets among children. In the [Country] MICS, these questions were only asked in the South and some districts of the East region since these are considered the areas of highest malaria risk. Seventy two percent of under five children slept under a bednet the night prior to the survey interview (Table 28). This percentage declines steadily with age. The vast majority of infants under 6 months of age (91 percent) sleep under a bednet compared to 69 percent of children aged 12-23 months and 61 percent of children aged 48-59 months. Most of the bednets are not treated with insecticide, however. Overall, only about five percent of the bednets used are impregnated with insecticide.

Questions on the prevalence and treatment of fever were asked for all children under age five. Slightly more than one in three under five children were ill with fever in the two weeks prior to the MICS (Table 29). The prevalence of fever reaches half of all children aged 6-23 months then declines to around 30 percent for children aged 24-47 months and 20 percent among children aged 48-59 months. Fever is less common among children whose mothers have secondary or higher education than among children of less educated mothers. Regional differences in fever prevalence are not large, ranging from 34 to 38 percent across the five regions.

Mothers were asked to report all of the medicines given to a child during their illness, both any medicine given at home and medicines given or prescribed at a health facility. Approximately 56 percent of children were given Paracetamol and 53 percent were given Chloroquine while less than one percent were given Fansidar. A relatively large percentage of children (25 percent) were given some other medicine. Overall, children with fever in the South, where malaria is probably most prevalent, are the most likely to received an appropriate anti-malarial drug while those in the South Central region are the least likely to receive and appropriate drug. Urban children are more

likely than rural children to be treated appropriately as are the children of mothers with secondary or higher education.

## **F. HIV/AIDS**

### **AIDS knowledge**

One of the most important strategies for reducing the rate of HIV/AIDS infection is the promotion of accurate knowledge of how AIDS is transmitted and how to prevent transmission. Among women aged 15-49 in [Country], 93 percent have ever heard of AIDS (Table 30). This percentage is very high in urban areas (97 percent) and somewhat lower in rural areas (90 percent).

Women in the MICS were read several statements about means of HIV/AIDS transmission and asked to state whether they believed the statements were true. Sixty three percent believe that having only one uninfected sex partner can prevent HIV transmission. Sixty two percent believe that using a condom every time one has sex can prevent HIV transmission and 45 percent agreed that abstaining from sex prevents HIV transmission. Overall, 37 percent knew all three ways and 71 percent were aware of at least one of the means of preventing transmission.

Accurate knowledge of the means of HIV/AIDS transmission is substantially less among women in the South than among other women. Also, education is a very important factor in AIDS knowledge. The percentage who know all three means of preventing transmission is more than seven times greater among women with secondary or more education compared to women with no education. Differences across age groups are not particularly large; the percentage of women who know all three means ranges from 34 percent among 20-24 year olds to 42 percent among 35-39 year olds.

Fifty nine percent of women correctly stated that AIDS can't be transmitted by supernatural means whereas 50 percent stated that AIDS can't be spread by mosquito bites (Table 31). More than seven in ten women correctly believe that a healthy looking person can be infected. Women in the South are more likely to believe misconceptions about AIDS transmission than other women. Women in the Central region are most likely to recognize all three misconceptions. Still, only a little more than half (52 percent) of these women correctly identified all three misconceptions.

Seventy six percent of women in [Country] know that AIDS can be transmitted from mother to child (Table 32). When asked specifically about the mechanisms through which mother to child transmission can take place, 71 percent said that transmission during pregnancy was possible, 51 percent said that transmission at delivery was possible, and only 45 percent agreed that AIDS can be transmitted through breast milk. Slightly less than one in three women knew all three modes of transmission. This percentage does not vary much across background categories.

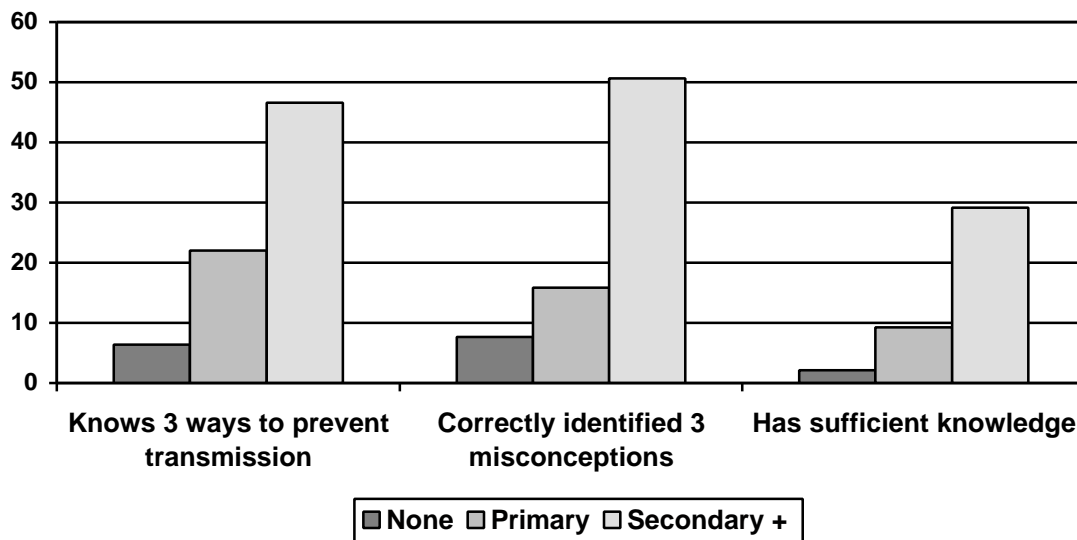
The MICS survey also attempted to measure discriminatory attitudes towards people living with HIV/AIDS. To this end, respondents were asked whether they agreed with two questions. The first asked whether a teacher who has the AIDS virus but is not sick should be allowed to continue teaching in school.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

Half of the respondents believe that a teacher with HIV/AIDS should not be allowed to work. This percentage is highest in the Central region at 64 percent and lowest in the South at 25 percent. Urban women and those with secondary or higher education are more likely to express this discriminatory attitude than rural women and those with no or primary education. Fourteen percent of women would not buy food from a person infected with AIDS. Interestingly, this measure shows a different regional pattern than the first question. Women in the South are the most likely and women in the Central region are the second most likely to express a discriminatory attitude on this question. Overall, 52 percent of women agree with at least one of the discriminatory statements.

Table 34 summarizes information from two previous tables on AIDS knowledge (Tables 30 and 31). The second column shows the percentage of women who know all three means of preventing HIV transmission – having on faithful uninfected partner, using a condom every time, and abstaining from sex. Thirty seven percent of women know all three ways. The third column of the table shows the percentage of women who correctly identified all three misconceptions about HIV transmission – that HIV can be transmitted through supernatural means, that it can be transmitted through mosquito bites, and that a healthy looking person cannot be infected. Thirty nine percent of women correctly identified these misconceptions. Finally, the fourth column of the table shows the percentage of women who have ‘sufficient knowledge’ of HIV/AIDS transmission. These are women who know all three ways of preventing HIV transmission and correctly identified all three misconceptions. Only 22 percent of women aged 15-49 fall into this category.

Knowledge of HIV/AIDS transmission varies dramatically by level of education (Figure 5). Women with secondary or higher education are almost eight times more likely to know all three ways to prevent transmission than women with no education. They are also seven times more likely to correctly identify all three misconceptions about AIDS and 14 times more likely to have sufficient knowledge of HIV/AIDS transmission

**Figure 6: Percentage of women aged 15-49 who have sufficient knowledge of HIV/AIDS transmission by level of education, Country, Year**



## **AIDS testing**

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

Sixty percent of women of reproductive age in [Country] know a place to get tested for AIDS. Women living in Central region are most likely to know a place, followed by those in the South Central, East, West, and South regions, respectively. Only 19 percent of women with no education know of a place to get tested compared to 43 percent of women with primary school education and 71 percent of women with secondary or higher education.

About 12 percent of women have been tested for AIDS. Again, this percentage is highest in Central region at 14 percent, lowest in the South at 8 percent and 9-10 percent in the other regions. The vast majority of women who have been tested were told the result, however, there is some variation across regions, age groups, and education levels. Among the regions, women in the South are least likely to have been told their result. Adolescent women (age 15-19) are the least likely of any age group to have been tested and least likely to know the result. Finally, women with no education are less likely than women with more education to be tested and least likely to have been told the result of the test.

## **G. Reproductive Health**

### **Contraception**

Current use of contraception was reported by 45 percent of married or in union women (Table 36). The most popular method is the pill which is used by one in four married women in [Country]. The next most popular method is female sterilization, which accounts for 10 percent of married women. Between two and three percent of women reported use of the IUD, injectables, and the condom. Fewer than one percent use periodic abstinence, withdrawal, male sterilization, vaginal methods, or the lactational amenorrhea method (LAM).

Contraceptive prevalence is highest in the Central region at 53 percent and almost as high in the West region at 51 percent. Forty four percent of married women in the South Central region and 39 percent in the East use a method of contraception. In the South, contraceptive use is rare; only six percent of married women reported using any method. Adolescents are far less likely to use contraception than older women. Only about 26 percent of married or in union women aged 15-19 currently use a method of contraception compared to 43 percent of 20-24 year olds and 47 percent of older women.

Women's education level is strongly associated with contraceptive prevalence. The percentage of women using any method of contraception rises from 11 percent among those with no education to 35 percent among women with primary education, and to 53 percent among women with secondary or higher education. In addition to differences in prevalence, the method mix varies by education. About half of contraceptive users with no or primary education use the pill and 31-39 percent are sterilized. In contrast, 63 percent of contraceptive users with secondary or higher education use the pill and 20 percent are sterilized.

## **Prenatal care**

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

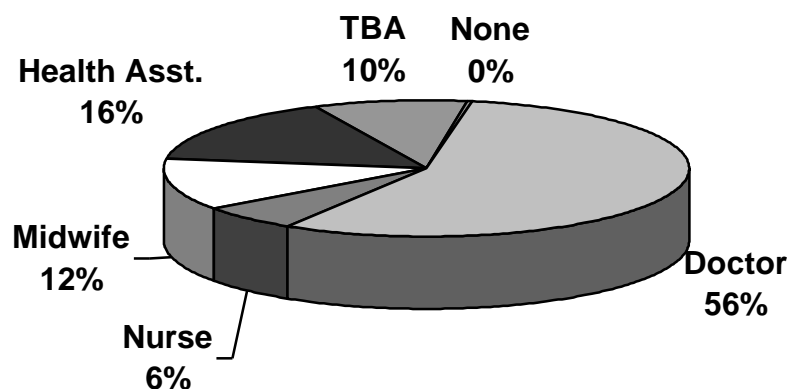
Tetanus toxoid injections are given to women during pregnancy to protect infants from neonatal tetanus, a major cause of infant death that is due primarily to unsanitary conditions during childbirth. Two doses of tetanus toxoid during pregnancy offer full protection. However, if a woman was vaccinated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

Three out of four women with recent births in [Country] are protected against neonatal tetanus (Table 37). The vast majority of these women received two or more doses of tetanus toxoid within the last three years. Among the regions, women living in the West are most likely to be protected (89 percent) while those living in the South are the least likely to be protected (68 percent). Note, however, that the regional estimates are based on small numbers of cases and should be interpreted with caution. Women with primary education are more likely to be protected against tetanus than those with either no education or secondary or higher education.

Female respondents who had had a birth in the year prior to the [Country] MICS were asked whether they had received antenatal care for the birth and, if so, what type of person provided the care. If the woman saw more than one type of provider, all were recorded in the questionnaire. Table 38 presents the percent distribution of women with a birth in the year prior to the MICS by the type of personnel who delivered antenatal care. If more than one provider was mentioned by the respondent, she is categorized as having seen the most skilled person she mentioned.

Virtually all women in [Country] receive some type of prenatal care and 75 percent receive antenatal care from skilled personnel (doctor, nurse, midwife). A little over half of women with a birth in the year prior to the survey received antenatal care from a doctor, 6 percent from a nurse, and 12 percent from a midwife (Figure 6). Health assistants provided prenatal care for 16 percent of women and traditional birth attendants for 10 percent. Note that health assistants are only used for prenatal care in the South where 73 percent of women received care from them. In the other regions, doctors are most likely to provide prenatal care but midwives are important providers in the East and South Central regions.

**Figure 7: Percent distribution of women with a birth in the last year by type of personnel delivering antenatal care, Country, Year**



### **Assistance at delivery**

The provision of delivery assistance by trained attendants can greatly improve outcomes for mothers and children by the use of technically appropriate procedures, and accurate and speedy diagnosis and treatment of complications. *Skilled assistance at delivery* is defined as assistance provided by a doctor, nurse, or midwife. About 77 percent of births occurring in the year prior to the MICS survey were delivered by skilled personnel (Table 39). This percentage is highest in the South Central region at 99 percent and lowest in the South at 21 percent. The more educated a woman is, the more likely she is to have delivered with the assistance of a skilled person.

More than one in three of the births in the year prior to the MICS survey were delivered with assistance by a midwife. Doctors assisted with the delivery of 27 percent of births and nurses assisted with 13 percent. Overall, health assistants delivered about 10 percent of births, but these births occurred only among women in the South where the type of personnel providing delivery assistance is noticeably different from the other regions. In the South, about 47 percent of births are delivered by health assistants and 27 percent by traditional birth attendants. In the other regions, between 42 and 49 percent of births are delivered with the assistance of a midwife while 29-33 percent are delivered by a doctor.

## **H. Child Rights**

### **Birth registration**

The International Convention on the Rights of the Child states that every child has the right to a name and a nationality and the right to protection from being deprived of his or her identity. Birth registration is a fundamental means of securing these rights for children. The births of 94 percent of children under five years in [Country] have been registered (Table 40). There are no significant variations in birth registration across sex, age, or education categories. Children in the

West are somewhat less likely to have their births registered than other children but this appears to be due primarily to a relatively large proportion of mothers who do not know if their child's birth was registered. Among those whose births are not registered, cost, travel distance, and lack of knowledge do not appear to be the main reasons.

### **Orphanhood and living arrangements of children**

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

In [Country], 64 percent of children aged 0-14 are living with both parents (Table 41). A substantial percentage - 21 percent - are living with their mother only although their father is alive. About 6 percent are living with neither parent although both parents are alive. Children who are not living with a biological parent comprise 7 percent and children who have one or both parents dead amount to 4 percent of all children aged 0-14. Older children are more likely to live away without their biological parents than younger children. While only four percent of children under age five are not living with a biological parent, 10 percent of children aged 10-14 do so.

The situation of children in the South differs from that of other children in [Country]. In the South, less than half of children live with both parents. Thirty six percent live with their mother only but their father is alive and a relatively large proportion (10 percent) are living with neither parent. This pattern is most likely due to labor migration of men and, to some extent women, from the South to other regions and neighboring countries.

### **Child labor**

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

In [Country], the MICS survey estimates that only about two percent of children aged 5-14 years engage in paid work (Table 42). About twice as many - 4 percent - participate in unpaid work for someone other than a household member.

'Domestic work' is defined as cooking, shopping, cleaning, washing clothes, fetching water, and caring for children. Slightly more than half of children do these tasks for less than four hours a day while 25 percent spend more than four hours a day on such tasks. Overall, girls are somewhat more likely than boys and older children (aged 10-14) are more likely than younger children (aged 5-19 years) to do domestic work. Variations across regions are greatest in the percentage of children who engage in more than four hours of domestic work a day. This percentage ranges from 19 percent in the Central and West regions to 36 percent in the South.

Children who have done any paid or unpaid work for someone who is not a member of the household or who did more than four hours of housekeeping chores in the household or who did other family work are considered to be 'currently working'. Overall, 31 percent of children are

classified as currently working. There is virtually no difference between boys and girls (32 percent of boys and 30 percent of girls). Regionally, the percentage of children working is lowest in the Central and West regions at 24 percent and highest in the East at 37 percent. Rural children are far more likely to work than urban children.

**Appendix A: Sample Design**

**Appendix B: List of Personnel Involved in the [Country] MICS**

**Appendix C: Questionnaires**