Uganda Demographic and Health Survey 2011

Preliminary Report

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Uganda Bureau of Statistics
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MEASURE DHS
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CONTENTS

TABLES AND FIGURES

PREFACE

The 2011 Uganda Demographic and Health Survey (2011 UDHS) was designed as a follow-up to the 1988/89, 1995, 2000-01 and 2006 Uganda Demographic and Health Surveys. The main objective of the 2011 UDHS was to obtain current data on demography, family planning, maternal mortality, infant and child mortality, and health related information such as breastfeeding, antenatal care, delivery, children's immunization, and childhood diseases. In addition, the survey was designed to evaluate the nutritional status of mothers and children, to measure the prevalence of anaemia among women and children, and to measure the prevalence of HIV infection among the male and female adult population age 15-49 years.

This report presents preliminary findings from the 2011 Uganda Demographic and Health Survey (2011 UDHS). The survey findings will be used by policy makers to evaluate the demographic and health status of the Ugandan population in order to formulate appropriate population and health policies and programs in Uganda. The forthcoming UDHS final report will contain more detailed findings.

Uganda Bureau of Statistics would like to acknowledge the efforts of a number of organizations and individuals who contributed immensely to the success of the survey. The Ministry of Health chaired the Technical Working Committee, which offered guidance on the implementation of the survey. The Makerere University School of Public Health (MakSPH) and the Department of Biochemistry conducted the Quality Control study and the laboratory testing for vitamin A deficiency respectively.

Financial assistance was provided by the Government of Uganda, USAID/Uganda, the United Nations Population Fund (UNFPA), the United Nations Children's Fund (UNICEF), the World Health Organization (WHO) and Irish Aid - the Government of Ireland. ICF International is greatly appreciated for providing important technical support.

Finally, we highly appreciate all the field staff and, more importantly, the survey respondents whose participation was critical to the successful completion of this survey.

John B. Male-Mukasa
Executive Director
Uganda Bureau of Statistics

I.   INTRODUCTION

The 2011 Uganda Demographic and Health Survey (2011 UDHS) was designed as a follow-up to the 1988/89, 1995, 2000-01 and 2006 Uganda Demographic and Health Surveys with the objective of providing updated estimates of basic demographic and health indicators. However, it is only the 2006 and 2011 that covered the entire country. The 2011 UDHS was conducted under the Uganda Bureau of Statistics, Act 1998. The data collection was carried out from June to December 2011.

The Uganda Bureau of Statistics (UBOS) was the major implementer of the survey. Other agencies and organizations that facilitated the successful implementation of the survey through technical support include the UDHS Technical Working Committee, the Makerere University School of Public Health, and the Biochemistry Department of Makerere University. Financial support was provided by USAID/Uganda, UNFPA, UNICEF, WHO and the Irish Aid, Government of Ireland. In addition, ICF International provided technical assistance through the MEASURE DHS project, a USAID-funded program supporting the implementation of population and health surveys in countries worldwide.

This preliminary report presents a summary of selected 2011 UDHS results. A final report with a comprehensive analysis of the data will be presented in the survey final report to be published mid-2012. Although the results presented here are considered provisional, they are not expected to differ significantly from those to be presented in the final report.

# II.	SURVEY IMPLEMENTATION

## A.	Sample Design

The sample for the 2011 UDHS was designed to provide population and health indicator estimates for the country as a whole and for urban and rural areas. Survey estimates can also be reported for the 10 sub regions grouped as shown in Figure 1 below. The results presented in this report show key indicators that correspond to these sub regions.

Figure 1 **Map of Uganda Showing the UDHS Sub Regions**

A representative sample of 10,086 households was selected for the 2011 UDHS. The sample was selected in two stages. In the first stage, 404 EAs were selected from among a list of clusters sampled in the 2009/10 Uganda National Household Survey (2010 UNHS). This matching of samples was done in order to allow for linking of the 2011 UDHS health indicators to poverty data from the 2009/10 UNHS. The clusters in the UNHS were selected from the 2002 Population Census sample frame.

In the second stage, households in each cluster were selected based on a complete listing of households. In all clusters new lists of the households were generated for the purpose of updating the sample list. Households were systematically selected from the households listed

during the listing exercise. (All the households covered in 2010 UNHS were purposively included in the UDHS sample.)

All women age 15-49 who were either permanent residents of the households or visitors who slept in the household on the night before the survey were eligible to be interviewed. In addition, in a sub-sample of one-third of all households selected for the survey, all men age 15-54 were eligible to be interviewed if they were either permanent residents or visitors who slept in the household on the night before the survey.

B.   Questionnaires

Three types of questionnaires were used for the 2011 UDHS: the Household Questionnaire, the Woman's Questionnaire, and the Man's Questionnaire. These questionnaires were adapted from model survey instruments developed for the MEASURE DHS project and the UNICEF Multiple Indicator Cluster Survey (MICS) to reflect the population and health issues relevant to Uganda. Questionnaires were discussed at a series of meetings with various stakeholders from government ministries and agencies, nongovernmental organizations (NGOs), and development partners. The questionnaires were translated into seven major languages: Ateso, Ngakarimojong, Luganda, Lugbara, Luo, Runyankole-Rukiga, and Runyoro-Rutoro.

The **Household Questionnaire** was used to list all the usual members and visitors who spent the previous night in the selected households. Some basic information was collected on the characteristics of each person listed, including his or her age, sex, education, and relationship to the head of the household. For children under age 18, survival status of the parents was determined. The data on the age and sex of household members obtained in the Household Questionnaire were used to identify women and men who were eligible for the individual interview. Additionally, the Household Questionnaire collected information on characteristics of the household's dwelling unit, such as the source of water, type of toilet facilities, materials used for the floor of the house, and ownership of various durable goods.

The **Woman's Questionnaire** was used to collect information from all eligible women age 15-49. The eligible women were asked questions on the following topics:

- Background characteristics (age, education, media exposure, etc.)
- Birth history and childhood mortality
- Knowledge and use of family planning methods
- Fertility preferences
- Antenatal, delivery, and postnatal care
- Breastfeeding and infant feeding practices
- Vaccinations and childhood illnesses
- Marriage and sexual activity
- Women's work and husband's background characteristics
- Awareness and behaviour regarding AIDS and other sexually transmitted infections (STIs)
- Adult mortality, including maternal mortality
- Knowledge of tuberculosis and other health issues.

The **Man's Questionnaire** was administered to all eligible men age 15-54 years in one third of the sampled household in the 2011 UDHS sample. The Man's Questionnaire collected similar information found in the Woman's Questionnaire but was shorter because it did not contain a detailed reproductive history or questions on maternal and child health.

All data collection instruments were pre-tested in August-September, 2010. The observations and experiences gathered from the pre-test were used to improve the data collection instruments for the main survey.

C.   Anthropometry, Anaemia, and Vitamin A Testing

The 2011 UDHS incorporated three biomarkers: anthropometry, anaemia testing, and vitamin A testing. The protocol for anaemia testing and for the blood specimen collection for vitamin A testing was reviewed and approved by the Institutional Review Board of ICF International.

Anthropometry. In all households, height and weight measurements were recorded for children age 0-59 months, women age 15-49 years, and men age 15-54.

Anaemia testing. Blood specimens were collected for anaemia testing from all children age 6-59 months, women age 15-49 years and men age 15-54 years who voluntarily consented to the testing. Blood samples were drawn from a drop of blood taken from a finger prick (or a heel prick in the case of young children with small fingers) and collected in a microcuvette. Haemoglobin analysis was carried out on site using a battery-operated portable HemoCue analyzer. Results were given verbally and in writing. Parents of children with a haemoglobin level under 7 g/dl were instructed to take the child to a health facility for follow-up care. Likewise, non-pregnant women, pregnant women, and men were referred for follow-up care if their haemoglobin level was below 7 g/dl, 9 g/dl and 9 g/dl, respectively. All households in which anaemia testing was conducted were given a brochure explaining the causes and prevention of anaemia. Anaemia data were adjusted for altitude prior to being tabulated.

Vitamin A testing. Blood specimens were collected by the health technicians for laboratory testing of vitamin A from all women age 15-49 who consented to the test and children age 6-59 months whose parent/responsible adult consented to the test. The protocol for the blood specimen collection and analysis was based on the anonymous linked protocol developed for MEASURE DHS project. This protocol allows for the merging of the vitamin A test results with the socio-demographic data collected in the individual questionnaires, after all information that could potentially identify an individual is destroyed.

The Health technicians explained the procedure, the confidentiality of the data, and the fact that the test results would not be made available to the respondent. If a respondent consented to the vitamin A testing, a maximum of 3 blood drops from the finger prick were collected on a filter paper card to which a barcode label unique to the respondent was affixed. Respondents were asked whether they consented to having the laboratory store their blood sample for future unspecified testing. If the respondent did not consent to additional testing using their sample the words 'no additional testing' were written on the filter paper card.

Each blood sample was given a barcode label, with a duplicate label attached to the Biomarker Data Collection page of the Household Questionnaire. A third copy of the same barcode was affixed to the Blood Sample Transmittal Form to track the blood samples from the field to the laboratory. Blood samples were dried overnight and packaged for storage the following morning. Samples were periodically collected from the field and transported to the laboratory at the biochemistry department of Makerere University in Kampala to be logged in, checked and stored.

This preliminary report does not include data on vitamin A deficiency. Data from the vitamin A test results will be linked to the demographic and health data and published in the 2011 UDHS final report.

D.   Pretest and Training

Thirty women and men were hired for the pretest. They were trained from August 30 to September 14, 2010 on the administration of the UDHS survey questionnaires. Seven days of fieldwork were followed by one day of interviewer debriefing and examination. Pretest fieldwork was conducted in two clusters in seven districts each with one rural and one urban cluster. The majority of pretest participants attended the main training and served as field editors and team leaders for the main survey. A second pretest was undertaken with the overall objective to test the management and implementation of the Computer Assisted Field data Editing (CAFÉ) program, and more specifically, to develop data editing guidelines for the 2011 UDHS.

UBOS recruited and trained 146 individuals for the main survey. The training that was conducted from May 2 to June 1, 2011, consisted of instructions regarding interviewing techniques and field procedures, a detailed review of the questions in the questionnaires, followed by tests, instruction and practice in weighing and measuring children, mock interviews and role plays between participants in the classroom and in the neighboring villages. At the end of the main training 123 individuals were retained to work as the main data collectors and 23 as data validators.

E.   Fieldwork

Sixteen data collection teams were formed, each comprised of a team leader, a field editor, three female interviewers, one male interviewer, and one health technician. UBOS staff coordinated and supervised fieldwork activities. Technical staff from USAID/Uganda also participated in the fieldwork monitoring. In addition to the data collection teams, a data validation team was formed for each of the 10 regions. Each data validation team included a field supervisor and three interviewers. An independent quality control team looking at survey protocol issues also visited the data collection teams. Data collection took place over a six month period, from June to December 2011.

F.   Data Processing

All questionnaires for the 2011 UDHS were returned to UBOS headquarters office in Kampala for data processing, which consisted of office editing, coding of open-ended questions, data entry, and editing computer-identified errors. The data were processed by a team of eight data entry operators, two office editors, and one data entry supervisor. Data entry and editing were accomplished using the CSPro software. The processing of data was initiated in August 2011 and completed in January 2012.

III. PRELIMINARY FINDINGS

A. Response Rates

Table 1 shows household and individual response rates for the 2011 UDHS. A total of 10,086 households were selected for the sample, of which 9,480 were found to be occupied during data collection. Of these, 9,033 households were successfully interviewed, giving a household response rate of 95 percent.

Of the 9,247 eligible women identified in the selected households, interviews were completed with 8,674 women, yielding a response rate of 94 percent for women.

Of the 2,573 eligible men identified in the selected sub-sample of households for men, 2,295 were successfully interviewed, yielding a response rate of 89 percent for men.

Table 1 Results of the household and individual interviews

Number of households, number of interviews, and response rates, according to residence (unweighted), Uganda 2011

	Residence		
Result	Urban	Rural	Total
Household interviews			
Households selected	2,977	7,109	10,086
Households occupied	2,794	6,686	9,480
Households interviewed	2,551	6,482	9,033
Household response rate[1]	91.3	96.9	95.3
Interviews with women age 15-49			
Number of eligible women	2,805	6,442	9,247
Number of eligible women interviewed	2,562	6,112	8,674
Eligible women response rate[2]	91.3	94.9	93.8
Interviews with men age 15-54			
Number of eligible men	772	1,801	2,573
Number of eligible men interviewed	631	1,664	2,295
Eligible men response rate[2]	81.7	92.4	89.2

[1] Households interviewed/households occupied
[2] Respondents interviewed/eligible respondents

Response rates were higher in rural than in urban areas, with the rural-urban difference being more pronounced among men (92 and 82 percent, respectively) than among women (97 and 91 percent, respectively).

B. Characteristics of the Respondents

Table 2 shows the distribution of women and men age 15-49 years in the 2011 UDHS sample, by background characteristics. About one in six women (61 percent) and men (57 percent) are below age 30, reflecting the young age structure of the Ugandan population.

The distribution of respondents by religion shows that about four in ten of all respondents are Catholic (41 percent of women and 44 percent of men), while about three in ten (30 percent of women and 32 percent) of men are Protestant.

The majority of women (17 percent) and men (16 percent) belong to the Buganda tribe.

Women who are in union (i.e., currently married or living with a man as if married) constitute over three-fifths of all interviewed women (63 percent). Among men 15-49, close to six in ten are currently in union (57 percent). The proportion of respondents age 15-49 who have never been married is higher among men (38 percent) compared with women (24 percent).

Table 2 also shows that 80 percent of women and men live in rural areas. Regional distribution shows that the largest proportion of respondents reside in the Eastern and Western regions (14 to 15 percent), while the lowest proportion of respondents reside in Karamoja (3 percent, each).

Education in Uganda is widespread; only 13 percent of women and 4 percent of men have never attended formal education. About six in ten respondents have primary education and

about one in four have secondary education. Smaller percentages of women and men have more than secondary education, 5 percent of women and 8 percent of men.

Table 2 Background characteristics of respondents

Percent distribution of women and men age 15-49 by selected background characteristics, Uganda 2011

Background characteristic	Women			Men		
	Weighted percent	Weighted number	Unweighted number	Weighted percent	Weighted number	Unweighted number
Age						
15-19	23.6	2,048	2,026	25.5	554	562
20-24	18.8	1,629	1,666	14.6	318	340
25-29	18.1	1,569	1,618	16.6	361	365
30-34	12.5	1,086	1,101	14.9	323	310
35-39	11.8	1,026	992	12.3	268	284
40-44	8.4	729	709	8.8	191	179
45-49	6.8	587	562	7.2	157	151
Religion						
Catholic	40.6	3,524	3,731	43.8	952	994
Protestant	30.0	2,601	2,463	32.0	695	678
Muslim	13.0	1,124	1,173	12.4	269	287
Pentecostal	13.3	1,154	1,079	8.5	185	169
SDA	1.9	168	149	1.8	39	34
Other	1.2	104	79	1.5	32	29
Ethnic group						
Muganda	17.4	1,511	1,472	16.4	356	359
Munyankole	10.2	887	778	10.0	218	184
Musoga	7.9	683	673	9.0	195	202
Mukiga	7.2	622	495	7.4	161	130
Ateso	7.1	617	505	7.0	152	132
Other	50.2	4,354	4,751	50.2	1,090	1,184
Marital status						
Never married	24.4	2,118	2,208	38.4	834	872
Married	35.6	3,087	3,071	41.4	899	878
Living together	26.9	2,331	2,281	15.1	329	326
Divorced/separated	9.3	805	790	4.7	103	107
Widowed	3.8	328	319	0.3	8	8
Missing	0.1	5	5	0.0	0	0
Residence						
Urban	19.8	1,717	2,562	20.2	439	614
Rural	80.2	6,957	6,112	79.8	1,734	1,577
Region						
Central 1	11.0	956	767	9.6	209	178
Central 2	10.4	902	830	10.8	236	221
Kampala	9.7	839	1,039	10.2	221	238
East Central	9.5	826	826	10.4	226	232
Eastern	15.1	1,309	992	13.7	298	246
North	8.5	735	823	9.2	199	222
Karamoja	3.3	289	659	2.5	55	116
West Nile	5.8	500	910	6.1	133	236
Western	14.1	1,221	919	14.8	322	280
Southwest	12.7	1,097	909	12.6	273	222
Education						
No education	12.9	1,120	1,332	4.1	90	112
Primary	59.4	5,152	4,820	60.2	1,309	1,250
Secondary	22.5	1,949	1,972	27.2	592	616
More than secondary	5.2	454	550	8.4	182	213
Total 15-49	100.0	8,674	8,674	100.0	2,173	2,191
Men 50-59	na	na	na	na	122	104
Total 15-54	na	na	na	na	2,295	2,295

Note: Education categories refer to the highest level of education attended, whether or not that level was completed.
na = Not applicable

C.   Fertility

To generate data on fertility, all women who were interviewed were asked to report the total number of sons and daughters to whom they had ever given birth in their lifetime. To ensure all information was reported, women were asked separately about children still living at home, those living elsewhere, and those who had died. A complete birth history was then obtained, including information on sex, date of birth, and survival status of each child; age at death for dead children was also recorded.

Table 3 shows age-specific fertility rates, the total fertility rate, the general fertility rate, and the crude birth rate for the three-year period preceding the survey. Age-specific and total fertility rates were calculated directly from the birth history data. The sum of age-specific fertility rates (known as the total fertility rate) is a summary measure of the level of fertility. The Total Fertility Rate (TFR) is the number of children a woman would have by the end of her childbearing years if she were to pass through those years bearing children at the current observed age-specific rates. If fertility were to remain constant at current levels, a Ugandan woman would bear an average of 6.2 children in her lifetime. This represents a decrease of 0.5 children in the 5 years since the 2006 UDHS, when the TFR was 6.7 births per woman. Fertility is significantly higher among rural than urban women. Rural women will give birth to nearly three more children during their reproductive years than urban women (3.8 and 6.8, respectively).

Figure 2 further shows that fertility has declined over the past five years for both rural and urban women.

Table 3 Current Fertility

Age-specific rates and total fertility rate, the general fertility rate, and the crude birth rate for the three years preceding the survey, by residence, Uganda 2011

	Residence		
Age group	Urban	Rural	Total
15-19	91	146	134
20-24	205	350	313
25-29	194	318	291
30-34	171	248	232
35-39	87	187	172
40-44	16	82	74
45-49	2	26	23
TFR (15-49)	3.8	6.8	6.2
GFR	148	234	217
CBR	40.3	42.4	42.1

Notes: Age-specific fertility rates are per 1,000 women. Rates for age group 45-49 may be slightly biased due to truncation. Rates are for the period 1-36 months prior to interview.
TFR: Total fertility rate expressed per woman
GFR: General fertility rate expressed per 1,000 women age 15-44
CBR: Crude birth rate, expressed per 1,000 population

Figure 2 Trends in Total Fertility Rates, UDHS 2006 and 2011

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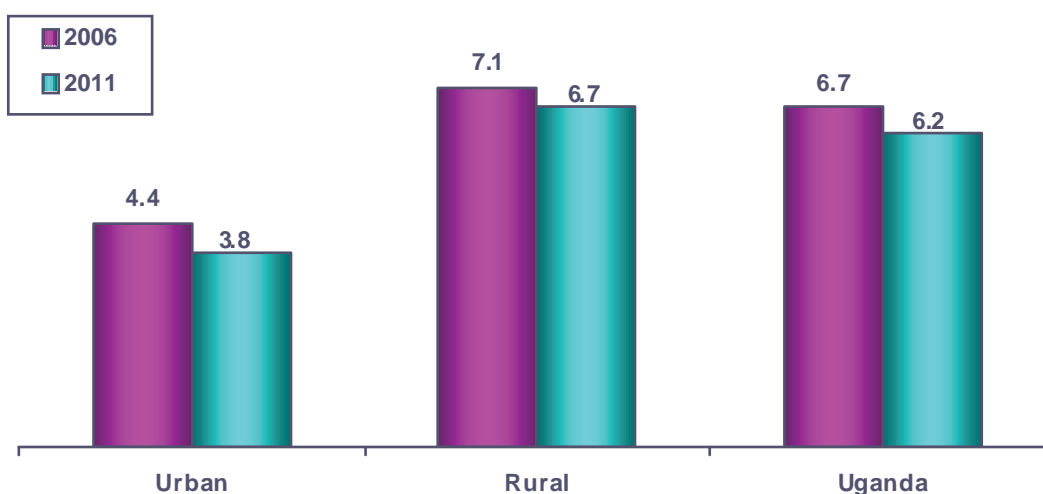
Information on fertility preferences is used to assess the potential demand for family planning services for the purposes of spacing or limiting future childbearing. To elicit information on fertility preferences, several questions were asked of women (pregnant or not at the time of interview) on whether they want to have another child, and if so, how soon.

Table 4 shows that 14 percent of women want to have another child soon (within the next two years) and 38 percent want to have another child later (two or more years). Forty percent of women want no more children and 3 percent are sterilized.

Fertility preferences are closely related to the number of living children. About four out of five women with no living children (79 percent) want a child soon, compared with only 3 percent of women with six or more children. The more children a woman has, the higher the likelihood of wanting to limit child bearing.

Table 4 Fertility preferences by number of living children

Percent distribution of currently married women age 15-49 by desire for children, according to number of living children, Uganda 2011

Desire for children	Number of living children[1]							Total
	0	1	2	3	4	5	6+	
Have another soon[2]	78.9	25.7	17.2	16.7	8.6	8.9	3.4	14.3
Have another later[3]	9.4	67.7	63.7	49.3	37.6	27.6	11.9	37.8
Have another, undecided when	1.3	0.9	1.0	0.7	1.0	0.7	0.5	0.8
Undecided	0.8	1.5	1.7	3.9	3.3	3.3	2.8	2.7
Want no more	3.1	3.0	14.3	25.9	46.5	53.3	72.4	39.5
Sterilized[4]	0.0	0.0	0.7	2.2	1.6	4.1	6.6	3.0
Declared infecund	6.4	0.9	1.3	1.1	1.4	2.1	2.3	1.8
Missing	0.0	0.4	0.1	0.2	0.0	0.0	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	192	660	871	790	738	665	1,502	5,418

[1] The number of living children includes current pregnancy
[2] Wants next birth within 2 years
[3] Wants to delay next birth for 2 or more years
[4] Includes both female and male sterilization

D.   Family Planning

Family planning refers to a conscious effort by an individual or a couple to limit or space the number of children they want to have through the use of contraceptive methods. Information about use of contraceptive methods was collected from female respondents by asking if they (or their partner) were currently using a method. Contraceptive methods are classified as modern or traditional methods. Modern methods include female sterilization, male sterilization, pill, IUD, injectables, implants, male condom, diaphragm, lactational amenorrhea method (LAM). Traditional methods include rhythm (periodic abstinence), withdrawal, and other traditional methods.

Table 5 shows that three in ten currently married women are using some method of contraception. The majority of users rely on a modern method (26 percent). Use of modern contraceptive methods has increased substantially over the past fifteen years from 8 percent of currently married women in 1995, to 18 percent in 2006, and to 26 percent in 2011 (Figure 3).

The most commonly used modern methods are injectables (14 percent). Four percent of women report using traditional methods.

Variation by age shows that the use of any methods among women currently in union increases steadily with age and peaks at 38 percent among women age 35-44. For rural-urban differentials there is a wide gap in the use of any methods between urban and rural areas (39 percent versus 23 percent). Distribution by sub region shows that the percentage of women currently in union using a contraceptive method is highest in Kampala (48 percent) while West Nile (15 percent) and Karamoja (8 percent) sub regions had the lowest percentages.

The use of contraception increases with increasing level of education. Forty-four percent of currently married women with secondary or more education are using a contraceptive method compared with 18 percent of those with no education.

In general, women do not begin to use contraception until they have had at least one child. Only about one-third of currently married women with three or more children are currently using a method of contraception.

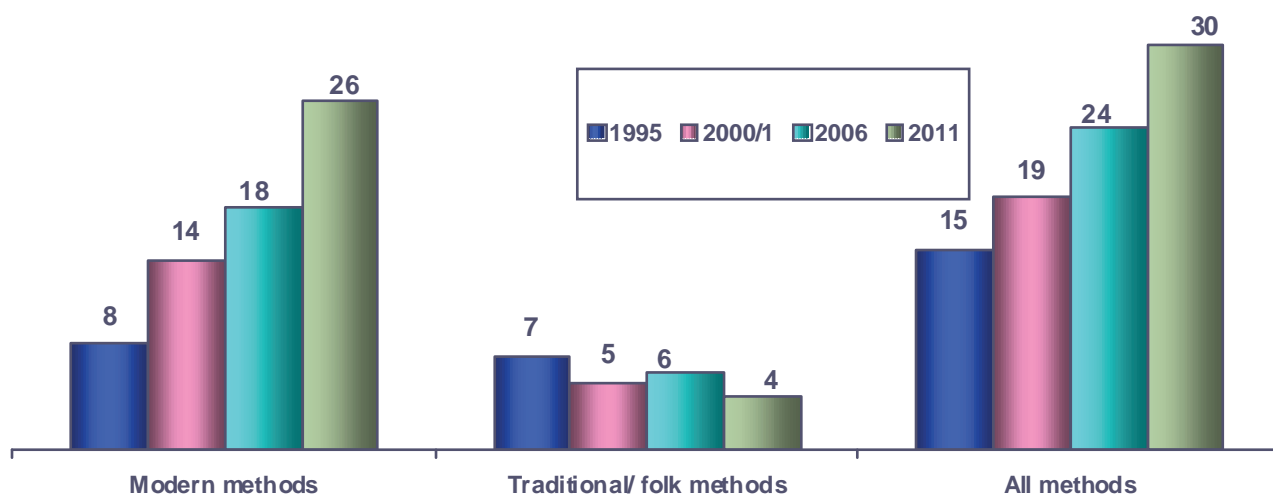*Figure 3* **Trends in Contraceptive Use**

Table 5 Current use of contraception by background characteristics

Percent distribution of currently married women age 15-49 by contraceptive method currently used, according to background characteristics, Uganda 2011

Background characteristic	Any method	Modern method									Traditional method				Not currently using	Total	Number of women
		Any modern method	Female sterili-zation	Male sterili-zation	Pill	IUD	Inject-ables	Implants	Male condom	LAM	Any tradi-tional method	Rhythm	With-drawal	Other			
Age																	
15-19	13.9	13.1	0.0	0.0	0.5	0.0	8.0	0.7	3.8	0.1	0.8	0.0	0.8	0.0	86.1	100.0	409
20-24	22.9	20.4	0.0	0.0	2.9	0.5	13.4	1.1	2.5	0.1	2.5	0.6	1.9	0.0	77.1	100.0	1,097
25-29	32.0	27.8	0.3	0.2	2.6	0.8	17.1	3.6	2.8	0.3	4.2	1.7	2.1	0.4	68.0	100.0	1,295
30-34	35.4	31.2	2.0	0.0	4.7	0.5	17.7	3.6	2.5	0.3	4.2	1.4	1.8	1.0	64.6	100.0	880
35-39	37.8	33.4	6.9	0.0	2.9	0.9	14.3	4.7	3.3	0.3	4.4	1.6	2.1	0.7	62.2	100.0	820
40-44	37.5	30.6	9.4	0.0	4.1	0.3	12.6	1.7	2.6	0.0	6.9	3.1	3.1	0.7	62.5	100.0	553
45-49	20.5	15.2	7.3	0.4	0.5	0.0	4.8	0.9	1.2	0.0	5.3	1.2	3.2	0.9	79.5	100.0	364
Residence																	
Urban	45.8	39.2	2.5	0.2	7.9	1.6	19.9	1.8	4.7	0.6	6.6	2.8	3.3	0.6	54.2	100.0	892
Rural	26.9	23.4	3.0	0.1	1.9	0.3	12.9	2.8	2.3	0.1	3.5	1.1	1.9	0.5	73.1	100.0	4,526
Region																	
Central 1	37.3	30.7	2.2	0.2	4.6	0.8	15.0	2.2	5.4	0.2	6.6	2.6	3.6	0.4	62.7	100.0	559
Central 2	33.7	30.7	4.9	0.3	3.0	0.5	14.3	3.4	3.3	1.1	2.9	0.4	2.5	0.0	66.3	100.0	565
Kampala	48.2	40.2	2.0	0.5	10.3	1.8	19.3	1.6	4.7	0.0	8.0	3.6	3.8	0.6	51.8	100.0	397
East Central	32.0	27.5	3.8	0.0	2.6	0.0	16.4	0.4	4.3	0.0	4.5	1.2	1.5	1.8	68.0	100.0	555
Eastern	26.3	23.4	4.2	0.0	0.8	0.1	15.2	1.8	1.3	0.0	2.9	1.2	1.2	0.5	73.7	100.0	884
North	23.9	23.4	2.7	0.0	1.2	0.9	12.7	5.0	0.8	0.1	0.5	0.4	0.1	0.0	76.1	100.0	487
Karamoja	7.8	7.4	0.2	0.0	1.9	0.0	2.8	1.6	0.9	0.0	0.4	0.0	0.4	0.0	92.2	100.0	215
West Nile	14.6	13.6	1.0	0.0	1.3	0.7	4.8	3.7	2.1	0.0	0.9	0.5	0.3	0.1	85.4	100.0	330
Western	32.7	26.8	2.1	0.0	1.5	0.5	15.5	4.2	2.8	0.2	5.9	2.8	2.2	0.9	67.3	100.0	743
Southwest	29.6	25.1	2.7	0.0	4.0	0.5	14.0	2.5	1.6	0.0	4.4	0.5	3.7	0.2	70.4	100.0	681
Education																	
No education	17.9	15.5	3.1	0.0	1.7	0.1	6.3	2.3	1.7	0.2	2.5	1.3	0.9	0.3	82.1	100.0	877
Primary	28.0	24.5	3.2	0.1	1.9	0.4	13.9	2.9	2.0	0.1	3.5	0.8	2.1	0.6	72.0	100.0	3,313
Secondary +	44.2	37.7	1.9	0.1	6.5	1.3	19.9	2.3	5.3	0.4	6.5	3.1	3.0	0.3	55.8	100.0	1,227
Number of living children																	
0	5.1	4.2	0.0	0.0	1.8	0.0	1.3	0.0	1.2	0.0	0.8	0.2	0.6	0.0	94.9	100.0	341
1-2	27.1	23.7	0.3	0.1	3.1	0.5	13.8	1.3	4.3	0.2	3.4	1.3	1.9	0.2	72.9	100.0	1,532
3-4	33.5	29.1	1.8	0.1	3.0	1.1	16.4	3.6	2.8	0.1	4.4	1.8	2.4	0.2	66.5	100.0	1,475
5+	33.8	29.2	6.0	0.1	2.9	0.2	14.6	3.4	1.7	0.2	4.6	1.4	2.2	1.0	66.2	100.0	2,069
Total	30.0	26.0	2.9	0.1	2.9	0.5	14.1	2.7	2.7	0.2	4.0	1.4	2.1	0.5	70.0	100.0	5,418

Note: If more than one method is used, only the most effective method is considered in this tabulation. LAM = Lactational amenorrhea method

E. Childhood Mortality

Infant and child mortality rates are basic indicators of a country's socioeconomic situation and quality of life (UNDP, 2007). Estimates of childhood mortality are based on information collected in the birth history section of the questionnaire administered to individual women. The section begins with questions about the aggregate childbearing experience of respondents (i.e., the number of sons and daughters who live with the mother, the number who live elsewhere, and the number who have died).

The rates are estimated directly from the information collected using the birth history table on a child's birth date, survivorship status, and age at death for children who died. This information is used to directly estimate the following five mortality rates:

Neonatal mortality: the probability of dying within the first month of life
Post-neonatal mortality: the arithmetic difference between infant and neonatal mortality
Infant mortality: the probability of dying before the first birthday
Child mortality: the probability of dying between the first and fifth birthday
Under-five mortality: the probability of dying between birth and the fifth birthday

All rates are expressed per 1,000 live births, except for child mortality, which is expressed per 1,000 children surviving to 12 months of age.

Table 6 shows early childhood mortality rates for successive five-year periods preceding the survey. For the five years immediately preceding the survey (corresponding roughly to 2006–2010), the infant mortality rate was 54 deaths per 1,000 live births, the child mortality was 38 deaths per 1,000 children surviving to 12 months of age, and the overall under-five mortality rate was 90 deaths per 1,000 live births. This implies that about one in 18 Ugandan children dies before the first birthday and one in 11 Ugandan children dies before the fifth birthday.

The 2011 UDHS results show that early childhood mortality rates have decreased over time. For example, under-five mortality has decreased from 143 deaths per 1,000 live births in the 10-14 years prior to the survey to 125 deaths in the 5-9 years prior to the survey to 90 deaths per 1,000 live births in the 5 years prior to the survey. Further investigation of the trends in early childhood mortality will be discussed in the 2011 UDHS final report.

Table 6 Early childhood mortality rates

Neonatal, post-neonatal, infant, child, and under-five mortality rates for five-year periods preceding the survey, Uganda 2011

Years preceding the survey	Neonatal mortality (NN)	Post-neonatal mortality (PNN)[1]	Infant mortality (1q0)	Child mortality (4q1)	Under-five mortality (5q0)
0-4	27	27	54	38	90
5-9	34	43	77	52	125
10-14	34	54	89	60	143

[1] Computed as the difference between the infant and neonatal mortality rates

F.   Maternal Care

Proper care during pregnancy and delivery are important for the health of both the mother and the baby. In the 2011 UDHS, women who had given birth in the five years preceding the survey were asked a number of questions about maternal health care. For the last live birth in that period, mothers were asked whether they had obtained antenatal care during the pregnancy and whether they had received tetanus toxoid injections or iron supplements during pregnancy. They were also asked what type of assistance they received at the time of delivery and where the delivery took place, as well as about postnatal care. Table 7 presents information on some key maternal care indicators.

Antenatal Care

Antenatal care from a trained professional is important for monitoring the pregnancy to reduce potential risks for the mother and child during pregnancy and delivery. Almost all women (95 percent) who gave birth in the five years preceding the survey received antenatal care at least once from a skilled provider (doctor, nurse/midwife or medical assistant/clinical officer). The percentage of women who had antenatal care by a skilled provider varies very little by background characteristics.

Tetanus Toxoid

Tetanus toxoid injections are given during pregnancy to prevent neonatal tetanus, an important cause of infant deaths. Table 7 indicates that 84 percent of women had their last birth in the preceding five years protected against neonatal tetanus, an increase from 76 percent in the 2006 UDHS. By region, the proportion of mothers who last birth was protected against neonatal tetanus is lowest in Central 1 (80 percent) and highest in Karamoja (93 percent). This percentage increases with mother's education.

Delivery Care

Proper medical attention and hygienic conditions during delivery can reduce the risk of complications and infections that can cause the death or serious illness of the mother and/or the baby. Although 95 percent of mothers received antenatal care from a skilled provider for their most recent live birth, only 59 percent of live births in the last five years are delivered by a doctor or nurse/midwife, and 57 percent are delivered in a health facility. This indicates that Uganda is about to meet the Millennium Development Goal 5 (MDG5) target of 60 percent of births to be delivered by a skilled provider (Table 7). Furthermore, it is encouraging to note that the proportion of births delivered by a skilled provider has increased over the last five years, from 42 percent in 2006 to 59 percent in 2011, while the proportion of births delivered in a health facility has increased from 41 percent in 2006 to 57 percent in 2011.

Births to women who give birth at a younger age (<20 years) are more likely than those to older women to be delivered from a skilled provider and to be delivered at a health facility. Delivery care varies markedly by place of residence. The percentage of births delivered by a skilled provider is substantially higher in urban areas (90 percent) than in rural areas (54 percent).

Deliveries in the Kampala are most likely to be assisted by a skilled provider (94 percent) while births in Karamoja are the least likely ((31 percent). Similarly, the percentage of births delivered in a health facility ranges from 27 percent in Karamoja region to 93 percent in the Kampala.

The percentage of deliveries by a skilled provider increases significantly with education from 38 percent of births to women with no education to 82 percent of births to women with secondary or higher level of education.

Table 7 Maternal care indicators

Among women age 15-49 who had a live birth in the five years preceding the survey, percentage who received antenatal care from a skilled provider for the last live birth and percentage whose last live birth was protected against neonatal tetanus, and among all live births in the five years before the survey, percentage delivered by a skilled provider and percentage delivered in a health facility, by background characteristics, Uganda 2011

Background characteristic	Percentage with antenatal care from a skilled provider[1]	Percentage whose last live birth was protected against neonatal tetanus[2]	Number of women	Percentage delivered by a skilled provider[3]	Percent- age delivered in a health facility	Number of births
Mother's age at birth						
<20	93.0	80.2	703	68.2	65.8	1,351
20-34	96.1	85.0	3,412	58.3	56.5	5,632
35+	91.5	84.6	853	53.1	51.1	1,092
Residence						
Urban	97.4	86.4	805	90.3	89.5	1,147
Rural	94.4	83.8	4,163	54.1	52.0	6,928
Region						
Central 1	87.8	80.3	504	64.4	61.7	797
Central 2	94.1	84.2	507	70.5	69.1	842
Kampala	98.0	84.6	358	93.8	92.9	489
East Central	91.2	82.3	512	71.1	67.7	889
Eastern	94.2	84.9	814	52.6	51.2	1,392
North	98.7	84.3	445	54.7	51.9	704
Karamoja	96.6	93.1	186	30.9	27.1	322
West Nile	97.6	87.1	299	60.6	58.7	484
Western	95.9	83.6	739	56.8	55.9	1,177
Southwest	97.6	84.8	604	41.8	40.3	978
Mother's education						
No education	92.3	79.8	713	38.3	36.1	1,161
Primary	94.8	83.7	3,079	56.1	54.0	5,161
Secondary +	96.6	88.5	1,177	82.4	81.4	1,754
Total	94.9	84.3	4,968	59.3	57.4	8,076

[1] Skilled provider includes doctor, nurse/midwife, medical assistant/clinical officer or nursing aide
[2] Includes mothers with two injections during the pregnancy of her last live birth, or two or more injections (the last within 3 years of the last live birth), or three or more injections (the last within 5 years of the last live birth), or four or more injections (the last within ten years of the last live birth), or five or more injections at any time prior to the last live birth

G.   Vaccination of Children

According to the WHO a child is considered fully vaccinated if he or she has received a BCG vaccination against tuberculosis, three doses of DPT vaccine to prevent diphtheria, tetanus, and pertussis, at least three doses of polio vaccine, and one dose of measles vaccine. These vaccinations should be received during the first year of life. The 2011 UDHS collected information on the coverage for these vaccinations among all children under age five.

Table 8 Vaccinations by background characteristics

Percentage of children age 12-23 months who received specific vaccines at any time before the survey by source of information (vaccination card or the mother's report), and percentage with a vaccination card, by background characteristics, Uganda 2011

Background characteristic	BCG	DPT 1	DPT 2	DPT 3	Polio 0[1]	Polio 1	Polio 2	Polio 3	Measles	All basic vaccine-tions[2]	No vaccina-tions	Percent-age with a vaccina-tion card	Number of children
Sex													
Male	94.1	94.3	87.9	72.0	67.8	94.2	84.4	63.9	74.8	51.6	3.0	59.6	679
Female	93.3	92.0	83.3	71.0	66.6	92.5	82.5	62.1	76.6	51.7	4.5	58.9	800
Residence													
Urban	96.3	94.6	87.7	75.4	83.3	92.1	83.3	69.2	80.8	60.8	3.4	55.3	204
Rural	93.3	92.8	85.1	70.8	64.5	93.5	83.4	61.9	75.0	50.2	3.9	59.8	1,275
Region													
Central 1	85.2	84.4	79.8	66.4	55.3	87.3	78.2	51.1	75.0	43.9	10.1	44.0	153
Central 2	94.5	89.3	80.1	61.7	67.3	91.9	78.6	54.0	70.7	43.0	3.3	52.9	169
Kampala	94.6	91.8	85.9	73.5	76.3	91.6	82.1	71.6	82.0	63.4	5.4	54.1	86
East Central	95.4	93.9	79.0	51.9	66.0	93.1	81.1	53.3	71.0	38.3	1.3	52.6	163
Eastern	97.5	95.5	89.5	74.4	81.5	97.4	87.4	62.7	77.0	52.6	0.6	54.2	265
North	94.0	95.3	89.1	73.4	77.5	93.4	80.3	59.5	72.0	49.0	3.0	68.4	140
Karamoja	99.8	98.7	93.6	89.5	93.1	97.7	88.7	65.4	90.6	62.2	0.2	62.6	58
West Nile	98.5	97.6	90.0	82.0	91.9	97.4	90.2	64.3	77.7	52.1	0.0	67.4	78
Western	95.4	98.2	86.9	77.6	55.2	95.1	83.9	72.2	81.7	59.7	1.8	66.9	196
Southwest	85.9	88.9	86.1	79.2	36.7	88.9	86.2	78.1	71.4	61.6	11.1	74.2	171
Education													
No education	92.5	93.1	81.4	69.7	63.8	91.5	79.4	55.1	72.6	45.0	5.2	54.7	191
Primary	93.8	93.1	84.9	68.9	64.1	93.8	83.0	61.9	73.7	49.2	3.2	59.7	937
Secondary +	94.0	93.0	89.2	79.2	77.1	92.8	86.4	69.8	83.1	61.7	4.6	60.4	351
Total	93.7	93.1	85.4	71.5	67.1	93.3	83.4	62.9	75.8	51.6	3.8	59.2	1,480

[1] Polio 0 is the polio vaccination given at birth
[2] BCG, measles and three doses each of DPT and polio vaccine excluding polio vaccine given at birth

Information on vaccination coverage was obtained in two ways—from health cards and from verbal reports of mothers. All mothers were asked by interviewers to show the child health cards on which vaccinations are recorded for all children born since January 2006. If the card was available, the interviewer copied into the questionnaire the dates on which each vaccination was received. If a vaccination was not recorded on the child health card, the mother was asked to recall whether that particular vaccination had been given. If the mother was not able to present a child health card for her child, she was asked to recall whether the child had received BCG, polio, DPT and measles. If she indicated that the child had received the polio or DPT vaccines, she was asked about the number of doses that the child received.

Table 8 presents information on vaccination coverage for children age 12-23 months. Overall, 59 percent of children 12-23 months old have a vaccination card, compared with 47 percent in 2000-01 and 63 percent in 2006. Coverage levels include data both from both child health cards and mothers' reports. The results show that fifty-two percent of children aged 12-23 months are fully vaccinated, an increase from 37 percent in 2000-01 and 46 percent in 2006. Ninety-four percent of children have received BCG and 93 percent, each, have received the first dose of polio and DPT vaccine. Coverage for all three of these vaccines has increased since the 2006 UDHS. Seventy-two percent of children completed the three required doses of the DPT and 63 percent completed the three required polio vaccines. Coverage of vaccination against measles

is 76 percent. Overall, only 4 percent of children in Uganda have not received any vaccinations, a slight decrease from 7 percent in 2006.

Full vaccination coverage is higher in urban areas (61 percent) than in rural areas (50 percent). Children in Kampala City have the highest percentage of children fully vaccinated (63 percent), while children in the East Central region have the lowest percentage (38 percent). Full vaccination coverage varies by mother's education, increasing from 45 percent among children of mothers with no education to 62 percent among children of mothers with secondary or higher education.

H.   Treatment of Childhood Illnesses

Acute respiratory illness (ARI) and dehydration from severe diarrhoea are major causes of childhood mortality. Prompt medical attention for children experiencing symptoms of these illnesses is, therefore, crucial in reducing child deaths. To obtain information on how childhood illnesses are treated, for each child under five years, mothers were asked if the child had experienced cough with short, rapid breathing (symptoms of ARI), fever, and diarrhoea in the two weeks before the survey.

Data from the 2011 UDHS show that 15 percent of children under five years had symptoms of ARI, 40 percent had fever, and 23 percent had diarrhoea in the two weeks preceding the survey (data not shown). Table 9 shows that eight of every 10 children with symptoms of ARI (80 percent) and of children with fever (81 percent) were taken to a health facility or provider for treatment. Youngest children less than six months, male children, those living in rural areas, children in Southwest, and children of mothers with no education are more likely than other children to be taken to a health facility or provider for treatment of ARI or fever.

The administration of Oral Rehydration Therapy (ORT) is a simple means of counteracting the effect of dehydration in children. ORT includes fluid prepared from an Oral Rehydration Packet (ORS) or Recommended Homemade Fluid (RHF). For children with diarrhoea in the last two weeks, mothers were asked what had been done to treat the diarrhoea. Table 9 shows that treatment from a health facility or provider was sought for 73 percent of children with diarrhea in the last two weeks. Furthermore, 44 percent of children with diarrhoea were given fluids made from an ORS packet and 48 percent were given some form of ORT.

Diarrhoea treatment practices vary by background characteristics. Similar to treatment for ARI and fever, children under six months, male children, those living in rural areas and in Southwest are less likely than other children to be treated for diarrhoea at a health facility or from a health provider and to be given ORS or ORT. There are no major differences in the percentage of children who had diarrhoea and received treatment with mother's level of education.

16

Table 9 Treatment for acute respiratory infection, fever, and diarrhoea

Among children under five years who had symptoms of acute respiratory infection (ARI) or had fever in the two weeks preceding the survey, percentage for whom treatment was sought from a health facility or provider, and among children under five years who were sick with diarrhoea during the two weeks preceding the survey, percentage for whom treatment was sought from a health facility or provider, percentage given a solution made from oral rehydration salt (ORS) packets, and percentage given oral rehydration therapy (ORT) by background characteristics, Uganda 2011

Background characteristic	Children with symptoms of ARI[1]		Children with fever		Children with diarrhoea			
	Percentage for whom treatment was sought from a health facility/ provider[2]	Number with ARI	Percentage for whom treatment was sought from a health facility/ provider[2]	Number with fever	Percentage for whom treatment was sought from a health facility/ provider[2]	Percentage given solution from ORS packet	Percentage given ORT[3]	Number with diarrhoea
Age in months								
<6	71.6	112	76.9	211	57.0	25.0	27.6	154
6-11	78.7	171	81.4	385	73.5	41.0	46.6	356
12-23	82.2	271	82.6	716	76.8	52.8	56.3	556
24-35	80.0	213	81.4	651	76.0	45.8	51.8	337
36-47	81.8	184	82.5	555	72.5	41.7	46.0	215
48-59	78.0	168	79.2	524	71.4	31.8	37.4	148
Sex								
Male	76.0	578	79.4	1,478	71.4	40.5	46.0	904
Female	83.2	540	82.9	1,564	75.2	46.8	50.5	862
Residence								
Urban	84.1	141	89.0	330	72.7	46.2	54.4	237
Rural	78.8	977	80.2	2,712	73.3	43.1	47.2	1,528
Region								
Central 1	75.3	70	86.6	315	72.3	37.4	50.9	166
Central 2	76.9	94	81.1	337	65.7	50.6	54.1	166
Kampala	91.8	65	92.1	112	72.7	46.3	53.8	112
East Central	83.8	123	71.2	575	78.0	57.2	62.0	260
Eastern	81.3	220	79.8	729	75.4	37.8	42.2	430
North	82.1	148	87.8	258	87.5	46.3	46.5	159
Karamoja	86.0	56	88.4	115	93.0	77.3	77.4	57
West Nile	82.6	62	84.7	168	78.5	43.4	49.3	83
Western	74.5	184	87.4	319	64.4	37.9	38.5	206
Southwest	66.8	96	69.7	115	52.2	22.0	27.3	126
Mother's education[3]								
No education	69.1	162	73.8	430	75.4	47.5	52.4	232
Primary	81.0	755	81.1	2,064	73.8	41.6	45.8	1,208
Secondary +	82.2	201	87.4	549	69.6	47.9	53.9	326
Total	79.5	1,118	81.2	3,042	73.3	43.5	48.2	1,766

[1] Symptoms of ARI (cough accompanied by short, rapid breathing which was chest-related and/or by difficult breathing which was chest-related) is considered a proxy for pneumonia
[2] Excludes pharmacy, shop, and traditional practitioner
[3] ORT includes fluid prepared from oral rehydration salt (ORS) packets and recommended home fluids (RHF)

I.   Nutrition

Breastfeeding

Breast milk is the optimal source of nutrients for infants. Exclusive breastfeeding is recommended during the first six months of a child's life because it limits exposure to diseases as well as provides all of the nutrients that a baby requires.

Table 10 shows the percent distribution of youngest children under two years living with the mother by breastfeeding status and the percentage of children under two years using a bottle with a nipple, according to age in months. Overall, 62 percent of children under six months are exclusively breastfed, a slight improvement from 60 percent reported in 2006. Among sub-groups, 82 percent of children less than two months of age are exclusively breastfed, but this percentage drops sharply at subsequent ages.

In addition to breast milk, 5 percent of infants under six months are given plain water only, 4 percent are given non-milk liquids and juice, and 9 percent receive other milk in addition to breast milk. Eighteen percent of children under six months are given complementary foods in addition to breast milk, indicating that very young children are mostly fed breastmilk. All children age 6-9 months, in contrast, should receive complementary foods. However, 77 percent of children 6-9 months received complementary foods the day or night preceding the survey. Bottle-feeding is not common in Uganda. However, 15 percent of children under six months are using a bottle with a nipple, an increase from 11percent in 2006. Bottle feeding peaks at 29-30 percent among children 4-11 months old.

Table 10 Breastfeeding status by age

Percent distribution of youngest children under two years who are living with their mother, by breastfeeding status and the percentage currently breastfeeding; and the percentage of all children under two years using a bottle with a nipple, according to age in months, Uganda 2011

| | Percent distribution of youngest children under two living with their mother by breastfeeding status | | | | | | | | | | |
Age in months	Not breastfeeding	Exclusively breastfed	Breastfeeding and consuming plain water only	Breastfeeding and consuming non-milk liquids[1]	Breastfeeding and consuming other milk	Breastfeeding and consuming complementary foods	Total	Percentage currently breast feeding	Number of youngest children under two years	Percentage using a bottle with a nipple	Number of all children under two years
0-1	3.9	81.6	4.3	2.0	2.0	6.2	100.0	96.1	238	3.7	242
2-3	0.7	67.1	2.8	3.4	10.1	15.9	100.0	99.3	279	12.1	285
4-5	3.1	39.0	6.4	5.5	14.1	31.9	100.0	96.9	267	28.9	275
6-8	4.0	9.8	2.2	4.5	5.4	74.1	100.0	96.0	408	29.2	417
9-11	6.4	0.9	1.4	1.5	0.5	89.3	100.0	93.6	405	29.5	411
12-17	16.3	1.0	0.4	0.5	0.0	81.8	100.0	83.7	681	25.0	723
18-23	46.9	0.2	0.4	0.3	0.7	51.5	100.0	53.1	643	19.4	756
0-3	2.1	73.8	3.5	2.8	6.3	11.4	100.0	97.9	517	8.3	527
0-5	2.5	62.0	4.5	3.7	9.0	18.4	100.0	97.5	784	15.3	802
6-9	4.6	7.8	2.4	4.0	4.1	77.2	100.0	95.4	536	30.2	548
12-15	13.1	0.9	0.6	0.5	0.0	84.9	100.0	86.9	465	28.5	485
12-23	31.2	0.6	0.4	0.4	0.3	67.1	100.0	68.8	1,324	22.2	1,480
20-23	54.2	0.1	0.5	0.4	0.3	44.5	100.0	45.8	438	17.8	535

Note: Breastfeeding status refers to a "24-hour" period (yesterday and last night). Children who are classified as breastfeeding and consuming plain water only consumed no liquid or solid supplements. The categories of not breastfeeding, exclusively breastfed, breastfeeding and consuming plain water, non-milk liquids/juice, other milk, and complementary foods (solids and semi-solids) are hierarchical and mutually exclusive, and their percentages add to 100 percent. Thus children who receive breast milk and non-milk liquids and who do not receive other milk and who do not receive complementary foods are classified in the non-milk liquid category even though they may also get plain water. Any children who get complementary food are classified in that category as long as they are breastfeeding as well.
[1] Non-milk liquids include fresh fruit juice or juice concentrate, any kind of soup, black tea/coffee or other liquids

19

Nutritional Status of Children

Poor nutrition places children at an increased risk of morbidity and mortality and is also associated with the mental development of a child especially those aged less than 5 years. Anthropometry provides one of the most important indicators of children's nutritional status. Height and weight measurements were obtained for all children born in the five years before the survey in the sub-sample of households selected for the male survey. The height and weight data are used to compute three summary indices of nutritional status: height-for-age; weight-for-height; and weight-for-age. These three indices are expressed as standard deviation units from the median for the international reference population recommended by the World Health Organization. Children who fall more than two standard deviations (-2 SD) below the reference median are regarded as undernourished, while those who fall more than three standard deviations (-3 SD) below the reference median are considered severely undernourished.

Table 11 shows the nutritional status of children under five. Children whose height-for-age is below minus two standard deviations from the median of the reference population are considered stunted or short for their age. Stunting is the outcome of failure to receive adequate nutrition over an extended period and is also affected by recurrent or chronic illness. Thirty-three percent of children under five are stunted or short for their age and 14 percent are severely stunted.

Children whose weight-for-height is below minus two standard deviations from the median of the reference population are considered wasted or thin. Wasting represents the failure to receive adequate nutrition in the period immediately before the survey, and typically is the result of recent illness episodes, especially diarrhoea, or of a rapid deterioration in food supplies for some regions. In Uganda, 5 percent of children under five are wasted and 2 percent are severely wasted.

Children whose weight-for-age is below minus two standard deviations from the median of the reference population are considered underweight. The measure reflects the effects of both acute and chronic under nutrition. Fourteen percent of children under five are underweight and 3 percent are severely underweight.

Rural children are much more likely to be nutritionally disadvantaged than urban children. Among regions, children in Karamoja have the poorest nutrition status indicators. Children whose mothers have no education are more likely to be stunted, wasted, or underweight than children whose mothers have attended school. In general, the nutritional status of children in Uganda has improved slightly over the last five years (Figure 3).

Figure 4 Trends in Nutritional Status for Children under Five Years, UDHS 2006 and 2011
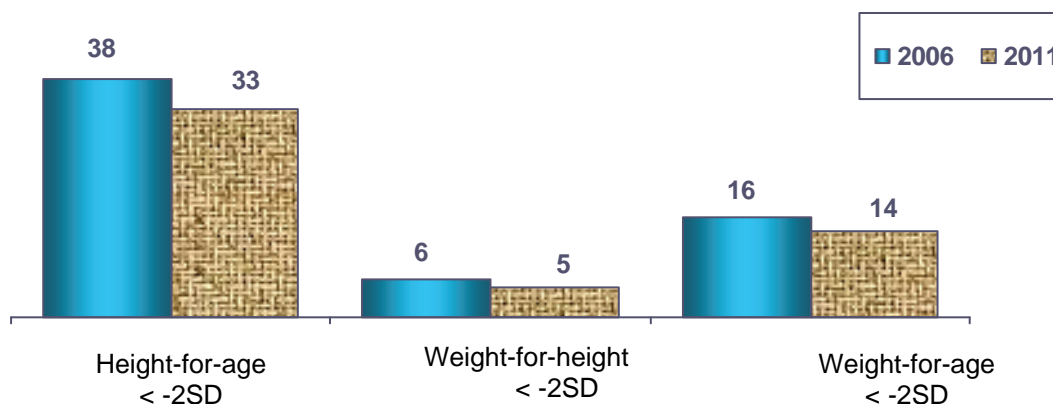

20

Table 11 Nutritional status of children

Percentage of children under five years classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, by background characteristics, Uganda 2011

Background characteristic	Height-for-age[1]			Weight-for-height[1]				Weight-for-age				Number of children
	Percentage below -3 SD	Percentage below -2 SD[2]	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[2]	Percentage above +2 SD	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[2]	Percentage above +2 SD	Mean Z-Score (SD)	
Age in months												
<6	4.6	16.1	-0.3	4.4	13.5	6.6	-0.2	3.2	13.3	2.0	-0.5	228
6-8	2.3	12.4	-0.4	6.0	13.6	3.4	-0.6	7.0	19.1	0.1	-0.8	131
9-11	5.8	21.1	-1.0	0.0	5.9	4.3	-0.2	0.0	12.6	0.5	-0.7	120
12-17	13.5	32.0	-1.4	1.4	5.7	2.7	-0.3	3.4	16.1	0.4	-0.9	245
18-23	19.1	42.2	-1.7	1.2	4.9	2.7	-0.1	5.9	17.0	1.7	-0.9	269
24-35	18.7	42.7	-1.8	0.4	2.3	4.8	0.2	2.9	14.6	0.6	-0.8	444
36-47	16.7	37.8	-1.7	0.5	1.8	2.9	0.2	3.9	11.5	0.2	-0.9	477
48-59	12.7	33.1	-1.5	1.4	2.3	1.7	0.0	2.0	11.2	0.2	-0.9	436
Sex												
Male	15.6	37.0	-1.5	1.0	4.9	3.9	0.0	3.0	14.9	0.7	-0.8	1,163
Female	11.9	29.9	-1.3	1.9	4.6	3.0	0.0	3.8	12.7	0.7	-0.8	1,188
Residence												
Urban	5.6	18.6	-0.8	2.3	4.2	4.1	0.0	1.1	6.6	2.6	-0.4	307
Rural	15.0	35.6	-1.5	1.4	4.8	3.3	0.0	3.8	14.9	0.4	-0.9	2,043
Region												
Central 1	14.2	32.5	-1.5	0.4	5.8	4.3	0.0	2.5	12.9	0.9	-0.8	243
Central 2	14.8	36.1	-1.3	2.1	5.3	4.8	0.1	1.4	11.4	1.2	-0.7	219
Kampala	3.1	13.5	-0.7	1.6	4.4	3.5	0.1	2.0	5.7	3.7	-0.3	132
East Central	12.9	33.5	-1.4	1.7	5.0	2.1	-0.1	3.3	16.7	0.7	-0.8	269
Eastern	7.9	25.3	-1.1	0.6	4.8	2.5	-0.2	1.3	10.0	0.0	-0.8	446
North	9.9	24.7	-1.3	0.7	3.4	4.1	0.1	3.2	12.3	0.7	-0.7	191
Karamoja	23.5	45.0	-1.8	2.6	7.1	0.1	-0.7	13.4	31.9	0.0	-1.5	82
West Nile	18.6	37.8	-1.7	2.4	6.2	2.2	-0.1	5.2	17.9	0.0	-1.1	149
Western	18.9	43.9	-1.8	1.4	2.7	3.2	0.0	4.6	15.5	0.2	-1.0	325
Southwest	18.6	41.7	-1.6	2.8	4.9	5.8	0.3	5.1	14.9	0.6	-0.8	294
Mother's education[3]												
No education	19.1	41.8	-1.7	2.7	6.9	3.1	-0.1	6.1	20.3	0.0	-1.1	275
Primary	14.5	34.3	-1.4	1.5	4.7	3.7	0.0	3.2	13.6	0.6	-0.9	1,406
Secondary +	9.5	26.8	-1.2	1.5	5.0	3.5	0.0	2.8	12.2	1.4	-0.7	374
Mother's interview status												
Mother interviewed	13.7	33.2	-1.4	1.6	5.0	3.7	0.0	3.4	13.6	0.6	-0.8	2,053
Mother not interviewed, but in household	14.9	34.3	-1.4	1.3	5.1	0.6	-0.2	2.4	21.3	1.9	-0.9	85
Mother not interviewed, not in household[4]	14.0	35.3	-1.4	0.2	2.1	1.8	0.1	4.2	12.4	0.4	-0.7	211
Total	**13.7**	**33.4**	**-1.4**	**1.5**	**4.7**	**3.4**	**0.0**	**3.4**	**13.8**	**0.7**	**-0.8**	**2,350**

Note: Table is based on children who spent the night before the interview in the household. Each of the indices is expressed in standard deviation units (SD) from the median of the WHO Child Growth Standards adopted in 2006. The indices in this table are NOT comparable to those based on the previously used 1977 NCHS/CDC/WHO Reference. Table is based on children with valid dates of birth (month and year) and valid measurement of both height and weight.

[1] Recumbent length is measured for children under age 2 and less than 85 cm; standing height is measured for all other children.

[2] Includes children who are below -3 standard deviations (SD) from the WHO Growth Standards population median

[3] For women who are not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers are not listed in the Household Questionnaire. [4] Includes children whose mothers are deceased

21

J.   Anaemia Prevalence

Anaemia, a low level of haemoglobin in the blood, decreases the amount of oxygen reaching the tissues and organs of the body and reduces their capacity to function. It is associated with impaired cognitive and motor development in children. Although there are many causes of anaemia, inadequate intake of iron folate, vitamin B12, or other nutrients usually accounts for the majority of cases in many populations. Malaria accounts for a significant proportion of anaemia in children under five in malaria endemic areas. Other causes of anaemia include thalassemia, sickle cell disease, and intestinal worm infestation. Promotion of the use of insecticide-treated bednets and deworming medication every six months for children under age five are some of the important measures to reduce anaemia prevalence among children.

Table 12 presents anaemia levels for children 6-59 months and for women age 15-49 years. Levels of anaemia were classified as severe, moderate, or mild according to criteria developed by the World Health Organization. Children with <7.0 g/dl of hemoglobin are classified as having severe anaemia, with 7.0-9.9 g/dl as having moderate anaemia, and with 10.0-10.9 g/dl as having mild anaemia. Children with <11.0 g/dl are classified as having any anaemia. Women with <7.0 g/dl are classified as having severe anaemia, with 7.0-9.9 g/dl as having moderate anaemia, non-pregnant women with 10.0-11.9 g/dl and pregnant women with 10.0-10.9 g/dl as having mild anaemia. Non-pregnant women with <12.0 g/dl and pregnant women with <11 g/dl are classified as having any anaemia.

Anaemia is common among children in Uganda. Half of the children 6-59 months are anaemic. Almost all children who suffer from anaemia are mildly anaemic (22 percent of all children) or moderately anaemic (25 percent of all children). Three percent of children 6-59 months are severely anaemic.

Anaemia is less common among women 15-49. Overall, about one in four women (24 percent) show any evidence of anaemia. The large majority of anaemic women are mildly anaemic (18 percent). Five percent of women are moderately anaemic and 2 percent are severely anaemic.

The prevalence of anaemia varies by residence and by region among both children and women. Rural residents and those living in Karamoja are the most likely to be anaemic when compared with urban residents and those living in other regions.

Table 12 Anaemia among children and women

Percentage of children age 6-59 months and women age 15-49 years classified as having anaemia, by background characteristics, Uganda 2011

Background characteristic	Percentage with anaemia				Number
	Any anaemia	Mild anaemia	Moderate anaemia	Severe anaemia	
CHILDREN					
Residence					
Urban	38.0	19.3	18.3	0.4	265
Rural	52.1	22.5	26.1	3.5	1,877
Region					
Central 1	56.8	27.0	29.1	0.7	209
Central 2	56.2	21.7	29.3	5.1	199
Kampala	39.8	17.0	22.3	0.5	122
East Central	67.5	21.7	43.4	2.4	257
Eastern	58.1	21.8	27.9	8.4	419
North	34.0	21.1	12.6	0.4	178
Karamoja	69.8	34.7	34.6	0.6	79
West Nile	64.4	26.9	36.3	1.2	141
Western	40.2	21.9	14.9	3.4	285
Southwest	24.6	16.2	8.4	0.0	253
Total	50.4	22.1	25.2	3.1	2,142
WOMEN					
Residence					
Urban	19.9	13.9	5.8	0.2	521
Rural	25.2	18.5	4.4	2.4	2,090
Region					
Central 1	23.5	17.8	5.5	0.1	269
Central 2	33.6	22.9	5.3	5.4	259
Kampala	19.6	14.1	5.3	0.3	246
East Central	28.8	22.3	6.0	0.5	258
Eastern	32.9	24.3	4.0	4.6	403
North	13.1	10.3	2.7	0.0	219
Karamoja	43.5	35.1	8.0	0.3	81
West Nile	32.3	26.4	5.5	0.5	163
Western	18.8	10.2	4.7	3.9	381
Southwest	11.4	8.5	2.9	0.0	333
Total	24.2	17.6	4.7	1.9	2,610

Note: Table is based on children and women who stayed in the household the night before the interview. Prevalence of anaemia, based on hemoglobin levels, is adjusted for altitude (for children and women) and smoking (for women) using CDC formulas (CDC, 1998). Women and children with <7.0 g/dl of hemoglobin have severe anaemia, women and children with 7.0-9.9 g/dl have moderate anaemia, and non-pregnant women with 10.0-11.9 g/dl and children and pregnant women with 10.0-10.9 g/dl have mild anaemia.

K.   Malaria

Malaria is one of the leading causes of death in developing countries (WHO, 2008). The 2011 UDHS collected data on measures to prevent malaria, including indoor residual spraying, the use of mosquito nets among women and children and the prophylactic use of antimalarial drugs.

All households in the 2011 UDHS were asked whether they own mosquito nets and, if so, how many. Respondents were asked to show mosquito nets to the interviewer so that he or she

could identify and record the brand name. Brand name and treatment history were used to classify nets as treated or untreated.

Ownership of Mosquito Nets

Table 13 shows that 74 percent of households nationwide own at least one mosquito net of any type. A larger percentage of urban (81 percent) than rural (72 percent) households own a net. Sixty percent of households own at least one insecticide-treated net (ITN). The pattern of urban-rural variation in ownership of ITNs contrasts to that of ownership of any net; a lower percentage of urban households (58 percent) own an ITN compared with rural households (60 percent). Overall, ownership of nets has increased markedly since the 2006 UDHS, when only 34 percent of households owned a mosquito net of any type and 16 percent owned at least one ITN.

Use of Mosquito Nets

Table 13 shows that 53 percent of children under age 5 slept under a mosquito net the night before the survey, 68 percent in urban areas compared with 51 percent in rural areas. Forty-three percent of children under age 5 were reported to have slept under an ITN the night before the survey, 49 percent in urban areas compared with 42 percent in rural areas. In households owning at least one ITN, 63 percent slept under an ITN the night before the survey, 70 percent in urban areas compared with 62 percent in rural areas.

Overall, about six in every 10 pregnant women age 15-49 (59 percent) slept under a mosquito net the night before the survey, 72 percent in urban areas versus 58 percent in rural areas. Forty-seven percent of pregnant women slept under an ITN the night before the survey, 56 percent in urban areas and 46 percent in rural areas. Among pregnant women in households owning at least one ITN, 71 percent slept under an ITN the night before the survey, 86 percent in urban areas and 69 percent in rural areas (Table 13).

Indoor Residual Spraying

Another means to reduce malaria transmission is indoor residual spraying (IRS). This is where specially trained staff of a government or NGO malaria control programme visits a household and spray insecticide on the interior walls of a dwelling. This insecticide helps to kill mosquitoes for several months. Table 13 shows that seven (7) percent of the households had received IRS in the 12 months preceding the survey. Households in rural areas were far more likely to have received IRS than those in urban areas (8 and 4 percent, respectively). Overall, 47 percent of children under five and 50 percent of pregnant women slept the night before the interview either under an ITN or in a household that had been sprayed with IRS in the past 12 months.

Preventive Malaria Treatment during Pregnancy

The 2011 UDHS also collected data on preventive malaria treatment during pregnancy. WHO recommendations to prevent malaria during pregnancy include intermittent preventive treatment (IPTp) with at least two doses of an effective antimalarial drug, such as sulfadoxine-pyrimethamine (SP), during routine antenatal clinic visits (WHO, 2008). Table 13 shows that 68 percent of pregnant women in Uganda took antimalarial drugs for malaria prevention during their last pregnancy in the two years preceding the survey. A higher proportion of pregnant women in urban areas took antimalarial drugs during their last pregnancy when compared with pregnant women in rural areas (70 percent versus 67 percent). However, only one in every four pregnant women (25 percent) received IPTp – that is, received at least two doses of

SP/Fansidar at least one of which was during an antenatal care visit (30 percent in urban areas and 24 percent in rural areas).

Treatment of Fever among Children

Four in every 10 children under age 5 were reported to have had a fever in the two weeks preceding the survey. Among children under age 5 with fever in the two weeks preceding the survey, about two- thirds (65 percent) took antimalarial drugs, with no rural-urban differences. Among children with fever, 43 percent took antimalarial drugs the same or next day after developing a fever, 47 percent in urban areas and 43 percent in rural areas (Table 13).

Table 13 Malaria indicators

Possession and use of mosquito nets, preventive malaria treatment during pregnancy, and treatment of children with fever using antimalarial drugs, by urban-rural residence, Uganda 2011

	Residence				Total	
	Urban		Rural			
Malaria indicators	Percentage	Number	Percentage	Number	Percentage	Number
Mosquito nets						
Percentage of households with at least one mosquito net (treated or untreated)	80.9	1,691	72.4	7,342	74.0	9,033
Percentage of households with at least one Insecticide Treated Net (ITN) [1]	58.4	1,691	60.0	7,342	59.7	9,033
Percentage of children under age five who slept under a mosquito net (treated or untreated) last night	66.7	1,060	51.2	7,235	53.1	8,295
Percentage of children under age five who slept under an ITN last night [1]	48.6	1,060	41.9	7,235	42.8	8,295
Percentage of children under age five who slept under an ITN last night in households with an ITN[1]	70.3	733	61.9	4,904	63.0	5,637
Percentage of pregnant women age 15-49 who slept under a mosquito net (treated or untreated) last night	71.5	135	57.5	874	59.4	1,009
Percentage of pregnant women age 15-49 who slept under an ITN last night[1]	55.8	135	45.7	874	47.1	1,009
Percentage of pregnant women age 15-49 who slept under an ITN last night in households with an ITN[1]	85.7	88	68.9	581	71.1	669
Indoor Residual Spraying (IRS)						
Percentage of surveyed households sprayed with a residual insecticide in the last 12 months	4.4	1,691	7.8	7,342	7.2	9,033
Percentage of children under age five who slept under an ITN last night or in household sprayed with IRS in the past 12 months[1]	50.9	1,060	45.9	7,235	46.5	8,295
Percentage of pregnant women who slept under an ITN last night or in household sprayed with IRS in the past 12 months[1]	57.5	135	48.9	874	50.0	1,009
Preventive malaria treatment during pregnancy						
Percentage of last birth in the two years preceding the survey for which the mother took antimalarial drugs for prevention during the pregnancy	70.3	458	67.0	2,634	67.5	3,092
Percentage of last birth in the two years preceding the survey for which the mother took 2+ doses of SP/Fansidar during pregnancy (IPTp) an received at least one dose during an antenatal visit[2]	29.8	458	23.6	2,634	24.5	3,092
Treatment of fever						
Proportion of children under age five with fever in the two weeks preceding the survey:	30.8	1,118	42.0	6,417	40.4	7,535
Among children under age 5 with fever in the two weeks preceding the survey, percentage who took antimalarial drugs						
Any antimalarial drug	63.6	345	64.6	2,698	64.5	3,042
SP/Fansidar	1.6	345	2.5	2,698	2.4	3,042
Chloroquine	3.0	345	3.7	2,698	3.7	3,042
Chloroquine with Fansidar	0.7	345	0.8	2,698	0.8	3,042
COARTEM/ACTS	45.5	345	44.1	2,698	44.2	3,042
Quinine	14.6	345	15.7	2,698	15.6	3,042
Other antimalarial	2.4	345	1.6	2,698	1.7	3,042
Among children under age 5 with fever in the two weeks preceding the survey, percentage who took antimalarial drugs the same day/next day after developing fever						
Any antimalarial drug	46.8	345	43.0	2,698	43.4	3,042
SP/Fansidar	1.0	345	1.6	2,698	1.5	3,042
Chloroquine	1.5	345	2.1	2,698	2.0	3,042
Chloroquine with Fansidar	0.5	345	0.4	2,698	0.4	3,042
COARTEM/ACTS	33.4	345	29.5	2,698	29.9	3,042
Quinine	9.5	345	9.7	2,698	9.7	3,042
Other antimalarial	2.4	345	1.1	2,698	1.3	3,042

[1] An Insecticide Treated Net (ITN) is a permanent net that does not require any treatment, a pretreated net obtained within the last 12 months or a net that has been soaked with insecticide within the past 12 months.
[2] Intermittent Preventive Treatment is preventive treatment with at least two doses of PS/Fansidar during antenatal visit.

L.   HIV/AIDS Knowledge and Behavior

The HIV/AIDS epidemic is a serious threat to social and economic development around the world. The 2011 UDHS included a series of questions that assessed respondents' knowledge about AIDS and their knowledge of modes of transmission of the human immunodeficiency virus that causes AIDS, and of behaviors that can prevent the spread of HIV. Table 14 shows that virtually almost all women and men in Uganda say that they have heard of AIDS. Knowledge does not vary by background characteristics.

Table 14 Knowledge of AIDS

Percentage of women and men who have heard of AIDS, by background characteristics, Uganda 2011

Background characteristic	Women		Men	
	Have heard of AIDS	Number of women	Have heard of AIDS	Number of men
Age				
15-24	99.6	3,677	99.4	872
15-19	99.3	2,048	99.1	554
20-24	99.9	1,629	99.9	318
25-29	99.6	1,569	99.8	361
30-39	99.8	2,112	100.0	592
40-49	99.9	1,316	100.0	348
Marital status				
Never married	99.3	2,118	99.3	834
Ever had sex	99.9	837	100.0	440
Never had sex	98.9	1,281	98.5	394
Married or living together	99.9	5,418	100.0	1,228
Divorced/separated/widowed	99.6	1,134	100.0	111
Residence				
Urban	99.7	1,717	99.9	439
Rural	99.7	6,957	99.7	1,734
Region				
Central 1	99.7	956	100.0	209
Central 2	100.0	902	100.0	236
Kampala	99.7	839	100.0	221
East Central	99.4	826	100.0	226
Eastern	99.5	1,309	100.0	298
North	99.9	735	100.0	199
Karamoja	99.9	289	99.1	55
West Nile	99.9	500	99.4	133
Western	99.2	1,221	98.5	322
Southwest	99.9	1,097	100.0	273
Education				
No education	99.7	1,120	99.7	104
Primary	99.6	5,152	99.6	1,382
Secondary +	99.8	2,402	100.0	809
Total 15-49	99.7	8,674	99.7	2,173
Men 50-59	na	na	100.0	122
Total 15-59	na	na	99.7	2,295

na: Not applicable

HIV prevention initiatives focus their messages and efforts on two important aspects of sexual behavior, namely faithfulness (having only one sexual partner) and use of condoms. The 2011 UDHS asked a series of questions to women and men related to these behaviors in order to monitor certain HIV/AIDS indicators.

Table 15 shows that 79 percent of women and 84 percent of men age 15-49 reported that people can reduce the risk of getting the AIDS virus by using condoms every time they have sexual intercourse. The proportion of women and men who say that limiting sexual intercourse to one uninfected partner who has no other partners can reduce the risk of infection of HIV is 89 percent and 91 percent, respectively. Overall, 74 percent of women and 79 percent of men know both of the HIV prevention methods.

Knowledge of both the HIV prevention methods is lowest among women and men age 15-19 years old, those who have never married and never had sex, and respondents who have no education. The proportion of respondents who know both HIV prevention methods is higher in urban areas than in rural areas, with the difference being more pronounced among women (82 percent versus 72 percent) than among men (84 percent versus 78 percent).

Table 15 Knowledge of HIV prevention methods

Percentage of women and men age 15-49 who, in response to prompted questions, say that people can reduce the risk of getting the AIDS virus by using condoms every time they have sexual intercourse and by having one partner who is not infected and has no other partners, by background characteristics, Uganda 2011

	Percentage of women who say HIV can be prevented by:				Percentage of men who say HIV can be prevented by:			
Background characteristic	Using condoms[1]	Limiting sexual intercourse to one uninfected partner[2]	Using condoms and limiting sexual intercourse to one uninfected partner[1][2]	Number of women	Using condoms[1]	Limiting sexual intercourse to one uninfected partner[2]	Using condoms and limiting sexual intercourse to one uninfected partner[1][2]	Number of men
Age								
15-24	79.0	87.3	73.6	3,677	83.9	90.9	79.1	872
15-19	75.7	85.1	69.5	2,048	82.4	89.8	77.2	554
20-24	83.1	90.1	78.8	1,629	86.7	93.0	82.4	318
25-29	79.2	89.6	75.1	1,569	87.1	92.6	83.0	361
30-39	80.7	89.6	75.5	2,112	82.6	91.6	78.3	592
40-49	75.5	90.5	72.0	1,316	83.1	89.5	76.9	348
Marital status								
Never married	76.5	86.0	70.5	2,118	83.9	91.0	79.0	834
Ever had sex	85.0	89.7	79.5	837	88.2	94.1	84.8	440
Never had sex	70.9	83.5	64.6	1,281	79.0	87.4	72.5	394
Married or living together	79.8	89.9	75.4	5,418	84.0	90.6	78.9	1,228
Divorced/separated/widowed	79.8	88.9	74.9	1,134	84.2	99.1	84.2	111
Residence								
Urban	86.4	91.7	82.1	1,717	87.2	93.5	83.5	439
Rural	77.1	88.0	72.1	6,957	83.1	90.6	78.1	1,734
Region								
Central 1	87.6	91.9	81.3	956	88.4	98.5	87.5	209
Central 2	84.4	91.7	80.0	902	92.9	98.4	91.9	236
Kampala	88.7	90.3	83.0	839	85.2	94.6	84.0	221
East Central	89.2	92.8	85.1	826	86.4	91.7	82.1	226
Eastern	70.2	80.7	66.2	1,309	79.7	70.6	61.3	298
North	87.7	94.8	85.5	735	92.3	98.2	91.1	199
Karamoja	38.3	85.1	37.3	289	53.1	80.9	52.9	55
West Nile	65.5	86.2	59.9	500	55.6	91.9	50.6	133
Western	78.8	87.0	72.5	1,221	88.6	95.1	85.7	322
Southwest	73.0	89.0	67.5	1,097	82.7	90.7	77.8	273
Education								
No education	65.0	84.2	59.9	1,120	71.9	86.3	64.4	104
Primary	78.4	88.1	73.4	5,152	83.6	90.6	78.5	1,382
Secondary +	86.6	92.3	82.2	2,402	85.9	92.6	81.6	809
Total 15-49	78.9	88.8	74.1	8,674	83.9	91.2	79.2	2,173
Men 50-54	na	na	na	na	82.5	90.0	74.8	122
Total 15-54	na	na	na	na	83.9	91.1	78.9	2,295

na = Not applicable
[1] Using condoms every time they have sexual intercourse
[2] Partner who has no other partners

Tables 16.1 and 16.2 present information on multiple sexual partners among women and men in the last 12 months, condom use during their last sexual encounter with a partner in the last 12 months, and the mean number of sexual partners in their lifetime.

About 2 percent of women and 19 percent of men age 15-49 say that they had two or more sexual partners in the past 12 months. The proportion of women with two or more sexual partners in the past 12 months is higher among women who live in urban areas (3 percent),

divorced, separated or widowed women (3 percent), and those who live in Central 1 (4 percent) and East Central (3 percent) regions. The proportion of men with two or more sexual partners in the past 12 months is higher among men age 40-49 (29 percent), men who are currently in union (26 percent), those who live in urban areas (20 percent), and in Central 1 (27 percent), Karamoja (26 percent) and East Central (25 percent) regions. The proportion of men with two or more sexual partners in the past 12 months varies by level of education; it is highest among those with no education (36 percent) compared with men with any education (18-19 percent). Even though an overwhelming majority of women and men say that the risk of getting the AIDS virus can be reduced by using condoms every time they have sexual intercourse, only 31 percent of women 15-49 and 18 percent of men 15-59 reported using a condom during their last sexual intercourse.

Among men, the mean number of sexual partners increases with age.

Table 16.1 Multiple sexual partners in the past 12 months: Women

Among all women age 15-49, the percentage who had sexual intercourse with more than one sexual partner in the past 12 months; among those having more than one partner in the past 12 months, the percentage reporting that a condom was used at last intercourse; and the mean number of sexual partners during her lifetime for women who ever had sexual intercourse, by background characteristics, Uganda 2011

Background characteristic	All women		Among women who had 2+ partners in the past 12 months:		Among women who ever had sexual intercourse[1]:	
	Percentage who had 2+ partners in the past 12 months	Number of women	Percentage who reported using a condom during last sexual inter-course	Number of women	Mean number of sexual partners in lifetime	Number of women
Age						
15-24	2.1	3,677	26.8	75	1.8	2,415
15-19	1.5	2,048	29.6	31	1.6	923
20-24	2.8	1,629	24.8	45	1.9	1,492
25-29	1.9	1,569	34.4	27	2.1	1,546
30-39	1.1	2,112	31.5	22	2.2	2,093
40-49	1.4	1,316	42.0	14	2.5	1,306
Marital status						
Never married	1.5	2,118	39.2	32	1.8	834
Married/living together	1.4	5,418	15.7	69	2.0	5,400
Divorced/separated/widowed	3.4	1,134	50.8	38	2.9	1,125
Residence						
Urban	2.6	1,717	29.0	41	2.5	1,444
Rural	1.5	6,957	31.2	97	2.0	5,915
Region						
Central 1	3.5	956	31.7	33	2.4	814
Central 2	2.1	902	53.5	17	2.4	772
Kampala	1.8	839	49.2	14	2.5	703
East Central	3.2	826	11.6	22	2.3	720
Eastern	1.9	1,309	24.5	25	2.1	1,130
North	0.3	735	0.0	1	1.7	628
Karamoja	0.2	289	77.1	1	1.4	253
West Nile	1.0	500	61.1	4	1.8	417
Western	1.5	1,221	18.6	16	2.2	1,068
Southwest	0.5	1,097	18.5	6	1.4	853
Education						
No education	1.1	1,120	40.9	11	1.9	1,087
Primary	1.7	5,152	26.9	82	2.1	4,365
Secondary +	2.0	2,402	34.6	46	2.2	1,908
Total	1.7	8,674	30.6	139	2.1	7,359

[1] Means are calculated excluding respondents who gave non-numeric responses.

Table 16.2 Multiple sexual partners in the past 12 months: Men

Among all men age 15-49, the percentage who had sexual intercourse with more than one sexual partner; among those having more than one partner in the past 12 months, the percentage reporting that a condom was used at last intercourse; and the mean number of sexual partners during his lifetime for men who ever had sexual intercourse, by background characteristics, Uganda 2011

Background characteristic	All men		Among men who had 2+ partners in the past 12 months:		Among men who ever had sexual intercourse[1]:	
	Percentage who had 2+ partners in the past 12 months	Number of men	Percentage who reported using a condom during last sexual intercourse	Number of men	Mean number of sexual partners in lifetime	Number of men
Age						
15-24	8.9	872	47.3	78	3.5	489
15-19	5.4	554	55.7	30	2.8	222
20-24	15.0	318	42.1	48	4.2	267
25-29	23.3	361	18.2	84	5.6	346
30-39	24.1	592	10.0	142	7.7	573
40-49	29.0	348	10.3	101	9.0	339
Marital status						
Never married	7.5	834	70.4	63	4.1	437
Married/living together	25.7	1,228	6.3	316	6.9	1,204
Divorced/separated/widowed	23.7	111	48.7	26	10.0	106
Residence						
Urban	20.0	439	36.0	88	7.2	370
Rural	18.3	1,734	14.2	317	6.1	1,377
Region						
Central 1	27.0	209	18.9	56	8.6	167
Central 2	18.0	236	24.6	42	6.6	196
Kampala	16.9	221	43.9	37	6.5	180
East Central	25.0	226	24.8	57	5.5	183
Eastern	11.7	298	9.6	35	6.7	241
North	19.9	199	4.3	40	7.3	169
Karamoja	26.4	55	3.5	15	3.8	48
West Nile	14.5	133	15.1	19	4.5	105
Western	19.4	322	15.1	63	7.4	263
Southwest	15.1	273	17.6	41	4.0	195
Education						
No education	36.1	104	6.2	38	5.8	91
Primary	19.0	1,382	16.6	262	7.2	1,106
Secondary +	18.0	809	24.5	144	6.5	667
Total 15-49	18.6	2,173	19.0	405	6.4	1,747
Men 50-59	33.1	122	11.3	39	14.1	118
Total 15-59	19.4	2,295	18.3	444	6.8	1,865

[1] Means are calculated excluding respondents who gave non-numeric responses.

M.   School Attendance Ratios

Uganda uses a 7-6-3 formal education system, i.e., seven years of primary education, six years of secondary education (four years of ordinary secondary and two years of advanced secondary), and three years of university/tertiary education. The official age ranges for the three levels of education are: 6-12 years, 13-18 years, and 19-24 years, respectively.

Pre-School Attendance Ratios

The Net Attendance Ratio (NAR) for the pre-school education is the percentage of the pre-school-age population (age 3-5) that is attending pre-school. Overall, the pre-school NAR in Uganda is 23 percent (Table 17). In urban areas, 53 percent of children age 3-5 are attending pre-school compared with 20 percent in rural areas. There is virtually no difference in the pre-school net attendance ratio by sex; the NAR is 24 percent for females versus 23 percent for males.

There is some variation in the NAR for pre-school by region. Kampala city leads with a NAR for pre-school of 62 percent. On the other hand, the West Nile and Northern regions have the lowest NAR for pre-school, with 5 and 6 percent, respectively, of children age 3-5 attending pre-school.

The Gross Attendance Ratio (GAR) measures attendance irrespective of the official age at each level. The GAR for pre-school is the total number of pre-school children expressed as a percentage of the official pre-school-age population (age 3-5). Overall, the pre-school GAR is 41, with the highest GAR in urban areas (75 percent) and in Kampala (82 percent). It is notable that the pre-school GAR in the Karamoja region is only 7 percent. As was the case with the NAR, the pre-school GAR has no notable differences by sex.

The Gender Parity Index (GPI) is a measure of the ratio of females to males attending school, regardless of age. For pre-school, the GPI is 1.06, indicating that the number of female slightly outnumbers the males. There is not much variation in the GPI for the pre-school GAR by background characteristics.

The big disparity between GAR and NAR in preschool is proof of over age children in preschool.

Primary School Attendance Ratios

The NAR for the primary school is the percentage of the primary school-age population (age 6-12) that is attending primary school. Overall, the primary school NAR in Uganda is 81 percent (Table 17). The NAR is slightly higher in urban areas (85 percent) than in rural areas (81 percent).

There is some variation in the NAR by region. Eastern region leads with a primary school NAR of 88 percent, compared with 51 percent in the North region. There is virtually no difference in the primary school net attendance ratio by sex; the NAR is 80 percent for females versus 82 percent for males. The GPIs are close to 100 percent in all areas except for the Northern region.

The GAR for primary school is the total number of primary school students expressed as a percentage of the official primary-school-age population (age 6-12). A major contributing factor to high GAR is children starting primary school later than the recommended age of 6 years. In addition, although the Universal Primary Education (UPE) programme, introduced in 1997, was

intended for all children age 6-15 years to attend primary school at the expense of government, many children above age 15 enrolled in primary school as a result of the initiative. This is another factor that may contribute to overage participation at the primary level and, thus, a high GAR.

Overall, the primary school GAR is 123 percent, with the highest GAR in the Eastern region (133 percent) and the lowest in the North region (73 percent). There are no notable differences by sex.

The GPI for primary school is 0.94, indicating that the number of female and male students is almost the same, with males slightly outnumbering females. The Central 2 region which has the highest GPI (1.03), while the South region has the lowest GPI (0.89).

Secondary School Attendance Ratios

The NAR for the secondary school is the percentage of the secondary school-age population (age 13-18) that is attending secondary school. Table 17 shows that the secondary school NAR in Uganda is 17 percent, 35 percent in urban areas compared with 14 percent in rural areas. There is no difference in the secondary school net attendance ratio by sex. By region, Kampala has the highest secondary school NAR (40 percent), while Karamoja has the lowest (5 percent).

The GAR for secondary school is the total number of secondary school students expressed as a percentage of the official secondary-school-age population (age 13-18). The secondary school GAR is 23 percent, with urban areas having a GAR more than twice as high as that in rural areas (44 percent versus 20 percent). The highest secondary school GAR is in Kampala (47 percent) and the lowest in the North and Karamoja regions (8 and 9 percent, respectively). There are no notable differences by sex.

The GPI for secondary school is 0.95, indicating that the number of female and male students is almost the same, with males slightly outnumbering females. The lowest GPI for secondary school is in North region (1.31) and the highest is in Central 1 (1.31).

Table 17 School attendance ratios - with pre-school

Net attendance ratios (NAR) and gross attendance ratios (GAR) for the de facto household population by sex and level of schooling; and the Gender Parity Index (GPI), according to background characteristics, Uganda 2011

Background characteristic	Net attendance ratio[1]				Gross attendance ratio[2]			
	Male	Female	Total	Gender Parity Index[3]	Male	Female	Total	Gender Parity Index[3]
PRE-SCHOOL								
Residence								
Urban	49.6	55.9	52.8	1.13	70.1	79.0	74.6	1.13
Rural	19.4	19.7	19.5	1.01	36.2	37.8	37.1	1.04
Region								
Central 1	31.8	39.9	35.8	1.25	45.6	58.6	52.1	1.29
Central 2	36.1	33.4	34.8	0.93	72.9	62.5	67.8	0.86
Kampala	58.4	64.8	61.7	1.11	75.4	87.2	81.5	1.16
East Central	15.4	20.7	17.9	1.34	29.6	36.7	33.0	1.24
Eastern	9.8	15.7	13.0	1.59	15.1	28.9	22.7	1.91
Karamoja	14.0	8.4	11.2	0.60	21.2	15.5	18.3	0.73
North	4.3	7.5	6.0	1.73	13.3	13.7	13.5	1.03
West Nile	5.2	4.5	4.8	0.86	8.0	5.6	6.7	0.70
Western	27.6	24.9	26.1	0.90	49.5	50.8	50.2	1.03
Southwest	30.9	29.0	30.0	0.94	63.9	62.8	63.4	0.98
Total	**23.0**	**23.8**	**23.4**	**1.04**	**40.2**	**42.6**	**41.4**	**1.06**
PRIMARY SCHOOL								
Residence								
Urban	85.4	84.6	85.0	0.99	118.2	117.0	117.6	0.99
Rural	81.2	80.0	80.6	0.98	127.2	119.0	123.0	0.94
Region								
Central 1	88.6	85.8	87.3	0.97	128.2	115.0	122.2	0.90
Central 2	77.9	81.7	79.6	1.05	116.8	120.9	118.6	1.03
Kampala	86.8	83.0	84.9	0.96	110.2	103.5	106.9	0.94
East Central	84.2	84.8	84.5	1.01	127.6	126.8	127.2	0.99
Eastern	90.0	86.0	87.7	0.96	140.2	127.1	132.8	0.91
Karamoja	80.3	77.5	79.0	0.96	133.3	124.3	129.2	0.93
North	56.3	46.5	51.4	0.83	75.6	70.5	73.1	0.93
West Nile	78.8	79.1	78.9	1.00	127.1	123.9	125.5	0.97
Western	80.2	79.4	79.7	0.99	130.0	120.0	124.4	0.92
Southwest	78.2	79.0	78.6	1.01	128.4	114.6	121.0	0.89
Total	**81.7**	**80.4**	**81.0**	**0.99**	**126.2**	**118.8**	**122.5**	**0.94**
SECONDARY SCHOOL								
Residence								
Urban	36.6	32.7	34.7	0.89	47.4	40.7	44.0	0.86
Rural	13.9	14.2	14.0	1.02	20.2	19.5	19.9	0.97
Region								
Central 1	20.4	28.1	23.7	1.38	27.0	35.4	30.6	1.31
Central 2	19.6	25.7	22.4	1.31	26.7	29.9	28.2	1.12
Kampala	39.9	39.8	39.8	1.00	49.2	45.7	47.4	0.93
East Central	21.5	18.2	20.0	0.85	29.8	27.4	28.7	0.92
Eastern	13.6	13.9	13.8	1.02	23.3	19.6	21.4	0.84
Karamoja	4.9	4.7	4.8	0.96	8.5	8.8	8.6	1.04
North	12.5	3.0	7.4	0.24	12.8	3.6	7.9	0.28
West Nile	11.0	8.2	9.7	0.75	20.5	13.0	16.9	0.63
Western	16.4	14.6	15.5	0.89	22.6	19.2	20.8	0.85
Southwest	16.1	13.5	14.9	0.84	21.9	20.6	21.3	0.94
Total	**16.9**	**16.9**	**16.9**	**1.00**	**23.9**	**22.6**	**23.3**	**0.95**

[1] The NAR for pre-school is the percentage of the pre-school age (3-5 years) population that is attending pre-school. The NAR for primary school is the percentage of the primary-school age (6-12 years) population that is attending primary school. The NAR for secondary school is the percentage of the secondary-school age (13-18 years) population that is attending secondary school. By definition the NAR cannot exceed 100 percent.

[2] The GAR for pre-school is the total number of pre-school students, expressed as a percentage of the official pre-school-age population. The GAR for primary school is the total number of primary school students, expressed as a percentage of the official primary school-age population. The GAR for secondary school is the total number of secondary school students, expressed as a percentage of the official secondary-school-age population. If there are significant numbers of overage and underage students at a given level of schooling, the GAR can exceed 100 percent.

[3] The Gender Parity Index for primary school is the ratio of the primary school NAR(GAR) for females to the NAR(GAR) for males. The Gender Parity Index for secondary school is the ratio of the secondary school NAR(GAR) for females to the NAR(GAR) for males.

N.   Birth Registration

It is a human right for a child to know who his parents are and to have a nationality through registration. The birth registration system in Uganda is still undergoing revival and significant progress has been made to extend coverage to all districts. The revival process is spearheaded by the Ministry of Justice and Constitutional Affairs and supported by UNICEF, Plan International, and UBOS, among others. To date, registration of births is being undertaken in more than 36 districts countrywide. In addition to being the first legal document to acknowledge the birth and existence of a child, the birth registration is fundamental to the provision of health care and access to immunisation. A well-established and functioning birth registration system ensures that the country has an up-to-date and reliable database of births. This is as useful for national-level planning as it is for local government bodies that are responsible for provision of education, health, and other social services for the community.

Table 18 shows that only three in every ten births of children under five are registered in Uganda. Birth registration is higher among the older children 2-4 years compared with younger children under the age of 2 years (32 and 26 percent). There is a slightly higher proportion of births registered in urban areas than in rural areas (38 percent compared with 29 percent). There is a higher proportion of births registered in Kampala (45 percent) and Central 1 (42 percent) regions than in other regions.

Table 18 Birth registration of children under age five

Percentage of de jure children under five years of age whose births are registered with the civil authorities, according to background characteristics, Uganda 2011

| | Children whose births are registered | | | | |
Background characteristic	Percentage who had a birth certificate seen	Percentage who had a birth certificate not seen	Percentage who did not have birth certificate	Percentage registered	Number of children
Age					
<2	8.3	7.1	11.0	26.3	3,301
2-4	7.8	11.4	13.0	32.2	5,060
Sex					
Male	8.1	9.2	12.6	29.9	4,182
Female	7.9	10.1	11.9	29.9	4,179
Residence					
Urban	10.1	15.5	12.5	38.0	1,068
Rural	7.7	8.8	12.2	28.7	7,293
Region					
Central 1	9.4	13.1	19.8	42.3	866
Central 2	13.8	11.8	7.7	33.3	873
Kampala	10.6	16.9	17.0	44.5	440
East Central	9.6	12.3	4.6	26.4	924
Eastern	7.1	9.1	16.6	32.8	1,390
Karamoja	8.1	10.6	13.1	31.8	749
North	2.3	5.6	3.2	11.1	314
West Nile	4.1	5.2	8.6	17.8	530
Western	9.4	6.8	19.3	35.5	1,230
Southwest	2.7	6.6	4.1	13.5	1,047
Total	8.0	9.7	12.2	29.9	8,361

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