



Sudan Household Health Survey Second Round 2010

Summary Report
August, 2011

National Ministry of Health
&
Central Bureau of Statistics



United Nations
World Food
Programme



unicef



World Health
Organization

INTRODUCTION

The Sudan Household Health Survey 2nd round (SHHS2) was carried out in 2010 by the Federal Ministry of Health (FMoH) and the Central Bureau of Statistics (CBS) representing the Government of National Unity (GoNU), and the Ministry of Health (MoH) together with the Southern Sudan Commission for Census, Statistics and Evaluation (SSCCSE), both representing the Government of Southern Sudan (GoSS) in partnership with the UN agencies and in collaboration with several ministries and institutions such as the Ministry of International Cooperation, Ministry of Education, and Ministry of Social welfare and women and child affairs, National Population Council, National Council for Child Welfare (NCCW) and National Water Corporation.

Financial and technical support was provided by the United Nations Children's Fund (UNICEF), the Pan Arab Project for Family Health (PAPFAM), the World Food Programme (WFP), the United Nations Population Fund (UNFPA), the World Health Organization (WHO), and the United States Agency for International Development (USAID), UNDP and JICA

The methodology and content of SHHS2 is based on the Multiple Indicator Cluster Survey (MICS) 4th round with the objective of providing up-to-date information on the situation of children and women and measuring the key indicators that allow the country to monitor progress towards the Millennium Development Goals (MDGs) and other internationally agreed upon commitments.

The sample design coverage of SHHS2 followed that of SHHS1 where 25 States were covered, 40 cluster in each State and 25 Households from each cluster; and two-stage cluster sampling design was employed to draw the sample in each state. For maternal mortality the sample size was 400 Enumeration Areas by states and 150 household by E

The questionnaires used were amended to fulfil the needs for the government and its counterparts from the UN agencies. The standard MICS4 questionnaires were adapted to the country context taking SHHS 2006 questionnaires as a basis for addition of country specific modules. Five questionnaires were used with the following detailed modules:

See www.childinfo.org for standard MICS4 questionnaires.



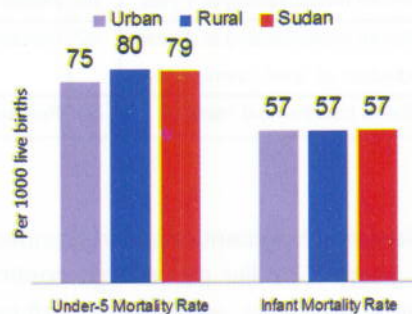
FINDINGS

CHILD MORTALITY

Infant and under-five mortality rates may be calculated by using information collected from full birth histories or from summary birth histories administered to women age 15-49 years. When full birth histories are used, information on sex, month and year of birth, survivorship status and current age, or, if the child had died, age at death are used to directly calculate infant and under-five mortality rates. Summary birth histories are used to collect information on the total numbers of children ever born, children surviving and children deceased, and this information is used to perform indirect calculations of child mortality.

For Sudan, the direct method of calculation was used. The results show that the infant mortality rate in the five years preceding the survey is 57 per 1,000 live births and under-five mortality is 79 deaths per 1,000 live births, for the same period. These results indicate that the majority (72 percent) of under-five deaths are infant deaths. Infant mortality rates are identical for urban and rural areas whereas under-five mortality rates are very similar in rural and urban areas.

Figure 1. Under-5 Mortality Rates and Infant Mortality Rates, Sudan, 2010



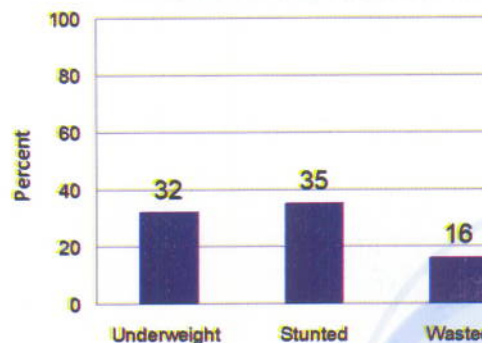
NUTRITION

Child Nutritional Status

The key indicators for monitoring the nutritional status of a child under the age of five are underweight (weight-for-age), stunting (height-for-age) and wasting (weight-for-height).

In Sudan 32 percent of children under age five are underweight, 35 percent are stunted and 16 percent are wasted.

FIGURE 2. PERCENTAGE OF CHILDREN UNDER AGE 5 WHO ARE UNDERWEIGHT, STUNTED AND WASTED, SUDAN, 2010



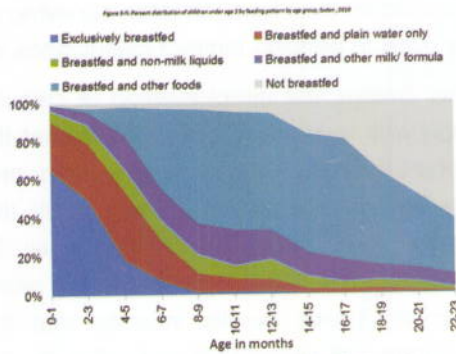
Breastfeeding

Figure 3-N and Figure 3-S show the detailed pattern of breastfeeding by the child's age in months. About 65 percent of 0-1 month old children are exclusively breastfed in Sudan. Among children who are 2-3 months old, the percentage of children that are exclusively breastfed declines to about 50 percent. By the sixth month, the percentage of children that are exclusively breastfed is only 18 percent.

TABLE 2 FINDINGS FOR SELECTED BREAST-FEEDING INDICATORS

Sudan, 2010		
Exclusive breastfeeding under 6 months	41	Percent
Continued breastfeeding at 1 year	88	Percent
Continued breastfeeding at 2 years	40	Percent
Introduction of solid, semi-solid or soft foods (children 6-8 months)	51	Percent

FIGURE 3. PERCENT DISTRIBUTION OF CHILDREN UNDER AGE 2 BY FEEDING PATTERN BY AGE GROUP, SUDAN, 2010

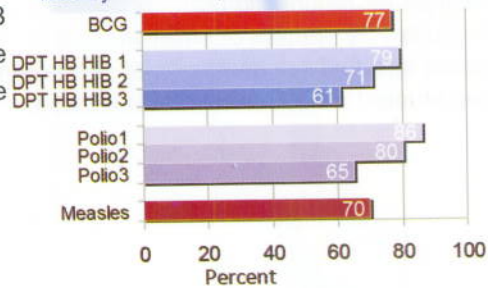


In Sudan, 41 percent of children under age 6 months are exclusively breastfed. At two years, a similar percentage continues breastfeeding. Half of the children 6-8 months start solid, semi-solid or soft food.

Child Health Immunization

In Sudan, 75 percent of children have received BCG vaccination, 58 percent have received three doses of DPT, HB, Hib and 62 percent have received three doses of polio vaccine. 62 percent are immunized against measles.

Figure 4. Percentage of children age 12-23 months who received the recommended vaccinations by 12 months, Sudan, 2011



Prevalence of Fever and Malaria Treatment

The main symptom of malaria is fever.

In Sudan 8 percent of children under age five had fever in the two weeks preceding the survey. Among those children who had fever children 43 percent received antimalarial medicine on the same or next day.

Prevalence and Treatment of Diarrhoea

Dehydration caused by diarrhoea is a major cause of mortality and morbidity. The recommended treatment for diarrhoea in children is oral rehydration therapy (ORS packet or recommended homemade fluid or increased fluids) with continued feeding.

Prevalence of Fever and Malaria Treatment

In Sudan 27 percent of the children under age five had diarrhoea in the two weeks preceding the survey. 52 percent of children with diarrhoea received the recommended treatment.

Prevalence and Antibiotic Treatment of Suspected Pneumonia

Nineteen percent of children under age five in Sudan had symptoms consistent with pneumonia during the two weeks preceding the survey. Overall, 66 percent of children with suspected pneumonia received antibiotics.

FIGURE 5. PERCENTAGE OF CHILDREN UNDER AGE 5 WHO HAD FEVER AND THOSE WITH FEVER WHO RECEIVED ANY ANTIMALARIAL TREATMENT, SUDAN, 2010

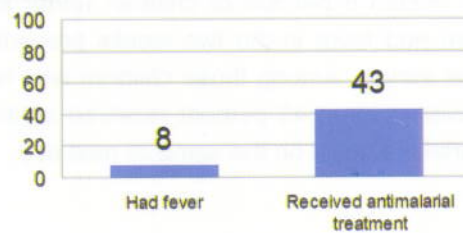


FIGURE 6. PERCENTAGE OF CHILDREN UNDER AGE 5 WITH DIARRHOEA AND THOSE WITH DIARRHOEA WHO RECEIVED ORT (ORS PACKET OR RECOMMENDED HOMEMADE FLUID OR INCREASED FLUIDS) AND CONTINUED FEEDING, SUDAN, 2010

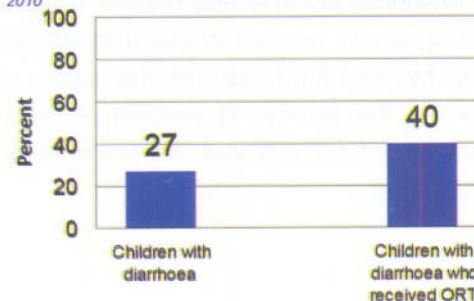
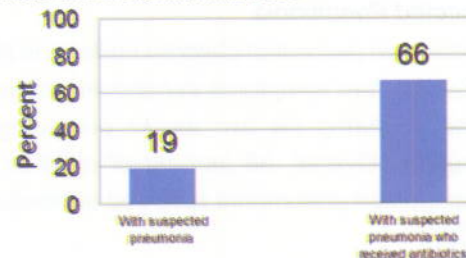


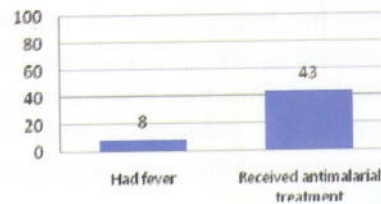
FIGURE 7. PERCENTAGE OF CHILDREN UNDER AGE 5 WITH SUSPECTED PNEUMONIA WHO RECEIVED ANTIBIOTICS, SUDAN, 2010



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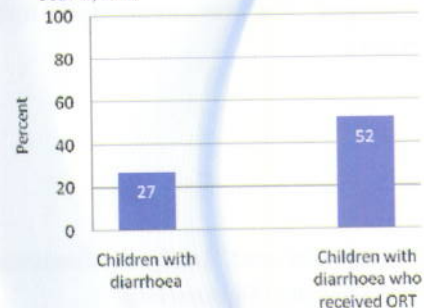
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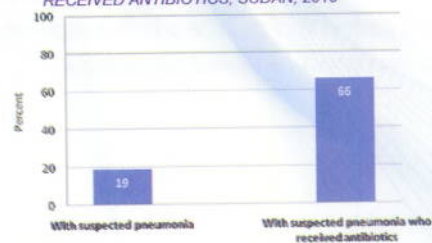
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FIGURE 7. PERCENTAGE OF CHILDREN UNDER AGE 5 WITH SUSPECTED PNEUMONIA WHO RECEIVED ANTIBIOTICS, SUDAN, 2010



WATER AND SANITATION

Overall, 61 percent of the population in Sudan use an improved water source as defined by the MDG indicator. There are differences between urban and rural areas: only 58 percent of household members in rural areas use an improved water source, while the corresponding percentage for urban areas is 67.

According to the country definition of improved water source which includes water transported from an improved source, the coverage figures increase to 81 percent. Ninety four percent of the urban population and 75 percent of the rural population have access to an improved source of drinking water

FIGURE 8. PERCENTAGE OF HOUSEHOLD MEMBERS USING IMPROVED SOURCES OF DRINKING WATER, SUDAN, 2010

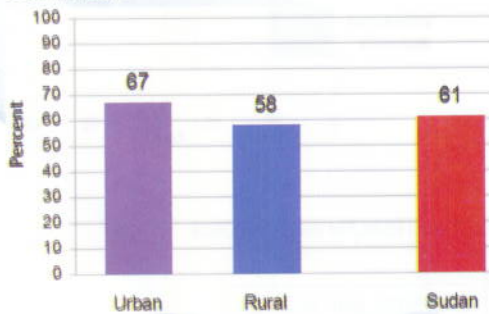
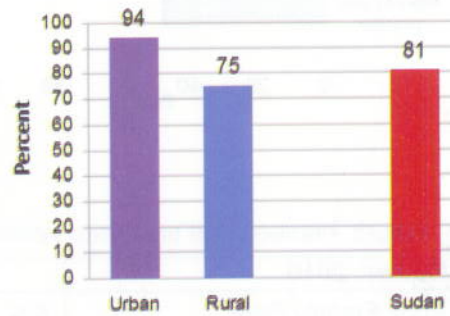


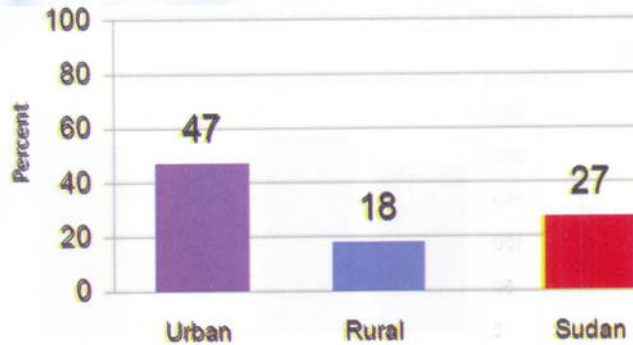
FIGURE 8A. PERCENTAGE OF HOUSEHOLD MEMBERS USING IMPROVED SOURCES OF



DRINKING WATER, SUDAN, 2010

The sanitation indicator shows similar disparities: only 18 percent of household members in rural areas use an improved sanitation facility, while in urban areas 47 percent use an improved facility. Overall, 27 percent of household members use an improved sanitation facility.

Figure 9 . Percentage of household members using improved sources of drinking water, Sudan, 2010



REPRODUCTIVE HEALTH

Seventy-four percent of women age 15-49 years in Sudan with a live birth in the two years preceding the survey received antenatal care (ANC) at least once by skilled personnel and 47 percent received ANC at least 4 times by any provider. Seventy three percent were attended by doctor, health visitor, nurse midwife or medical assistant at delivery and 21 percent delivered in a health facility.

FIGURE 10 . ANTENATAL CARE COVERAGE, SUDAN 2010

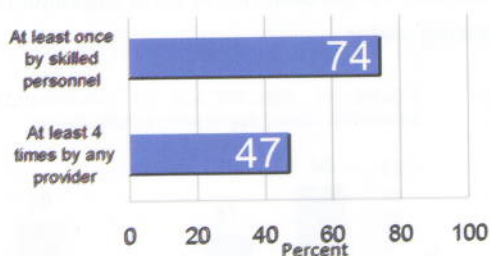


FIGURE 11 . DELIVERY CARE, SUDAN, 2010

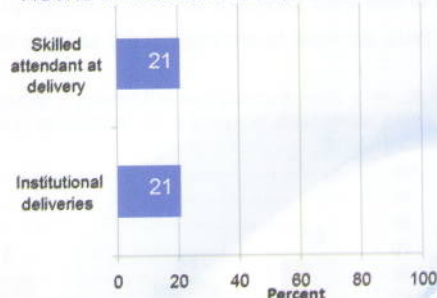


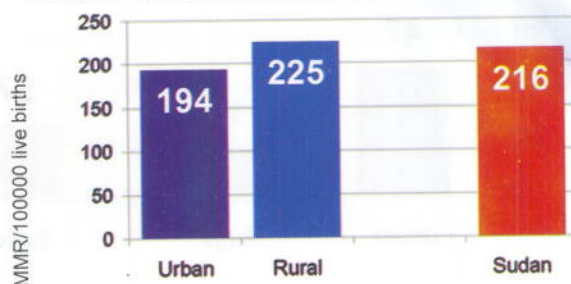
TABLE 3. FINDINGS FOR SELECTED REPRODUCTIVE HEALTH INDICATORS

Sudan , 2010		
Total Fertility Rate	5.6	Children per woman
Adolescent Birth Rate	102	Per 1000 women
Contraceptive Prevalence Rate	9	Percent
Unmet Need	29	Percent

Only nine percent of married women age 15-49 years in Sudan use a contraceptive method and the unmet need for contraception (for either spacing or limiting births), is 29 percent. The adolescent birth rate is very high; 102 births per 1000 women age 15-19 years. Total fertility rate is 5.6 per children woman.

For Sudan, the direct method of calculation was used. The results show that the maternal mortality ratio was 216 per 1,000,000 live births for urban it was 194 and rural areas 225

FIGURE 12 MATERNAL MORTALITY RATIO, SUDAN , 2010



Literacy and Education

Literacy among young women

Overall, in Sudan, only 45 percent of young women age 15-24 years is literate. Among women living in the poorest households, the literacy rate is as low as 20 percent. In contrast, the literacy rate is 61 percent among women in the richest households.

FIGURE 13: LITERACY RATES, YOUNG WOMEN AGE 15 - 24 YEARS, BY AREA, SUDAN, 2010

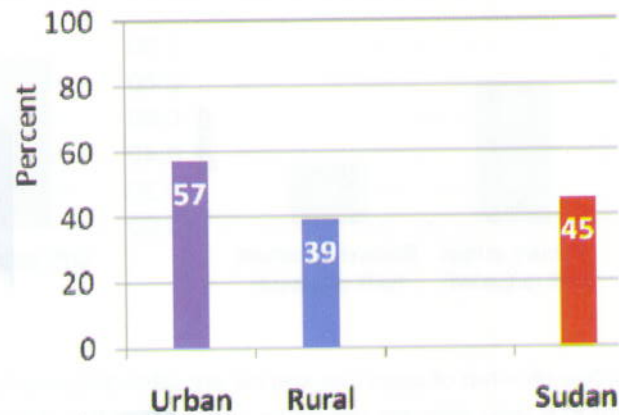
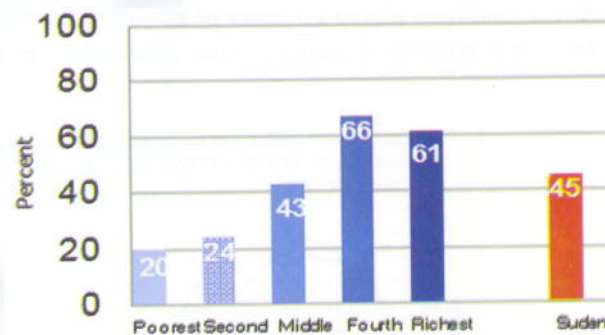


FIGURE 14: LITERACY RATES, YOUNG WOMEN AGE 15 - 24 YEARS, BY WEALTH QUINTILES,



Overall, in Sudan, only 45 percent of young women age 15-24 years is literate. Among women living in the rural areas, the literacy rate is as low as 39 percent. In contrast, the literacy rate is 57 percent among women in the urban areas.

SCHOOL ATTENDANCE

About 72 percent of children of primary school age in Sudan are attending primary school and only 34 percent of children of secondary school age are attending secondary school. More boys are attending primary school than girls; the Gender Parity Index (GPI) is 0.94. In secondary school the GPI increases further to 1.08, indicating that more girls than boys attend secondary school.

FIGURE 15: PRIMARY AND SECONDARY SCHOOL NET ATTENDANCE RATIOS (NAR) (ADJUSTED), SUDAN, 2010

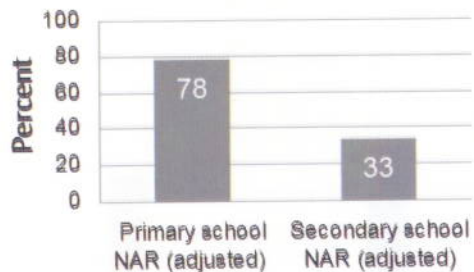
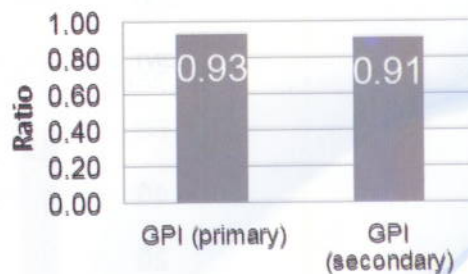
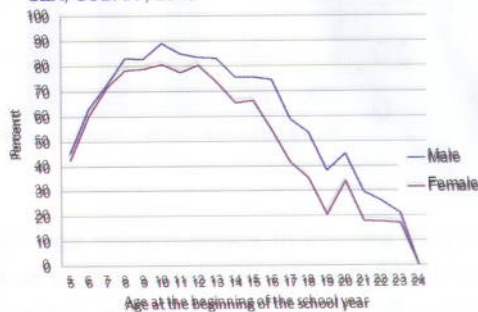


FIGURE 16: GENDER PARITY INDEX (GPI) IN PRIMARY AND SECONDARY SCHOOL, SUDAN, 2010



In Sudan, few children of ages five and six are attending any form of school. Around 62 percent of 6 year olds are attending school; age 6 is the official school starting age in Sudan. School attendance increases slightly for children of age 7-11 and starts to decrease for children of age 12-14 years. For children between 15-17 years the school attendance drops quite dramatically the older the child gets. Fifteen to seventeen years is the official age range for upper-secondary school. Few household members above 20 years of age attend school. Gender differentials are generally small showing more boys than girls appear to attend school.

FIGURE 17: PERCENTAGE OF HOUSEHOLD MEMBERS AGE 5-24 YEARS ATTENDING SCHOOL, BY SEX, SUDAN, 2010

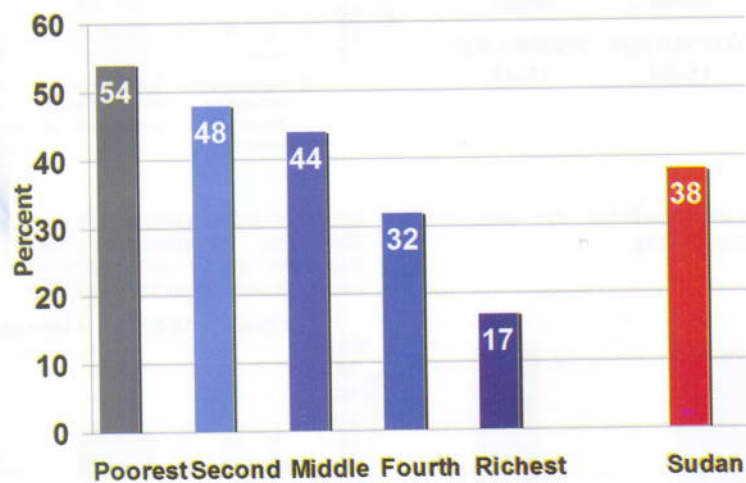


CHILD PROTECTION

Early Marriage

The percentage of women age 20-49 years who were first married before age 18 is 38 percent in Sudan. Differences by wealth quintiles exist; 54 percent of women from the poorest households were married before age 18, while only 17 percent from the richest households were married at this age.

FIGURE 18: PERCENTAGE OF WOMEN AGE 20-49 YEARS WHO WERE MARRIED BEFORE AGE 18,



HIV/AIDS AND ORPHANS

HIV/AIDS

About three quarters of all women in Sudan have heard of AIDS. Only 5 of young women age 15-24 years have comprehensive knowledge about HIV prevention and 34 percent correctly identify all three means mother-to-child HIV transmission. Nine percent of young women express accepting attitudes towards people living with HIV. These indicators are similar for all women age 15-49 years.

FIGURE 19: PERCENTAGE OF WOMEN WHO HAVE HEARD OF AIDS.

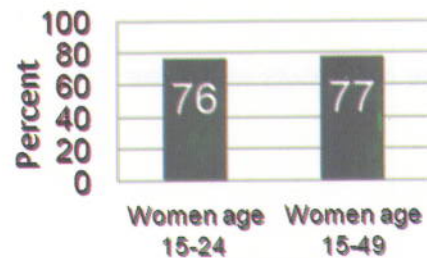


FIGURE 20: KNOWLEDGE ABOUT HIV/AIDS PREVENTION AND TRANSMISSION AND ATTITUDES TOWARDS PEOPLE LIVING WITH HIV, FOR WOMEN AGE 15-24 AND 15-49 YEARS SUDAN, 2010

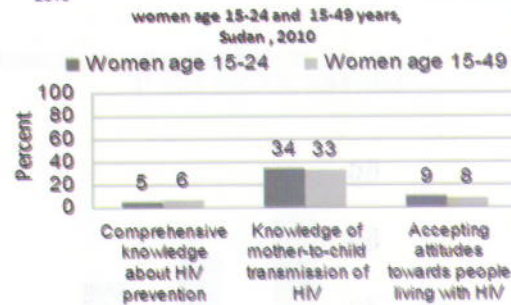


FIGURE 21: PERCENTAGE OF MEN WHO HAVE HEARD OF AIDS.

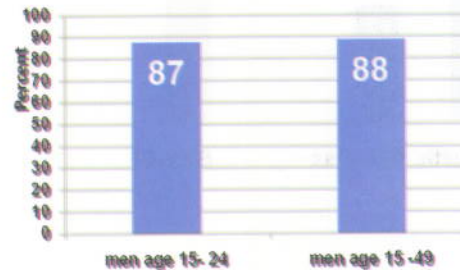
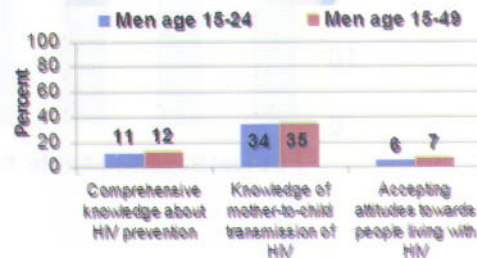


FIGURE 22: KNOWLEDGE ABOUT HIV/AIDS PREVENTION AND TRANSMISSION AND ATTITUDES TOWARDS PEOPLE LIVING WITH HIV, FOR MEN AGE 15-24 AND 15-49 YEARS SUDAN, 2010

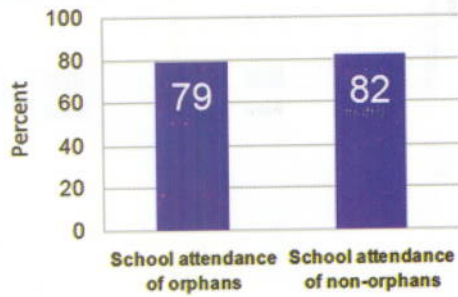


In Sudan, 87 percent of men age 15-24 years have heard of AIDS, which is similar to men age 15-49 years. The comprehensive knowledge about HIV prevention is 11 percent for men age 15-24 years and 12 percent for those age 15-49 years.

School Attendance of Orphans and Non-orphans

In Sudan the school attendance rate among children 10-14 years who have lost both their parents is 79 percent. Among children of the same age, whose parents are alive, and who are living with a least one parent, the school attendance rate is 82 percent. The orphans to non-orphans school attendance ratio are 0.96

FIGURE 23: SCHOOL ATTENDANCE OF ORPHANS AND NON-ORPHANS AGE 10-14 YEARS,



Injury, chronic disease and disability

FIGURE 24: INJURY OVER THE LAST 12 MONTHS, SUDAN, 2010

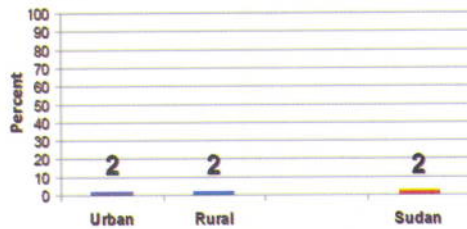
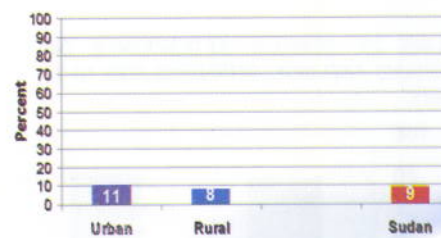


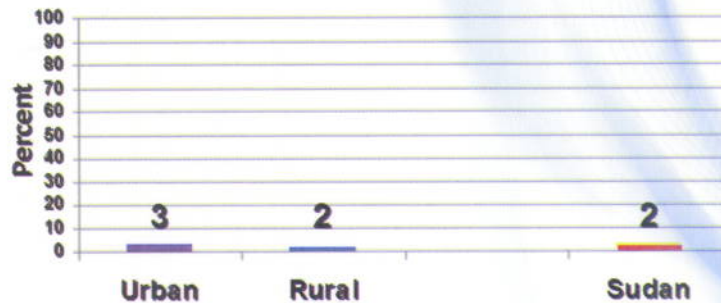
FIGURE 25: PREVALANCE OF CHRONIC DISEASE, NORTHERN SUDANAN STATES, 2010



For Sudan, the results show that the percentage of household members who had injury in the last 12 months was 2 percent. The percentages are identical for urban and rural areas.

In Sudan, the disability prevalence rate was 2 percent. 3 percent was in urban and 2 percent in rural.

FIGURE 26: DISABILITY PREVALANCE RATE, NORTHERN SUDAN STATES, 2010



Food Security

FIGURE 27: PERCENTAGE OF HOUSEHOLDS WITH POOR, BORDERLINE AND ACCEPTABLE FOOD CONSUMPTION SCORE,

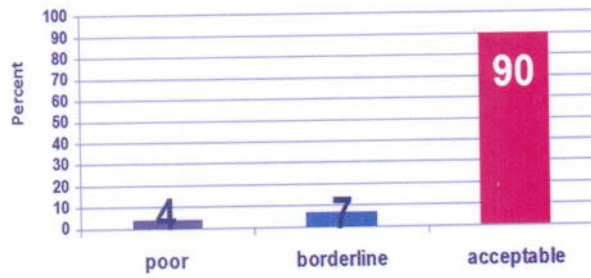
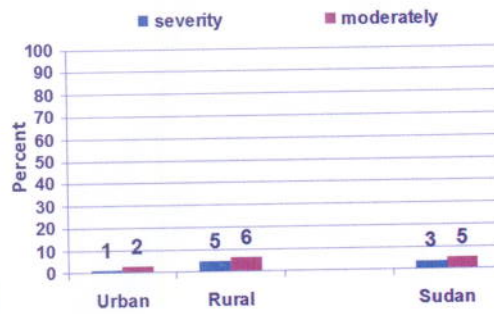


FIGURE 28: PERCENTAGE OF FOOD SECURE, MODERATELY FOOD INSECURE AND SEVERELY FOOD INSECURE HOUSEHOLDS, SUDAN, 2010







Sudan Household Health Survey

2nd Round 2010

Summary of the Main Indicators

August, 2011

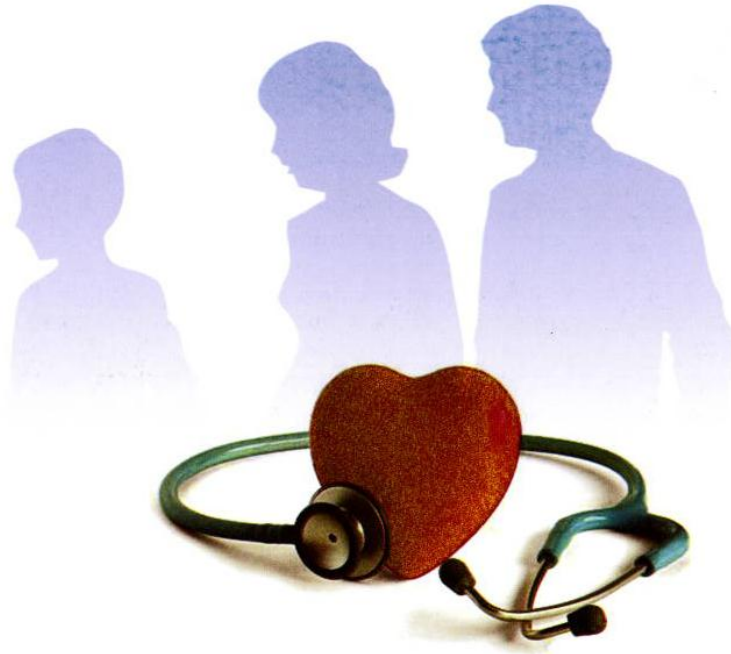


Sudan Household Health Survey-2 (SHHS2) and Millennium Development Goals (MDGs) indicators, Sudan, 2010			
Topic	MDG indicator number	Indicator	Value %
CHILD MORTALITY			Value/1000 Live births
		Neonatal mortality rate / 1000 live births	33
		Post neonatal mortality rate /1000 live births	24
	4.2	Infant mortality rate /1000 live births	57
		Child mortality rate /1000 live births	23
	4.1	Under-five mortality rate /1000 live births	78
NUTRITION			Value %
Children's nutritional status	1.8	Underweight prevalence (moderate and severe)	32.2
		Underweight prevalence (severe)	12.6
		Stunting prevalence (moderate and severe)	35.0
		Stunting prevalence (severe)	15.7
		Wasting prevalence (moderate and severe)	16.4
		Wasting prevalence (severe)	5.3
		Overweight prevalence	2.9
Breastfeeding		Exclusive breastfeeding rate (0-5 months)	41.0
		receiving solid, semi-solid or soft foods (6-8 months)	51.1
		Minimum meal frequency (6-23 months)	30.3
		Continued breastfeeding rate (12-15 months)	87.6
		Continued breastfeeding rate (20-23 months)	40.1
	appropriately breastfed (0-23 months)	49.4	
Salt iodisation		Iodised salt consumption	9.5
Vitamin A supplementation		Vitamin A supplementation (12-23 months)	60.5
		Vitamin A supplementation (post-partum mothers)	22.1
CHILD HEALTH			Value %
Immunization		Tuberculosis immunization coverage (children aged 12-23 months receiving BCG vaccine before their first birthday)	74.6
		Tuberculosis immunization coverage (at any time up to the date of the survey)	76.8
		Immunization coverage for DPT HB HIB 3 (children aged 12-23 months receiving DPT HB HIB 3 vaccine before their first birthday)	58.4
		Immunization coverage for DPT HB HIB 3 (at any time up to the date of the survey)	61.3
		Polio immunization coverage (children aged 12-23 months receiving polio vaccines before their first birthday))	62.0
		Polio immunization coverage (at any time up to the date of the survey)	64.8

Sudan Household Health Survey-2 (SHHS2) and Millennium Development Goals (MDGs) indicators, Sudan, 2010			
Topic	MDG indicator number	Indicator	Value %
	4.3	Measles immunization coverage (children aged 12-23 months receiving measles vaccine before their first birthday)	62.3
		Measles immunization coverage (at any time up to the date of the survey)	70.1
		Fully immunized children (children aged 12-23 months receiving all vaccines before their first birthday)	39.3
		Fully immunized children (children aged 12-23 months receiving all vaccines at any time up to the date of the survey))	49.4
Tetanus toxoid vaccination		Neonatal tetanus protection	54.7
Care of illness		Under -5 with diarrhea in the last two weeks preceding the survey	26.8
		Use of Oral Rehydration Therapy (ORT)	52.0
		Received ORT with continued feeding	11.8
		Under -5 with suspected pneumonia in the last two weeks preceding the survey	18.7
		Care-seeking for suspected pneumonia	55.8
		Knowledge of the two danger signs of pneumonia	4.5
Solid fuel use		Use of solid fuels	63.2
MALARIA PREVENTION AND TREATMENT			Value %
		Households with at least one mosquito net	58.2
		Households with at least one long-lasting treated net	25.0
		Under fives with fever in the last two weeks preceding the survey	8.4
	6.8	Antimalarial treatment (under-5)	65.0
		anti-malarial drug same or next day	43.0
WATER AND SANITATION			Value %
Water	7.8	Use of improved drinking water sources	60.5
		Use of improved drinking water sources (country definition)	81.1
		Appropriate water treatment	0.9
		Percentage of household population spend 30 minutes or more to an improved source of drinking water.	13.2
Sanitation	7.9	Use of improved sanitary means of excreta disposal	27
Water and sanitation		Use of both improved drinking water sources and sanitary means of excreta disposal	20.8
		Use of both improved drinking water sources and sanitary means of excreta disposal (country definition)	25.2
REPRODUCTIVE HEALTH			Value
Fertility		Total fertility rate (children/woman)	5.6
	5.4	Adolescent birth rate/1,000 women	102

Sudan Household Health Survey-2 (SHHS2) and Millennium Development Goals (MDGs) indicators, Sudan, 2010			
Topic	MDG indicator number	Indicator	Value %
Contraception	5.3	Contraceptive prevalence	9.0
	5.6	Unmet need for family planning	28.9
Maternal and newborn health	5.5	Antenatal care visits (4 or more visits)	47.1
	5.5	ANC at least one visit by skilled provider of antenatal care	74.3
	5.2	Births attended by a qualified health personnel	72.5
		Institutional deliveries	20.5
Maternal mortality	5.1	Maternal mortality ratio/100,000 live births	216
EDUCATION			Value
Literacy	2.3	Literacy rate (women age 15-24years)	45.2
Primary and secondary education		Net intake rate in primary education	46.0
	2.1	Net attendance ratio of primary school-age children (adjusted)	71.8
	3.1	Gender parity index (primary school)	0.94
	3.1	Gender parity index (secondary school)	1.08
		Secondary school net attendance ratio	34.3
	2.2	Children reaching last grade of primary school	82.2
		Primary school completion rate	62.7
	Transition rate to secondary school	77.8	
CHILD PROTECTION			Value %
Birth registration		Birth registration	59.3
Early marriage and polygyny		Marriage before age 15	9.5
		Marriage before age 18	37.6
		Young women aged 15-19 currently married	23.5
		Polygyny	20.0
Domestic Violence		women age 15-49 years who believe a husband is justified in beating his wife	47.0
Children's living arrangements and orphanhood		Children's living arrangements (not living with a biological parent)	4.1
		Prevalence of orphans	5.7
HIV/AIDS			Value %
HIV/AIDS knowledge		Awareness about AIDS among women age 15-49 years	76.6
		Awareness about AIDS among men age 15-49 years	88.4
	6.3	Comprehensive knowledge of HIV/AIDS among women age 15-24 years	5.3
	6.3	Comprehensive knowledge of HIV/AIDS among men age 15-24 years	11.1
		Knowledge about HIV prevention (correctly identifying two ways of avoiding HIV infection) among women age 15-24 years	15.4
		Knowledge about HIV prevention (correctly identifying two ways of avoiding HIV infection) among men age 15-24 years	35.0
		Awareness about mother-to-child transmission of HIV	60.3

Sudan Household Health Survey-2 (SHHS2) and Millennium Development Goals (MDGs) indicators, Sudan, 2010			
Topic	MDG indicator number	Indicator	Value %
		Knowledge of means of mother-to-child transmission of HIV (all three means of vertical transmission)	32.7
	6.4	School attendance of non-orphans (10-14 years)	81.8
	6.4	School attendance of orphans (10-14 years)	78.8
		Orphans to non-orphans school attendance ratio	0.96
Injuries			Value %
		Respondents who had an injury over the past 12 months	2.0
		Health care for the most recent injury (inpatient & outpatient)	53.2
Chronic disease			
		Prevalence rate of chronic disease for population age 10 years and above.	9.1
FGM			Value %
		Percentage of girls and women who have had any form of FGM/C	65.5
		Attitude of women aged 15-49 years towards whether the practice of FGM/C should be continued	42.3
		Attitude of ever married women aged 15-49 years towards whether the practice of FGM/C should be continued	48.1
		Percentage of ever married women aged 15-49 years who intend to FGM/C their daughters,	48
Child Disability			
		Disability prevalence rate among children age 2 -9 years	2.4
Food Security			Value %
Food consumption		Percentage of households with acceptable food consumption score	89.9
Food secure		Percentage of food secure households	91.7
Food insecurity		Percentage of moderately food insecure households	5.0
		Percentage of severely food insecure households	3.4



تعمیر و ترمیم

