HIV Behavioural Surveillance Survey

Juba Municipality, South Sudan

United Nations High Commissioner for Refugees

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Table of Contents

Table and figures

Acknowledgements

The HIV Behavioural Surveillance Survey (BSS) in Juba Municipality, South Sudan was a collaborative effort among a number of organizations and persons concerned with reducing the risk for HIV transmission in the country. The United Nations High Commissioner for Refugees (UNHCR) spearheaded and supported the project financially and technically. The Ministry of Health, Government of South Sudan, the Southern Sudan AIDS Commission, and the Southern Sudan Commission for Census, Statistics and Evaluation, were key partners in the design and implementation of the survey.

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Acronyms

AIDS	Acquired immunodeficiency syndrome
ANC	Antenatal clinic
BCC	Behavioural change communication
BSS	Behavioural Surveillance Survey
CAR	Central African Republic
CDC	US Centers for Disease Control and Prevention
DRC	Democratic Republic of Congo
EPI	Expanded Programme of Immunization
HIV	Human immunodeficiency virus
IDP	Internally displaced population
IEC	Information, education and communication
MOH	Ministry of Health
PLWH/A	People living with HIV/AIDS
PPS	Probability proportionate to size
SSAC	Southern Sudan AIDS Commission
SSCCSE	Southern Sudan Commission for Census, Statistics and Evaluation
STI	Sexually transmitted infection
UNAIDS	Joint United Nations Program on AIDS
UNHCR	United Nations High Commissioner for Refugees
VCT	Voluntary counselling and testing

Executive Summary

Background

HIV/AIDS has become one of the most serious health problems throughout the world. By the end of 2005, the Joint United Nations Program on AIDS (UNAIDS) estimated that there were 38 million adults and 2.3 million children living with HIV, and AIDS is now the leading cause of death in sub-Saharan Africa. In 2003, UNAIDS estimated the overall adult HIV prevalence in Sudan was 2.3%, and local surveys conducted by the US Centers for Disease Control and Prevention (CDC) in the same year found between 0.4% and 4.4% HIV prevalence in the South Sudanese towns of Yei and Rumbeck, respectively.

The January 2005 peace agreement in South Sudan ended two decades of civil war, during which an estimated four million persons had been displaced both internally and to other countries throughout the war. Juba, the capital of South Sudan, was a closed garrison town until after the peace agreement and has recently experienced wide-scale population change including an influx of displaced persons either returning to or resettling in the area. While there is no data on HIV prevalence in Juba, case reports from the Voluntary Counselling and Testing centre (VCT) in the local Juba Teaching Hospital indicate that 20% of the people tested there in 2006 were positive for the virus, and it is feared Juba could become an HIV epicenter in the country.

HIV Behavioural Surveillance Survey

In late 2006, the United Nations High Commissioner for Refugees (UNHCR) undertook an HIV Behavioural Surveillance Survey (BSS) in Juba Municipality in collaboration with the Ministry of Health, Government of South Sudan, the Southern Sudan AIDS Commission, and the Southern Sudan Commission for Census, Statistics and Evaluation. The goal of the survey was to increase the knowledge base in the region for designing and strengthening programmes and responding to the HIV epidemic and had the following objectives:

Objective 1: Establish baseline behavioral data among the population of Juba Municipality, Central Equatoria State

Objective 2: Provide data to allow for analysis of behavioral risks in antenatal clinic (ANC) catchement areas where HIV sentinel surveillance will later be undertaken

Objective 3: Provide data to allow for comparison of behavioral risks among returned refugees, internally displaced populations (IDPs), and populations that were not displaced

Objective 4: Measure trends over time.

Objective 5: Provide data for use by program managers and policy makers.

Objective 6: Provide data to allow for comparison of indicators across other areas of the country and region.

Methods

The BSS was a cross-sectional survey of the general population between the ages of 15 and 49 years old residing in the three main payams (administrative districts) of Juba Municipality, including Juba Town, Kator and Munuki. The total sample size was 809, and household sampling was conducted using a two-stage probability proportionate to size (PPS) methodology.

Data collection was conducted between October and November 2006 by four teams consisted of five interviewers and one supervisor each and was overseen by four central supervisors. Each of the people recruited provided informed consent and answered a 30-45 minute structured questionnaire. Information collected by the survey instrument included the following:

- Socio-demographic characteristics
- Mobility and displacement
- Alcohol and drug use
- Circumcision
- Military activity
- Marital history
- Sexual activity
- Forced sex
- Access to and use of male and female condoms
- History of sexually transmitted infections (STIs) and health-seeking behaviour
- Knowledge, attitudes and opinions about HIV/AIDS
- Exposure and access to interventions including voluntary counseling and testing (VCT)
- ANC utilization

Data was double entered and validated using CSPro 3.2, and data analysis was conducted using STATA 9.0, adjusting for design effect.

Summary results and recommendations

Women comprised 57% of the population of Juba Municipality. They had less education, higher illiteracy, and fewer were engaged in formalized employment then men. Most women did not access HIV information through printed materials, and a large proportion stated their preference for receiving the HIV education was through a health facilities or their place of worship. **Female-focused interventions** are critical for HIV prevention interventions in Juba Municipality and must be designed considering the different methods and locations in which women access HIV information.

Though there is a high level of literacy among men in the area, there is not a common language read by the entire population, and one third of women cannot read at all. IEC/BCC materials should account for the fact that **no single language will reach all audiences**.

While a majority of people (82%) had received messages in the past year about HIV, most of their information was coming through mass media outlets (radio and television). **No NGO interventions** were identified as sources of HIV information and education, despite the fact that many NGOs in South Sudan are headquartered in Juba Municipality.

Most men under the age of 24 had never been married. Casual sex partners were most common among unmarried men (19%) and those under the age of 25 (16%), though a low proportion of men reported engaging in transactional sex. Few women reported a casual sex partner in the past year (2%), and only two women in the survey reported ever having exchanged sex for money. There is a high proportion fractured households where married couples are not living with their spouses, particularly among women. **Partner reduction initiatives** need to consider targeting messages towards both single and married persons, particularly young men, and what effect long-term separation between spouses may have. Alcohol consumption was common among men who had a casual sex partner, and these campaigns to should also address the role of alcohol in safe sex decision-making.

While overall knowledge about methods for reducing HIV transmission risk was high, 20% fewer people knew that condoms reduce HIV transmission than knew abstinence (89%) and being faithful to mutually monogamous, uninfected partners (92%) prevented HIV. Condom use with casual sex partners was low, and less then 10% of the sexually active population in Juba Municipality had ever used a condom. There was also a large disparity between women and men in their knowledge about and use of condoms. There is a significant amount of work to be done on condom knowledge, promotion and access. **Condom promotion** must be rapidly stepped up in Juba Municipality, through both behaviour change education and increased access to services.

There continues to be **high population mobility and displacement** in Juba Municipality. A majority of IDPs (92%) and refugees (69%) had still not returned to their home communities, and half of the residents of Juba Municipality were not originally from the area. Long-term travel away from home was common in the population, with 17% of both younger and older men and women reported traveling away from their current communities for one month or more in the past year. Interventions need to consider that a large proportion of their population is newly or temporarily settled in the community and may have less knowledge of or access to health care and other services. Targeting mobile groups with repeated interventions may prove challenging, and programmes should focus on fixed locations which a large sub-group of the community regularly access such as health facilities, places of worship, schools, and community venues.

Less than half of men in Juba are circumcised. While men who are circumcised have a lower risk of HIV transmission, **messages regarding circumcision** as preventative for HIV have to be carefully developed and potential interventions have to be considered within the local context. In-depth qualitative research on the appropriateness of such interventions is needed before moving this type of prevention strategy should be considered.

Symptoms of sexually transmitted infections, particularly of ulcerative STIs, are quite high (12%) among females over the age of 25. **STI interventions** should be integrated into comprehensive HIV programmes for both men and women. Because, for the most part, the population accesses health services to treat suspected STIs, services to prevent and treat STIs should initially be focused in public health facilities.

Of the respondents, 3% of women and no men said that they had ever been forced to have sex. None of the women in the survey who had been forced to have sex had ever been displaced. Despite these low figures, which are potentially underestimated, **reduction of sexual violence**, particularly against women, should be incorporated into comprehensive HIV programmes and more research is needed that measures the prevalence of sexual violence in the community and identifies strategies for addressing it.

Almost one-half of the men and one-third of the women would want it to remain a secret if a family member had HIV and one-third of all people felt an HIV positive teacher should not remain in their jobs. There is still a **high level of stigma against PLWH/A** in the community which requires sensitization campaigns and incorporating anti-stigmatization messages into interventions.

Only 15% of men and 7% of women in Juba Municipality had been tested for HIV and received their results. Male and female returned refugees were three times more likely to know their HIV status then people who had never been displaced outside of Sudan. Far more men then women knew where to access VCT, with most people identifying the local hospital as a VCT site. There does not appear to be stigmatization regarding HIV testing in Juba, and a majority of people surveyed said they would be willing to get tested. As HIV testing already appears to be acceptable in the area, **access to voluntary counseling and testing** in Juba Municipality needs to be increased considerably.

Juba will likely experience an increase in HIV prevalence if prevention is not stepped up significantly - **but not necessarily due to the returned refugees**. HIV already has a serious foothold in the area, with 20% of VCT clients in Juba testing positive for the virus in 2006. HIV transmission is occurring in the entire population, regardless of displacement status, and there are likely three times more PLWH/A in Juba Municipality who have never been refugees than those who had. While returned refugees were more likely to have sex outside of marriage than Juba residents who had not been displaced outside of the country, they also had much higher condom use than people who had not been refugees. In addition, reported incidence of forced sex among refugees is not high enough to influence a population-level epidemic.

National data is not adequate for understanding specific epidemic dynamics in different areas of the country. Therefore, **local HIV prevalence and behavioural data is crucial** for developing evidence-based policies and programmes. Systematic HIV surveillance in ANC clinics and later in the general population should be prioritized, and research on the prevalence of ulcerative STIs in the area would be valuable to designing effective prevention programmes.

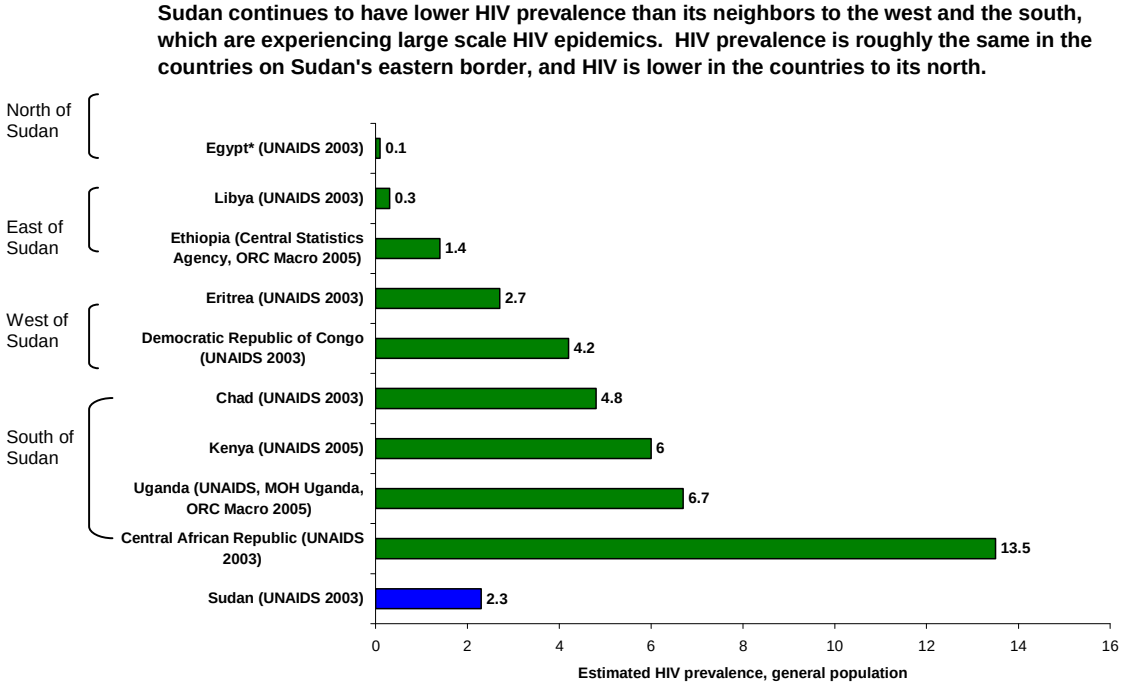
Introduction

Background on HIV in Juba, South Sudan

HIV/AIDS has become one of the most serious health problems throughout the world. By the end of 2005, the Joint United Nations Program on AIDS (UNAIDS) estimated that there were 38 million adults and 2.3 million children living with HIV, and AIDS is now the leading cause of death in sub-Saharan Africa. The majority of HIV infections in East Africa and the Horn of Africa are transmitted through heterosexual contact (accounting for up to 85% of the cases recorded) with the prevalence of infection highest among females aged 20-24 years and males aged 30-39 years.

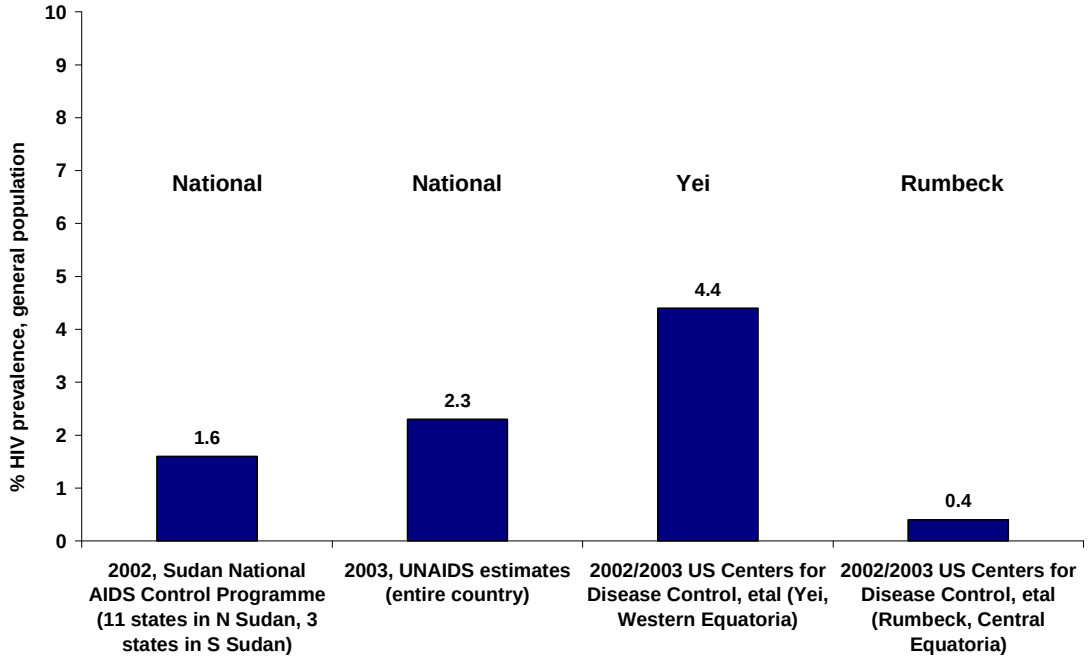
In October 2002, the results of an epidemiological survey conducted among 7,385 individuals in 11 Sudanese states were released. Persons tested included Sudanese and non Sudanese, and the HIV sero-prevalence among Sudanese was 1.6%. [1] The following year, UNAIDS estimated the overall adult HIV prevalence in the country was 2.3%. [2] Both figures indicate that Sudan may be experiencing a general population HIV epidemic. As of 2003, Sudan was generally thought to be experiencing a lower HIV epidemic then its neighbors to the south (Uganda, Kenya, CAR) and west (Chad, DRC), and an equitable epidemic to countries on its east (Ethiopia, Eritrea).

Figure 1: HIV prevalence in Sudan and its neighboring countries



The January 2005 peace agreement in South Sudan ended two decades of civil war, during which an estimated four million persons had been displaced both internally and to other countries throughout the war. Wide-scale repatriation of these populations is now underway, and with the population change is the fear that HIV will now increase. Currently, there is limited data on HIV prevalence in specific areas of South Sudan. Research by the CDC in 2003 found HIV prevalence in Yei, near the southern border with Uganda, was 4.4%, and in Rumbeck HIV prevalence was less than 1%. [3]

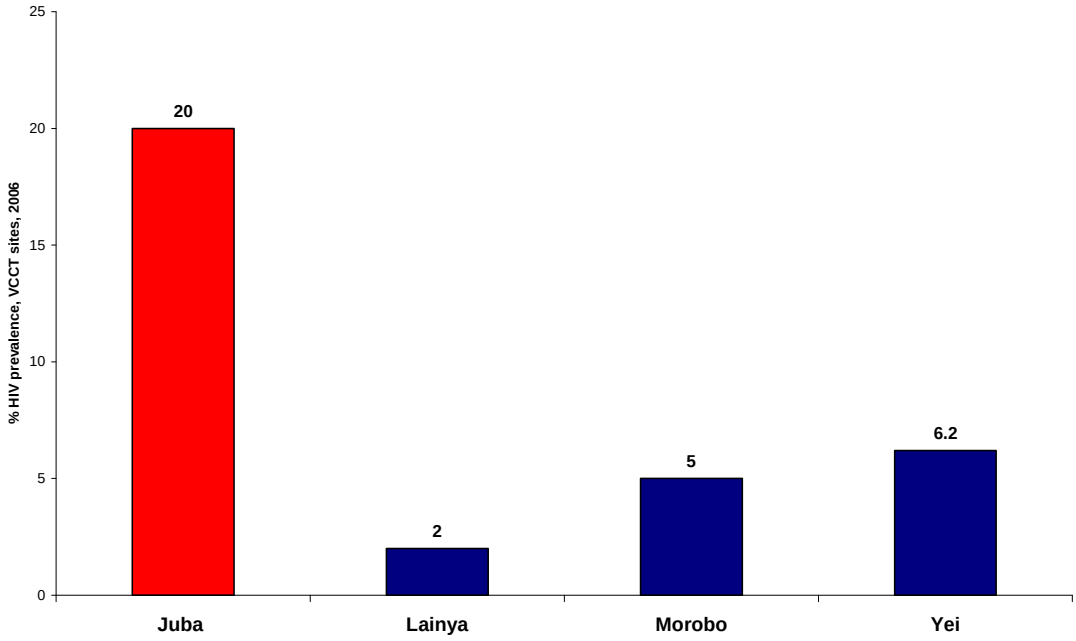
Figure 2: HIV prevalence nationally and in South Sudan



Juba, the capital of South Sudan was a closed garrison town until after the peace agreement. Since 2005, the area has experienced an influx of displaced persons either returning to or resettling in the area. No accurate population estimates exist for Juba before and during the war, but early census estimates indicate that the population of Juba Municipality is now more than 150,000 people. [4] Although ANC sentinel surveillance is in the planning stages [5], no HIV surveillance or ad hoc surveys have yet to be carried out in Juba and the population prevalence is unknown.

Case reports from the Voluntary Counselling and Testing centre (VCT) in the local Juba Teaching Hospital indicate that 20% of the people they tested in 2006 were positive for the virus. In contrast, 6% or fewer of the clients at VCT sites in other cities of Central Equatoria were HIV positive.[6] While inherent biases from access to VCT sites and self-selection for testing render comparisons of HIV prevalence between these sites difficult, the high case detection in Juba indicates that there is the potential for a serious epidemic in the area.

Figure 3: Case reports from Voluntary Counseling and Testing sites in Central Equatoria State



Background on HIV Behavioural Surveillance Surveys

HIV sentinel surveillance, the traditional cornerstone of HIV monitoring efforts, becomes less sensitive as an epidemic matures. This is because HIV prevalence changes very slowly in response to behavioral changes in populations due to the chronic nature of HIV infection. Thus, HIV prevalence data cannot indicate whether prevention interventions are having their desired short-term effect of changing behaviours.

Repeated surveys on behavioural risks and vulnerability for HIV on the other hand, can capture trends in behavioral change which lead to reduction in HIV infection, e.g., reduced number of sexual partners and increased condom use among casual sexual partners. These changes may be related to the effects of any number of interventions put in place to reduce high-risk behaviors, or they may be a function of naturally occurring responses to the epidemic. Whichever may be the case, the type of information produced by these Behavioral Surveillance Surveys (BSS) can help guide intervention programs by giving program planners a clearer picture of current risk behaviors in various segments of the population. At the same time, these data may be used to give an indication of how well the combined effects of a package of interventions are working.

Objectives of the survey

In an effort to better understand and respond to the behaviours driving HIV transmission in Juba, UNHCR and partners implemented a BSS in Juba Municipality with the following objectives:

Objective 1: Establish baseline behavioral data among the population of Juba Municipality, Central Equatoria State

Objective 2: Provide data to allow for analysis of behavioral risks in ANC catchement areas where HIV sentinel surveillance will later be undertaken

Objective 3: Provide data to allow for comparison of behavioral risks among returned refugees and IDPs and populations that were not displaced

Objective 4: Measure trends over time.

Objective 5: Provide data for use by program managers and policy makers.

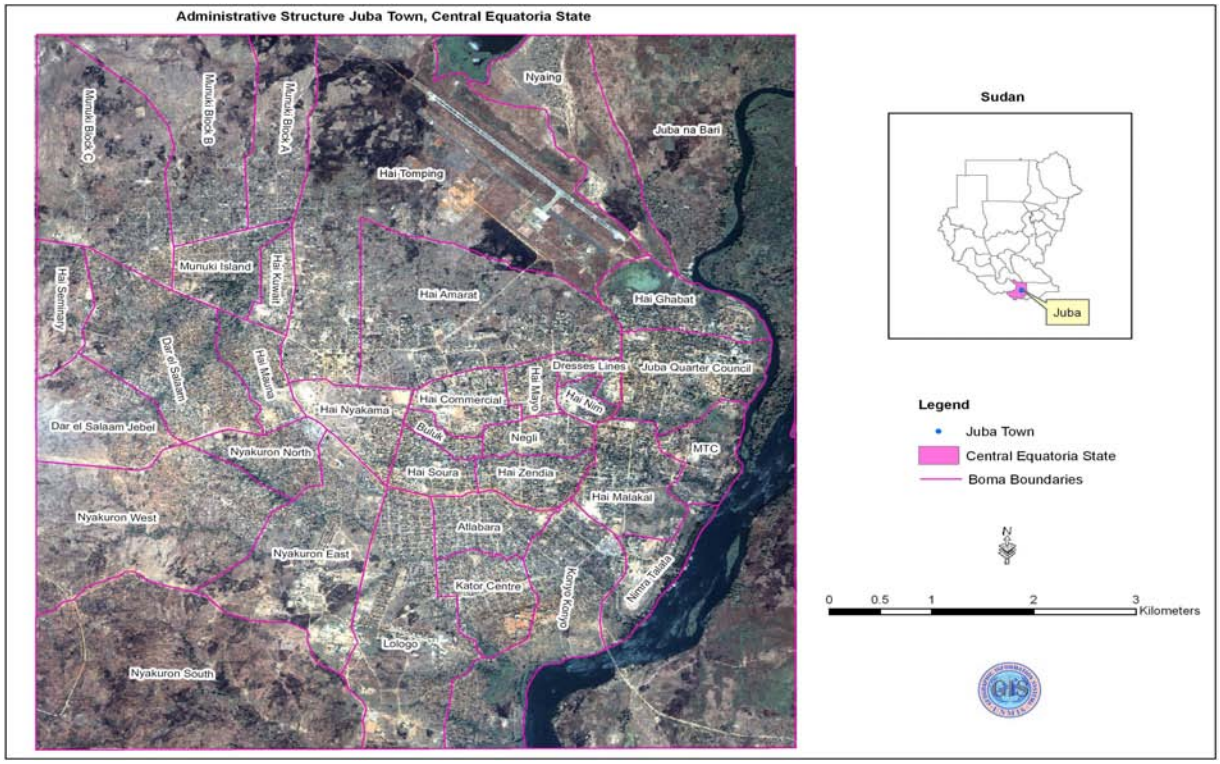
Objective 6: Provide data to allow for comparison of indicators across other areas of the country and region.

Survey coverage area and populations

Juba County is in Central Equatoria State and had an estimated population of more than 300,000 people in 2006 according to pre-census estimates conducted by the SSCCES. Juba Municipality serves as the capital of South Sudan, with approximately half of the county's population is living within its administrative boundaries.

The BSS covered the three payams[1] of Juba Municipality: Juba Town, Kator, and Manuki. The survey initially attempted to cover the entire population of Juba County but was unable to do so because of security and logistical impediments. All men and women between the ages of 15 and 49 living in Juba Municipality were eligible for the survey. More detail on how participants were chosen is provided in the methods section of this report.

Figure 4: BSS coverage area



[1] Payams are administrative areas smaller then a county that encompass multiple bomas

Methods

Survey design

The BSS in Juba was designed by a team of epidemiologists and public health professionals from UNHCR, the Ministry of Health, Government of South Sudan, the Southern Sudan AIDS Commission and the Southern Sudan Commission for Census, Statistics and Evaluation. It is a cross-sectional general population survey implemented according to globally recognized methods for research of this nature. The protocol and survey tools were reviewed and approved by the ethical review board under the auspices of the Ministry of Health, Government of South Sudan.

The survey questionnaire and informed consent were adapted for the South Sudanese context from a standardized tool designed by UNHCR to measure HIV risk-behaviors and vulnerability among populations affected by conflict. Information collected by the survey instrument included the following:

- Socio-demographic characteristics
- Mobility and displacement
- Alcohol and drug use
- Circumcision
- Military activity
- Marital history
- Sexual activity
- Forced sex
- Access to and use of male and female condoms
- History of sexually transmitted infections (STIs) and health-seeking behaviour
- Knowledge, attitudes and opinions about HIV/AIDS
- Exposure and access to interventions including VCT
- ANC utilization

The questionnaire and informed consent were translated from English into Juba Arabic and Bari by a team of skilled translators with a health background and pre-tested. They were then back-translated by a second team of translators and finalized. The questionnaire took approximately 30-45 minutes to administer. All participants comfortably spoke one of the three languages of the survey, and no significant problems or irregularities with the translated questionnaires were encountered during data collection. The English version of the questionnaire used in the survey is provided in Appendix 3 of this report.

Sample size and sampling methodology

The sample size was determined using a two-stage sampling formula to measure change of at least 10% between a baseline of 50% and the final surveys, with a precision level of 0.05 and a power of 0.20. A design effect of 2 was applied to accommodate the use of cluster sampling. The formula and other details are given in Appendix 2 of this report.

The indicators used to calculate the sample size are the following:

Indicator 1: Had multiple sex partners in the past 12 months
Indicator 2: Correct and comprehensive knowledge about HIV/AIDS
Indicator 3: Accepting attitudes towards PLWH/A
Indicator 4: Had HIV test in past 12 months

The overall sample size with 20% non-response was 761. A high non-response rate was built in because of the mobility of the population and not because a large number of refusals were anticipated. The sample size was inflated to 900 to ensure that a significant enough number of returned refugees and IDPs would be captured by the survey to allow for analysis by displacement status. With an actual non-response rate of 12%, the final sample size of the survey was 809 persons.

Table 1: Sample size, Juba BSS 2006

Desired sample size* to measure indicators with no non-response	609
Desired sample size assuming 20% non-response	761
Sample size inflation to allow for analysis by displacement status	900
Total number of eligible persons recruited	921
Non-response rate	12%
Total sample size of survey	**809**

* Assumptions: Design effect = 2, 10% change in indicators over time from baseline of 50%

Household sampling was conducted using probability proportionate to size (PPS), resulting in self-weighted samples and thus obviating the need for sampling weights. The survey utilized two-stage cluster sampling. The first stage was bomas (smaller administrative districts within the payams). Population data for this stage was provided

by the Southern Sudan Commission for Census, Statistics and Evaluation from their preliminary census estimates of October 2006.

The second stage involved household selection of 11 households per cluster (with a total of 30 clusters) using a modified EPI methodology. Team supervisors worked with the boma leader to identify the boundaries and geographically most central area of the boma. A random starting direction was then selected. Survey teams enumerated all households along this line until the boundary of the boma was reached. A randomly selected number between one and the total number of households in that direction was selected, which served as the first household in the sample. The interviewers then moved past the next closest and second closest households to the first (determined by proximity of cooking pots), and interviewed the third household. Interviewers repeated this process until all 11 houses in the cluster had been selected.

The average household size was 7.2 persons and the average number of eligible people aged 15-49 per household was 3.1. All males and females aged 15 to 49 years old living in the household for at least two weeks and sharing meals were eligible for participation, and interviewers recruited all eligible member in the selected household. Abandoned and absent households were not replaced.

Team recruitment and training

Interviewers, supervisors and data entry clerks were recruited from the local population and through the survey partners. All team members underwent a resume review and a written selection process. Final candidates were selected after they had successfully completed the training with twenty interviewers, four team supervisors and three data entry clerks chosen from a pool of more than 80 people. All team members were required to understand and sign a code of conduct prior to their employment. Teams were composed of five interviewers and each team had one supervisor. Half of the interviewers selected were women and half men.

The survey teams were trained for five days in interviewing techniques, household and participant recruitment, administering informed consent, survey ethics, the survey process, attitudes towards HIV, data editing, management skills and quality control mechanisms. Three days were dedicating to practicing recruitment and interviewing including one day of field practice in a boma not selected in the sampling frame.

Data collection

Prior to the start of data collection, survey partners met with administrative and health officials in the survey areas to gain their agreement on and assistance in implementing the work. In the days preceding the work in specific bomas, a central supervisor would meet with the boma leader to apprise him of the upcoming data collection in his jurisdiction. The central supervisors then worked with the boma leader to sensitize the communities

on the upcoming survey. All supervisors carried official introduction letters and wore identifying name badges.

Data collection took place over 15 days between November and December 2006. Four teams worked concurrently with one supervisor per team who was responsible for communicating with the boma leader, managing fieldwork implementation, selecting an recruiting households, supervising team progress, and editing all questionnaires prior to leaving the field. Two central survey managers oversaw all of the teams on a daily basis, managed sampling, and reviewed and edited all questionnaires. Team supervisors met with the survey managers at the end of each day for a debriefing on that day's achievements and a review of the following day's work. All team members including interviewers participated in a progress review and feedback session every morning of data collection.

Any person or household that was absent received two subsequent visits either at pre-scheduled times or during the evening or weekends. Among those eligible for the survey, 1.3% refused to participate, 3.0% were short-term absences, and 7.8% were long-term absences. Men comprised 68% of the non-responses. The non-responses had a mean age of 30.3 years, while participants had a mean age of 27.6 years.

Table 2: Characteristics of non-responses, Juba BSS 2006

Result of recruitment	Number	Percent
Agreed to participate	809	87.8%
Refused to participate	12	1.3%
Short term absence	28	3.0%
Long-term absence	72	7.8%
Total	921	100%

Data entry, management and analysis

Questionnaires were entered on a daily basis using CSPro 3.2. All questionnaires were double entered and validated, and a data management supervisor oversaw the data clerks. Data analysis was done using STATA 9.0, adjusting for survey design effect. F-tests of significance were used to test for differences between groups for categorical variables, and T-tests were used for continuous variables.

Limitations

At the start of the survey, areas of Juba County came under attack from armed groups. Concerns over security limited the places in which the survey team could work, and lack of infrastructure and reliable transportation precluded sampling other areas. Ultimately, the survey was conducted only in the municipal payams of the county. Therefore, survey results can not be generalized to persons residing in more rural sectors of the county.

Among the participants, 57% were women and 43% were men. While there was a higher non-response rate among men then women (men were 58% of the non-responses), mainly due to short- and long-term absences, the non-response rate is not what accounts for this discrepancy in the sex distribution. Instead, the higher proportion of women in the survey is due in large part to their over-represented in the community itself. However, the interpretation of the combined results of men and women must be done carefully because the responses of female participants will more heavily weight the findings. All analysis has been disaggregated to provide a clearer picture of sexual behavior dynamics in Juba.

The survey achieved a higher then expected sample size. However, it was not powered to test differences in rare events in the population.

Results

Characteristics of respondents

Among the participants, 57% were women and 43% were men, indicating that women comprise more then half the population of Juba Municipality. Among the male and female survey respondents, 42% were between the ages of 15 and 24 years, the age group at highest risk for HIV transmission. The mean age was 27.6 years.

A majority of the people surveyed were from a Bari-speaking tribe, 15% were Muru, 7% Madi, and other tribes representing 5% or less of the population. One-half of the participants were Catholic, 37% Protestant and 7% Muslim. Other religions reported were Pentecostal, Jehovah's Witness, Evangelical and Pagan (2% or less). More men then women reported that they were Catholic, while the opposite was true for those reporting they were Protestant.

Of all residents of Juba Municipality, one-third had never attended school or did not complete primary education. One-third had completed primary education, and the same proportion had completed secondary education. Men were twice as likely as women to have completed secondary education, and women were four times as likely as men to have received no education at all ($p<.01$).

Table 3: Demographic characteristics, Juba BSS 2006

Characteristics	Male		Female		Total	
	n	%	n	%	n	%
Age (years)	N=351		N=458		N=809	
15-19	77	21.9	99	21.6	176	21.8
20-24	63	18.0	100	21.8	163	20.2
25-49	211	60.1	257	56.1	468	57.9
Tribe	N=350		N=457		N=807	
Bari-speaking	197	56.3	250	54.7	447	55.4
Achioli	13	3.7	23	5	36	4.5
Muru	47	13.4	74	16.2	121	15
Madi	20	5.7	33	7.2	53	6.6
Didinga	1	0.3	2	0.4	3	0.4
Avukia	2	0.6	2	0.4	4	0.5
Dinka	12	3.4	13	2.8	25	3.1
Lotuko	10	2.9	10	2.2	20	2.5
Langо	2	0.6	2	0.4	4	0.5
Baka	4	1.1	5	1.1	9	1.1
Other	42	12.0	43	9.4	85	10.5
Religion	N=350		N=457		N=807	
Catholic	197	56.3	213	46.6	410	50.1
Protestant	109	31.1	192	42.0	301	37.3
Moslem	29	8.3	24	5.3	53	6.6
Other[1]	15	4.3	28	6.1	43	5.3
Highest level of education completed	N=351		N=458		N=809	
No schooling	24	6.8	108	23.6	132	16.3
Did not complete primary	31	8.8	82	17.9	113	14.0
Primary	100	28.5	146	31.9	246	30.4
Secondary	156	44.4	99	21.6	255	31.5
Post-secondary	40	11.4	23	5.0	63	7.8
Employment	N=351		N=458		N=809	
Employed in job	165	47	120	26.2	285	35.2

[1] Other religion includes Jehovah's Witness, Seventh Day Adventist, Pentacostal, Evangelist, Pagan, and not specified (2% or less of population)

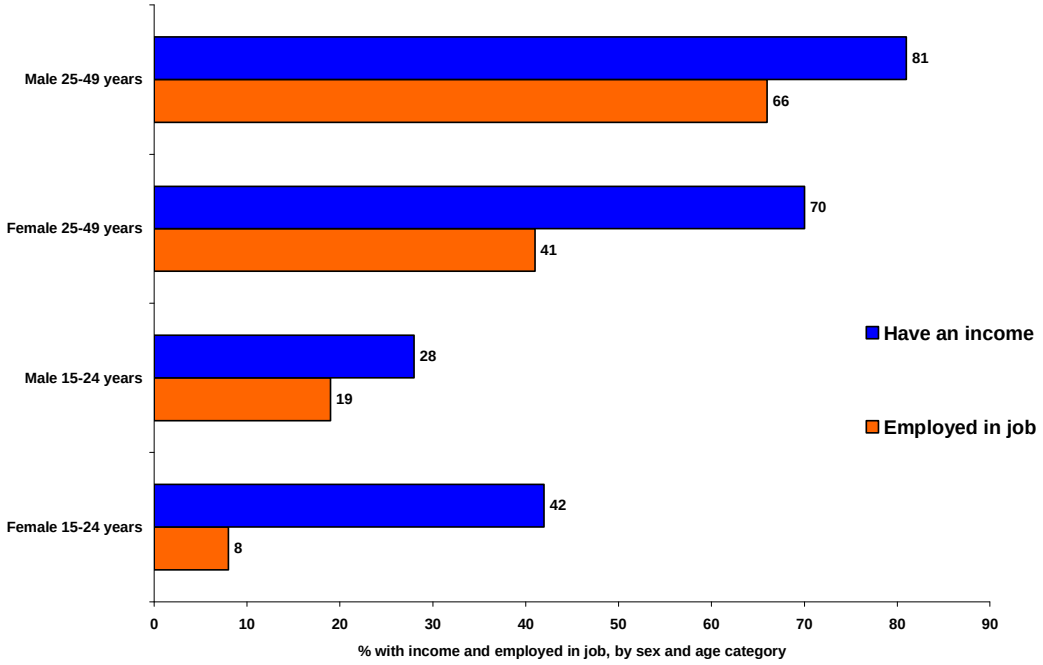
A majority of the men and two thirds of the women were able to read one of the main languages of Juba County which include Juba Arabic, Bari and English. Juba Arabic and English were the most commonly read languages in the area, however there was no single language that all literate participants were able to read.

Table 4: Ability to read, Juba BSS 2006

Languages read	Male		Female		Total	
	n	%	n	%	n	%
Juba Arabic	N=350		N=457		N=807	
Read easily	194	55.4	49	14.0	344	42.6
Read with difficulty	150	32.8	55	12.0	104	12.9
Bari	N=350		N=457		N=807	
Read easily	100	31.4	62	17.7	173	21.4
Read with difficulty	63	13.8	41	9.0	103	12.8
English	N=351		N=458		N=809	
Read easily	225	64.1	39	11.1	363	44.8
Read with difficulty	138	30.1	67	14.6	106	13.1
Any of the three languages	N=351		N=458		N=809	
Read any language	323	92.0	299	65.3	622	76.9

Almost half of the men and one-quarter of the women indicated that they had regular employment. A majority of men and women aged 25 years or older earned an income in some capacity, though it was more common for men to be employed in a job then women. Younger women were more far likely then their male counterparts to work, though few of them were earning money in a regular, employed position. The most common income sectors reported were in public services or through business.

Figure 5: Income and employment among men and women by age group, Juba BSS 2006



One-half of the men in the survey reported that they had never been married, and 22% of the women said the same. Among women, 50% were married and living with their spouse and 16% reported that while they were married, they did not currently reside with their spouse (this does not include couples that have separated). Among men, 40% were married and living with their spouse and 7% were married but not living with their spouse. 21% of male and 32% of female returned refugees were married but not currently living with their spouse.

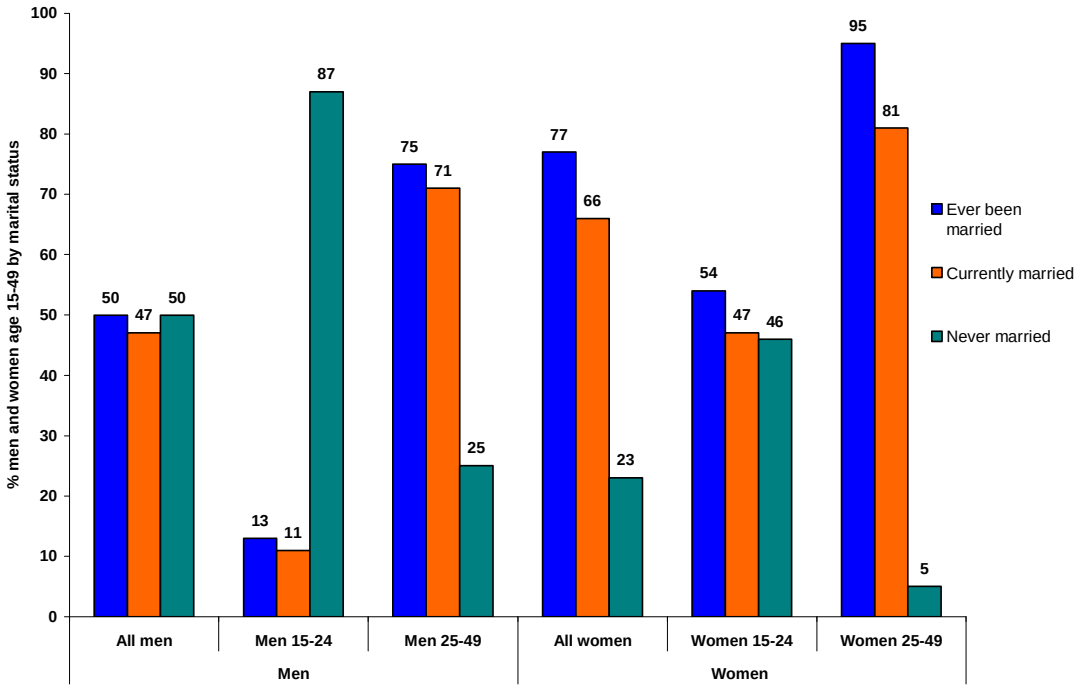
One third of the female population that had ever been married had been separated, widowed or divorced. Co-marriages were common among women (29%) and men (18%). Few people reported that they had inherited or been inherited by a family member.

Among women under the age of 25 years, 36% more were married than men in the same age group. Men married at an average age of 25 and women at 20. The mean age of the married men was 34, and the mean age of their oldest wife was 28. The mean age of the married women was 29 and the mean age of their husbands was 38. Women in the survey were an average of 6-9 years younger then their husbands.

Table 5: Marital history, Juba BSS 2006

Marital history	Male		Female		Total	
	n	% / mean	n	% / mean	n	% / mean
Current marital status	N=348		N=455		N=803	
Never married	175	50.3	104	22.9	279	34.7
Currently married and living with spouse	139	40.0	229	50.3	368	45.8
Currently married and not living with spouse	25	7.2	74	16.3	99	12.3
Divorced	4	1.1	7	1.5	11	1.4
Separated	3	0.9	17	3.7	20	2.5
Widow/widower	2	0.6	24	5.3	26	3.2
Co-marriage	N=176		N=354		N=530	
Currently in a co-marriage (among those ever married)	30	17.5	104	29.4	134	25.3
Spouse inheritance	N=349		N=457		N=809	
Has been inherited/has inherited spouse	3	0.9	8	1.8	11	1.4
Age first marriage	N=175		N=352		N=527	
Mean age when first married (among those ever married)		24.7		20.1		21.7

Figure 6: Marital history of men and women by age category, Juba BSS 2006



Alcohol and drug use

There was very little reported alcohol consumption among most sub-groups in the community. Few women ever drank alcohol as did only one-quarter of men, though most of the men that did consume alcohol reported that they did so on a weekly basis. Men aged 25 and older were far more likely to report drinking alcohol every week (21%) then the younger men (9%) ($p<.05$). Participants who had never been displaced were more likely to report drinking alcohol every week (31%) then those who had been displaced (16%) ($p<.05$).

Only 2% of men and no women said they used a recreational drug (not one medically prescribed) in the past year, with marijuana being the drug most commonly used. Only one participant reporting injecting a recreational drug in the past year

Table 6: Alcohol and drug use, Juba BSS 2006

Alcohol and drug use	Male		Female		Total	
	n	%	n	%	n	%
Alcohol consumption in past 4 weeks	N=350		N=457		N=807	
Everyday	24	6.9	7	1.5	31	3.8
At least once a week	56	16.0	19	4.2	75	9.3
At least once a month	10	2.9	9	2.0	19	2.4
Never	260	74.3	422	92.3	682	84.5
Used recreational drugs in past 12 months	N=350		N=458		N=808	
Used drugs	7	2.0	0	0	7	0.9

Military service

One-fifth of men and 3% of women had served at some time in the military, and two-thirds of them were still in the military. Men over 25 years and older were 23% more likely to have been in the military than younger men ($p<.01$).

Mobility and displacement

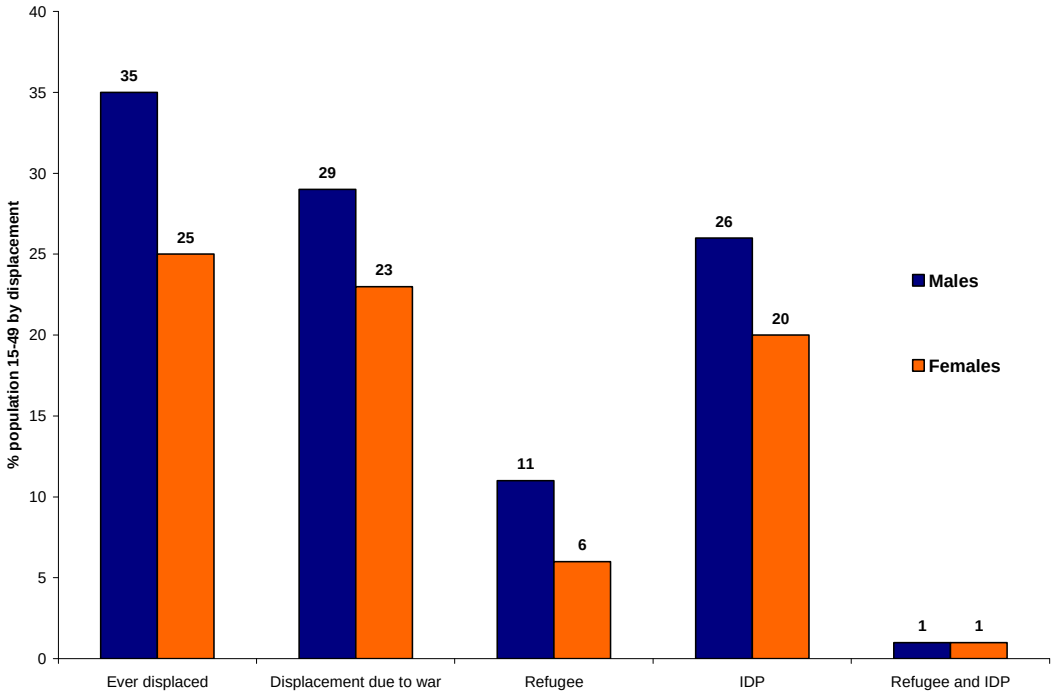
All but one participant in the survey was originally from Sudan[2]. Almost half (47%) of respondents in Juba Municipality reported that they were not now living in their home communities (with similar results for sexes and age categories). Central Equatoria was the home state of 68% of respondent (among whom 20% were not from originally from Juba), and 15% cited Western Equatoria and12% Eastern Equatoria as their home states. While almost half of respondents were not originally from Juba Municipality, a majority of them (83%) had been living there for a minimum of 5 years.

Long-term travel away from home was common in the population, with 17% of both younger and older men and women reported traveling away from their current communities for one month or more in the past year. Men most commonly reported traveling for school (25%) and employment (22%), while women traveled most often for family-related reasons (41%).

One quarter of the population had been displaced due to the war, with displacement being more prevalent among men then women. A majority of those forced from them homes were internally displaced in another area of Sudan, and 11% of men and 6% of women in Juba Municipality were returned refugees.

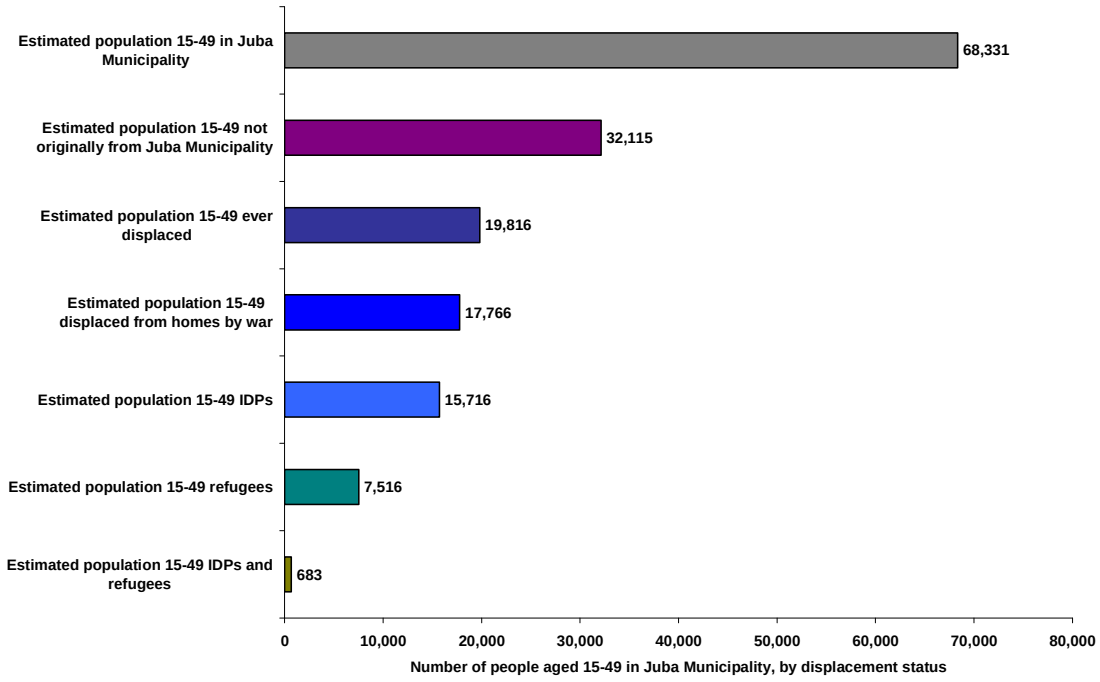
[2] Sudanese nationality was not an eligibility criteria for participation in the survey

Figure 7: Population displacement by sex, Juba BSS 2006



More than 30,000 people between the ages of 15 and 49 years old residing in Juba Municipality were not living in their home communities, and an estimated 20,000 had been displaced from their homes, a majority due to the war. Approximately 16,000 people living in Juba had been internally displaced, 7,500 had been refugees, and almost 700 had been both refugees and internally displaced persons (IDPs).

Figure 8: Estimated population of people in Juba Municipality aged 15-49 years old by displacement status, Juba BSS 2006



At the time of the survey, IDPs reported a mean of 13 years from when they were displaced from their homes (displacement beginning in 1993). Among them, 87% had been displaced elsewhere in Central Equatoria, 11% in Khartoum, 6% in Eastern Equatoria, 3% in Western Equatoria, and 1% or less in Jonglei, White Nile, South Kordofan and West Kordofan states. A majority of IDPs (92%) had not yet returned to their home communities.

Like IDPs, participants who had been refugees also reported a mean of 13 years from when they were displaced from their homes (displacement beginning in 1993). Men became refugees an average of 15 years previously, while women reported leaving Sudan 10 years ago. 67% of refugees were displaced to Uganda (mean time=13 years), 19% to Kenya (mean time = 11 years), 16% to DRC (mean time= 11years), 8% to Ethiopia (mean time = 11 years), and 3% to another country.

Among refugees, 71% had returned to Sudan in the last year, with 39% returning only in the last 5 months. While they had repatriated to their home country, 69% of refugees reported that they still had not returned to their home communities within Sudan.

Co-factors for HIV transmission: Male circumcision and sexually transmitted infections

Three recent randomized control trials have found the male circumcision reduces their risk of acquiring HIV up to 60%. [7-9] In Juba Municipality, 44% of men had been circumcised, among whom 90% of Moslem men and 39% of non-Moslem men were circumcised. While no association has been found between female circumcision and HIV transmission, women were also asked whether they had been circumcised, and 3% reported that they had. One-half of Moslem women were circumcised and less than 1% of the non-Moslem women. There was no significant difference in the prevalence of male or female circumcision in different age groups. The mean age of circumcision was 10 years old among men and 9 years old among women.

Sexually transmitted infections (STIs) can increase the risk for HIV, particularly when a genital ulcer or sore or genital sore is present. [10] A majority of women and women (90%) had heard of diseases transmitted through sexual intercourse. Women were more likely than men to have a symptom of a sexually transmitted infection in the past 12 months, with 8% of women and 2% of men reporting any symptom. While unusual vaginal discharge can be a non-specific STI symptom, genital ulcers and sores are less ambiguous markers of an STI. Women between the ages of 25 and 49 had the highest reported symptoms, with 9% having a genital ulcer or sore in the past year, and 12% having any STI symptom.

Among those people experiencing an STI symptom in the past year, 80% sought treatment. A majority of the people seeking treatment went to a public health center as their first recourse, and 80% of women and 20% of men with an STI symptom informed all of their sex partners.

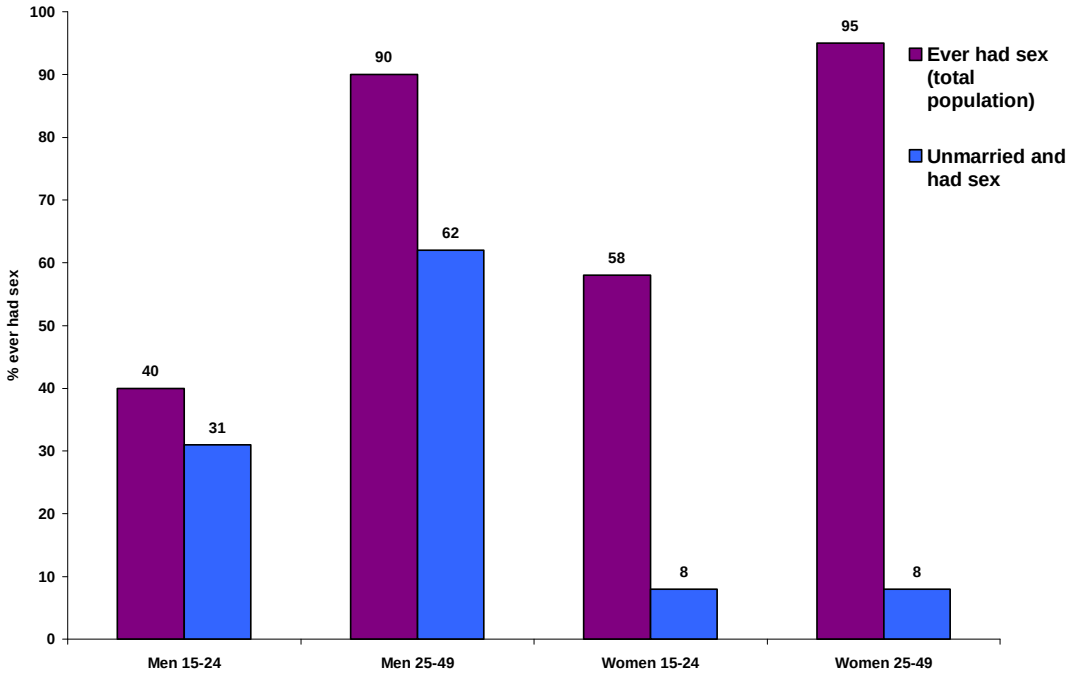
Table 7: Reported STI symptoms in the past 12 months by sex and age category, Juba BSS 2006

STI symptom in past 12 months	Male		Female		Total	
	n	%	n	%	n	%
Unusual genital discharge	N=351		N=458		N=809	
15-24 years old	2	1.4	4	2.0	6	1.8
25-49 years old	3	1.4	26	10.1	29	6.2
All	5	1.4	30	6.6	35	4.3
Genital ulcer or sore	N=351		N=457		N=808	
15-24 years old	1	0.7	3	1.5	4	1.2
25-49 years old	4	1.9	24	9.3	28	6.0
All	5	1.4	27	5.9	32	4.0
Any STI symptom	N=351		N=458		N=809	
15-24 years old	2	1.4	5	2.5	7	2.1
25-49 years old	4	1.9	31	12.1	35	7.5
All	6	1.7	36	7.9	42	5.2

Sexual behaviour

The median age at first sex was three years higher among men (20.5 years) then women (17.8 years). Less than 10% of all women surveyed reported having sex outside of marriage. However, 31% of never married men under the age of 25 and 62% of never married men 25 years and older reported having sex.

Figure 9: Sexual activity among men and women by age category and marital status, Juba BSS 2006



In this survey a regular sex partner was defined as a spouse or live-in sex partner. More than 90% of currently married couples had sex with their spouse in the past year. The last time they had sex with their spouse, 5% of men and 1% of women reported using a condom. Among men and women who had been refugees, 31% and 5%, respectively, reported using a condom the last time they had sex with their spouse.

A casual sex partner was defined in this survey as a person with whom the respondent had sex but was not married to or co-habitating with and whom the respondent did not give money, a gift or a favour in return for sex. Sex with a casual sex partner in the past year was reported by 12% of men and 2% of women. Among men and women with a casual sex partner, the mean number of casual partners in the past year was two.

No women reported using a condom with their casual sex partners. One-half of men used a condom the last time they had sex with a casual sex partner and less than one-quarter consistently used a condom every time they had sex with a casual partner in the past 12 months. Among men with a casual sex partner who used a condom, 68% suggested using the condom themselves, 21% said it was a joint decision, and 11% said that their partner suggested condom use. One-quarter of men with a casual partner in the past 12 months reported drinking alcohol before having sex with that person.

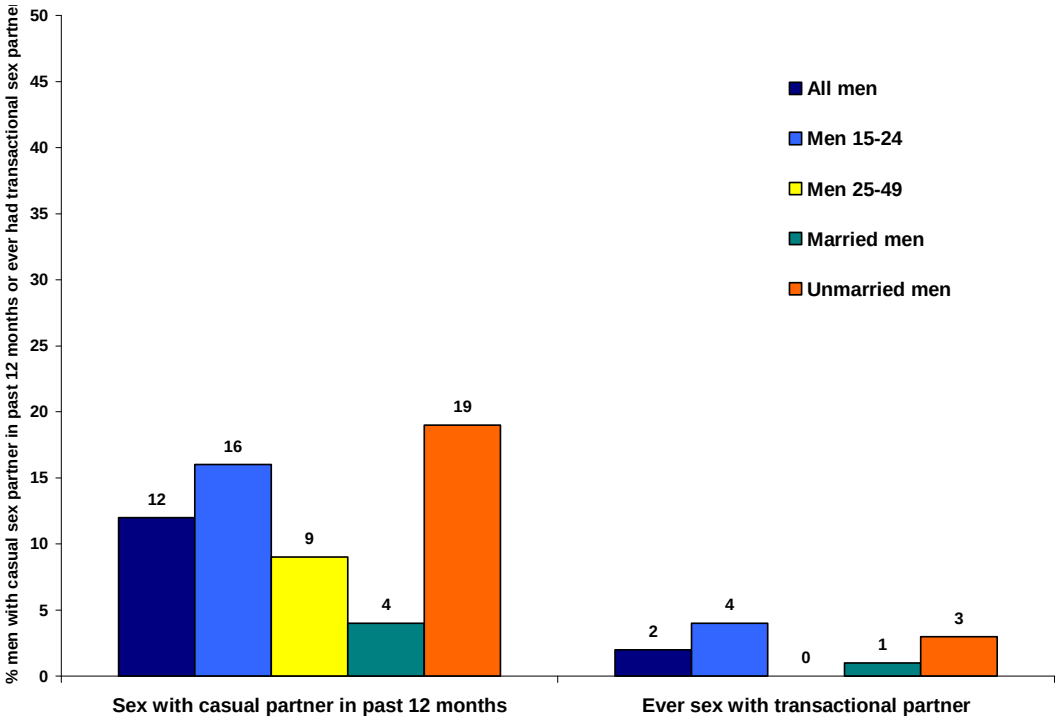
Transactional sex partners were defined for this study as partners with whom money, gift or a favour was exchanged for sex. Less than 1% of women and 2% of men reported ever having a transactional sex partner, and none had ever used a condom with a transactional partner.

Table 8: Sexual partners and condom use among men and women by age category, Juba BSS 2006

Sex partners and condom use	Male		Female		Total	
	n/N	%	n/N	%	n/N	%
Casual sex partners						
Sex with casual partner in past 12 months						
15-24 years old	23/140	16.4	5/199	2.5	28/339	8.3
25-49 years old	18/211	8.5	2/257	0.8	20/468	4.3
All	41/351	11.7	7/458	1.5	48/809	5.9
Condom use during last sex with casual partner						
15-24 years old	20/23	43.5	0/5	0	10/28	35.7
25-49 years old	9/18	50.0	0/2	0	9/20	45.0
All	19/41	46.3	0/7	0	19/48	39.6
Consistent condom use in past 12 months with all casual partners						
15-24 years old	7/22	31.8	0/5	0	7/27	25.8
25-49 years old	2/18	11.1	0/2	0	2/20	10.0
All	9/40	22.5	0/7	0	9/47	19.2
Transactional sex partners						
Ever had sex with transactional partner						
15-24 years old	6/140	4.3	1/199	0.5	7/339	2.1
25-49 years old	1/211	0.5	0/257	0	1/468	0.2
All	6/351	1.7	2/458	0.4	8/809	1.0
Sex with transactional partner in past 12 months						
15-24 years old	5/140	3.6	1/199	0.5	6/339	1.8
25-49 years old	0/211	0	0/257	0	0/468	0
All	5/351	1.4	1/100	0.2	6/809	0.7
Condom use during last sex with transactional partner						
All	0/5	0	0/1	0	0/6	0

Casual sex partners were most common among unmarried men (19%) and men under the age of 25 years (16%).

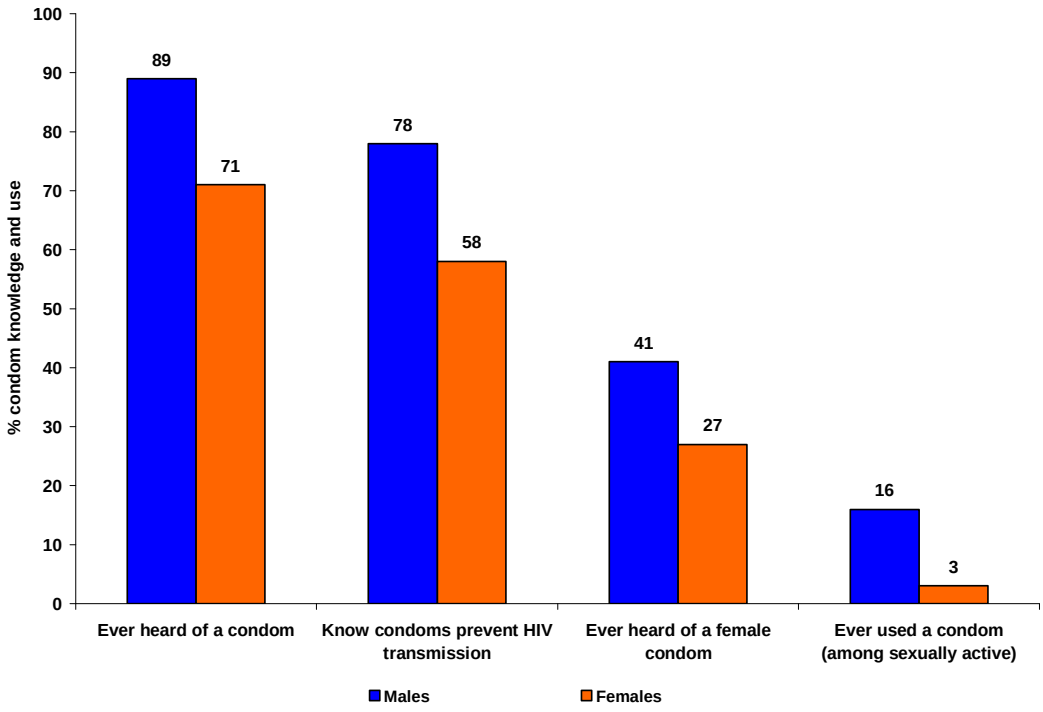
Figure 10: Sex with casual and transaction sex partners among currently married and unmarried men by age category, Juba BSS 2006



Condom knowledge and use

In Juba Municipality, 11% of men and 29% of women had *never* heard of a condom, and 59% of men and 73% of women had *never* heard of a female condom. Three-fourths of men and 58% of women were aware that the correct use of condoms reduces the risk for HIV transmission. Only 16% of men and 3% of women in Juba Municipality who were sexually active had ever used a condom.

Figure 11: Knowledge and use of male and female condoms, Juba BSS 2006



Forced sex

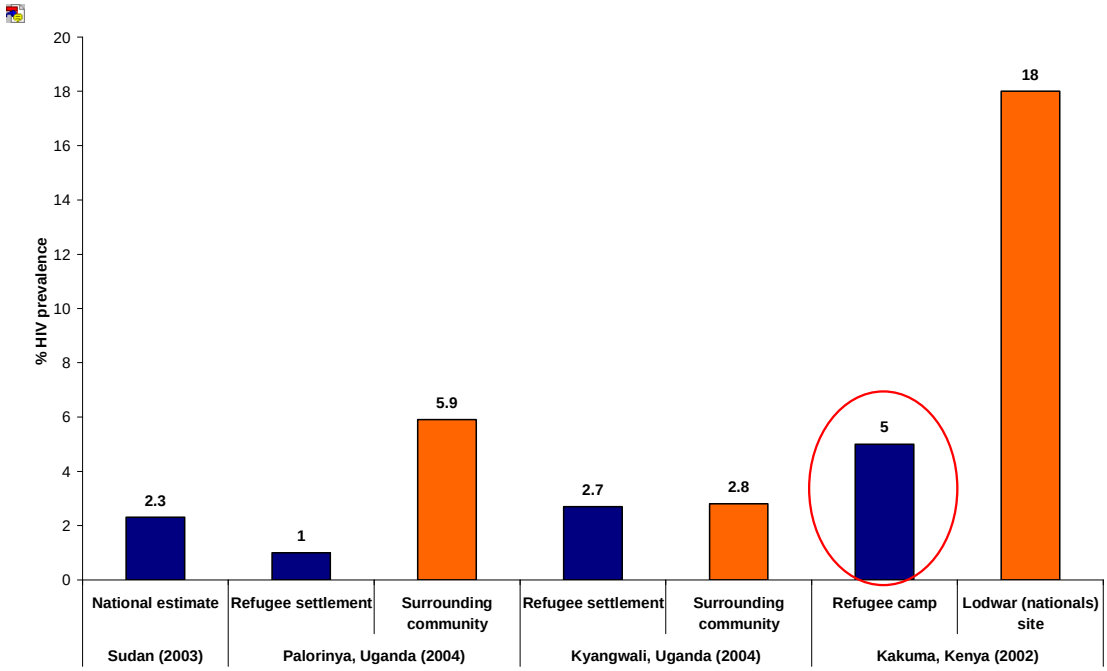
Of the respondents, 3% of women and no men said that they had ever been forced to have sex. None of the women in the survey who had been forced to have sex had ever been displaced.

HIV transmission risk due to forced displacement

There is often a widely held fear in populations experiencing societal change that "outsiders" may bring HIV into their communities. Since the peace agreement, a large number of refugees and IDPs have returned to South Sudan, and this has ignited worries that HIV could increase in the region particularly because many refugees are repatriating from countries with higher HIV prevalence.[11-14] In looking at the data, however, it is clear that returned refugees and IDPs do not pose the threat in Juba Municipality the some may believe.

HIV prevalence among refugees in Uganda (1% in Palorinya and 2.7% in Kyangwali) was similar to the national prevalence of Sudan. Only in Kyangwali, Uganda was HIV prevalence among refugees anywhere near that of the host national communities. In Kakuma, Kenya, HIV prevalence among refugees was 5% which was three times less than the prevalence in the local Kenyan community.

Figure 12: HIV prevalence among refugees and their surrounding communities in Uganda and Kenya, Juba BSS 2006



Sources: Sudan national estimate, UNAIDS
Refugee and community prevalence, UNHCR

There were an estimated 150,841 people residing in Juba Municipality at the time of the survey (SSCCES, October 2006), among whom 8% were returned refugees and 23% were IDPs. Applying even the highest HIV prevalence estimate of 5% to the number of refugees in the area, there would less than 400 returned refugees between the ages of 15

and 49 with HIV/AIDS in the area. This number makes up less than one-third of the estimated 1,500 PLWH/A living in the community.

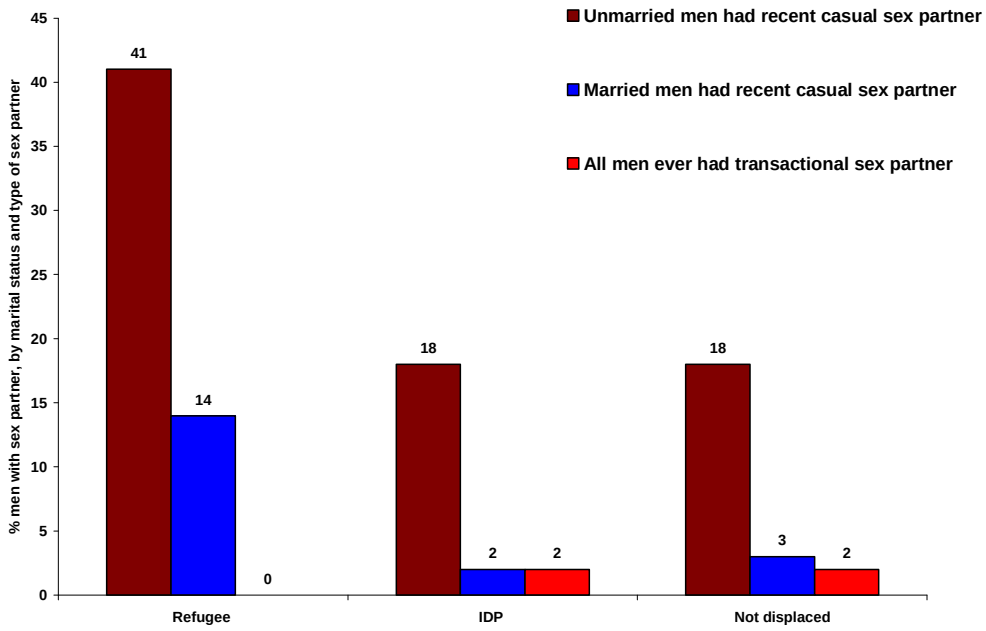
Table 9: Population estimates on the number of PLWH/A in Juba Municipality by displacement status, Juba BSS 2006

	Total population	**Refugees** (8% of population)	**IDPs** (23% of population)
Estimated population of Juba Municipality[1]	**150, 841**	**12,067**	**34,693**
Estimated population 15-49 years old	**68,331**	**7,516**	**15,716**
Estimated population 15-49 currently infected with HIV/AIDS[2]	**1,572**	**376**	**437**

[1] Based on pre-census estimates provided by the South Sudan Commission for Census, Statistics and Evaluation, November 2006 and assuming same age structure for refugees and IDPs
[2] Based on a national HIV prevalence estimate of 2.3% (UNAIDS 2003) for the total population and IDPs. Based on a high estimate of 5% HIV prevalence for refugees (multiple surveys, UNHCR) where the highest prevalence was found in Kakuma, Kenya. Refugee prevalence likely overestimated.

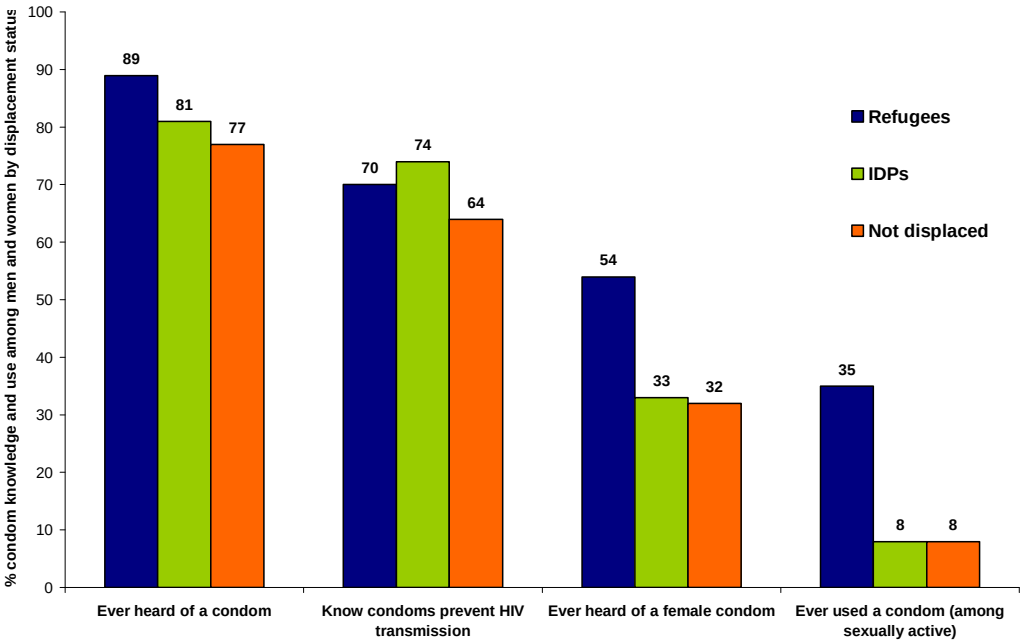
Married and unmarried men who had been refugees were twice as likely to have had a casual sex partner in the past 12 months ($p<.05$) than IDPs and men who had never been displaced. Few men regardless of displacement status reported ever engaging in transactional sex.

Figure 13: Casual sex in the past 12 months and transactional sex ever among men by martial and displacement status, Juba BSS 2006



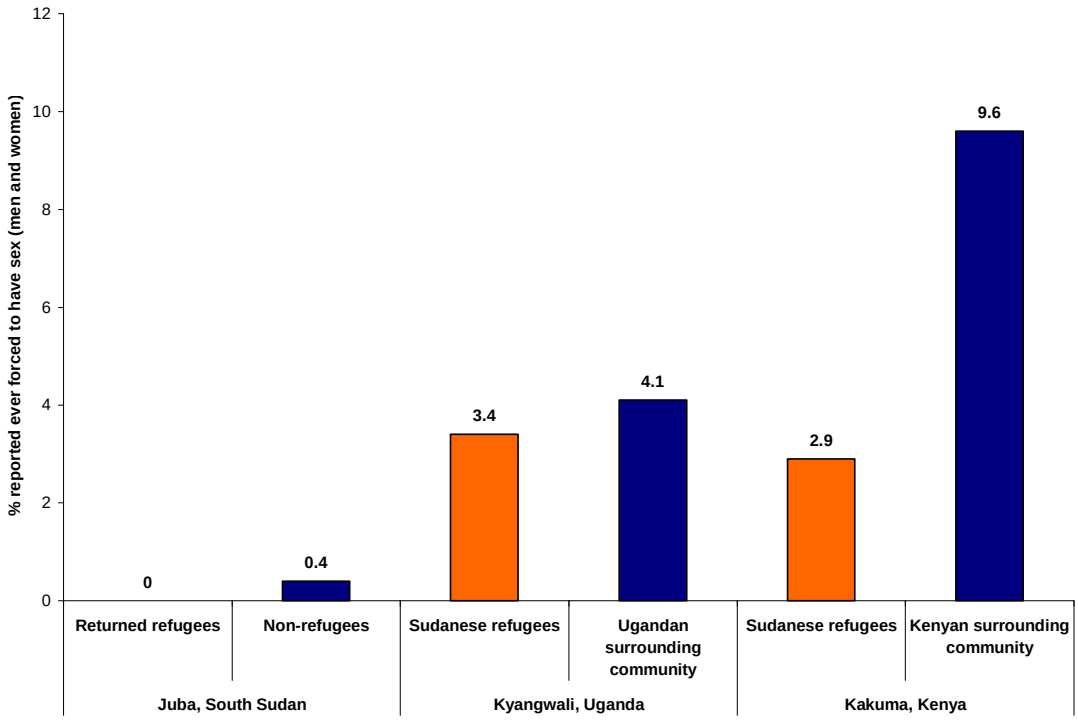
While casual sex among returned refugees was more prevalent than among non-refugees, so too was condom use among the same group. Only 8% of those people who had been IDPs or never been displaced and were sexually active had ever used a condom. In contrast, 35% of sexually active returned refugees had ever used a condom. Slightly more refugees than non-refugees had ever heard of a condom and 20% had heard of a female condom.

Figure 14: Condom knowledge and use by displacement status, Juba BSS 2006



Approximately 3% of Sudanese in two refugee camps in Kenya and Uganda reported they had been forced to have sex in their lifetime. In the community surrounding Kakuma camp in Kenya, the local population was far more likely to have been forced to have sex than the Sudanese refugees (10% Kenyan community versus 3% Sudanese).

Figure 15: Ever forced to have sex among refugees and non-refugees in Juba and refugees and their surrounding communities in Uganda and Kenya, Juba BSS 2006



It is unlikely that a refugee influx into Juba Municipality will spark a rapidly increasing HIV epidemic in the area. HIV transmission is already occurring in the whole population, regardless of displacement status, and there are likely three times more PLWH/A in Juba Municipality who have never been refugees than those who had. While returned refugees are more likely to have sex outside of marriage than Juba residents who had not been displaced outside of the country, they also had much higher condom use than people who had not been refugees. In addition, reported incidence of forced sex among refugees is not high enough to influence a population-level epidemic.

HIV knowledge, opinions and attitudes

A majority of all men and women in Juba Municipality (97%) had ever heard of HIV, however knowledge regarding ways HIV can be prevented varied. While 92% of people knew that staying faithful to one mutually monogamous and uninfected partner and 89% knew abstinence prevented HIV transmission, only 67% of respondents identified correct and consistent condom use as a method for reducing HIV transmission risk. Women were 20% less likely to know that condoms reduced their risk for HIV. Two-thirds of the people could name all three of the above HIV prevention methods.

It was commonly known that sharing needles was a risk for HIV transmission (90% of respondents). Of survey participants, 80% replied that HIV could be passed from mother to child during pregnancy and birth and 71% through breastfeeding. One-half of people in Juba Municipality knew that anal sex without a condom increase the risk of HIV transmission.

More than 80% rejected two common misconceptions in the region regarding HIV transmission: sharing food with an infected person and mosquito bites as ways that HIV could be passed to another person. Almost 90% of people knew that even if a person looked healthy, s/he could still be infected with the virus.

Table 10: Knowledge about HIV transmission and rejection of common misconceptions about HIV, Juba BSS 2006

Knowledge about HIV and its transmission and rejection of common misconceptions	Male		Female		Total	
	n	%	n	%	n	%
	N=351		N=458		N=809	
Has ever heard of HIV	339	96.6	444	96.9	783	96.8
Know HIV transmission can be prevented through*:						
Abstinence	320	91.2	397	86.7	717	88.6
Staying faithful to one mutually faithful, uninfected partner	321	91.5	421	91.9	742	91.7
Correct and consistent condom use	273	77.8	265	57.9	538	66.5
Know all three prevention methods	259	73.8	250	54.6	509	62.9
Know HIV can be transmitted in the following ways*:						
Anal sex without a condom	164	46.7	243	53.1	407	50.3
Sharing needles	333	94.9	424	92.6	757	93.6
Prenancy and delivery	293	83.5	357	78.0	650	80.4
Breastfeeding	241	68.7	331	72.3	572	70.7
Know HIV *cannot* be transmitted in the following ways:**	N=339		N=444		N=783	
Mosquito bites	278	82.0	354	79.7	632	80.7
Sharing food	303	89.4	397	89.4	700	89.4
Know healthy-looking person can have HIV	300	88.5	378	85.1	678	86.6

* Denominator = total population

** Denominator = those who have ever heard of HIV

Most people surveyed said that they would care for a family member who was sick with AIDS, though 35% would want it to remain a secret if they had an infected family member (43% of men and 29% of women). One-half to one-third of the population replied that a teacher with HIV should not continue teaching, they would not buy vegetables from a person who was infected, and adolescents should not be taught about condom use.

Table 11: Attitudes towards people who are infected with HIV and condom education, Juba BSS 2006

Attitudes towards people infected with HIV and condom education*	Male		Female		Total	
	n	%	n	%	n	%
	N=339		N=444		N=783	
If family member were infected with HIV, would want it to remain a secret	146	43.1	128	28. 8	274	35.0
Would care for a relative who was ill with AIDS	322	95.0	425	95.7	747	95.4
If teach had HIV, should be allowed to continue teaching	196	57 . 8	294	66.2	490	62.6
Would not by vegetables from someone with HIV	88	26.0	106	23.9	194	24.8
Do not think yound adolescents should be taught how to use condoms	88	26.0	147	33.2	235	30.1

* Denominator = those who have ever heard of HIV

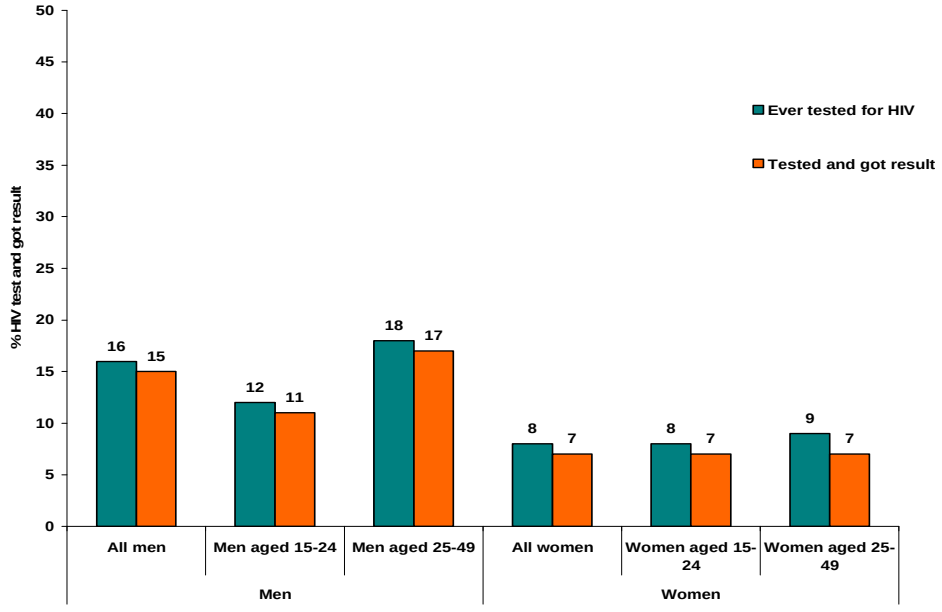
Voluntary testing and counseling

In Juba Municipality, 68% of men and 48% of women knew a location where they could be tested for HIV. Three-fourths of those people who knew of an HIV testing site named the hospital, and two thirds named the VCT center, though few knew of testing carried out at a PMTCT center.

Less than 10% of women surveyed had ever had an HIV test and knew their HIV status. 15% of all men had been tested for HIV in their lifetime and knew their result. Men between the ages of 15 and 49 were the group most likely to have had an HIV test. A majority of people who had been tested for HIV said the test was voluntary and was carried out in a hospital, and more than 80% of the people who were tested reported receiving counseling with their test.

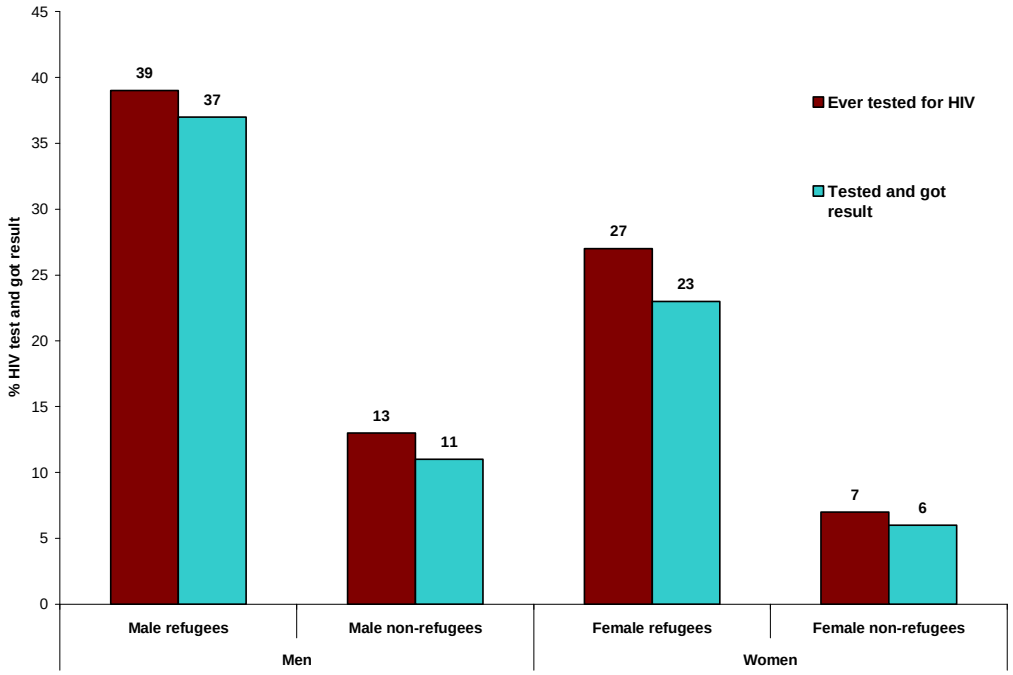
While only a small proportion of the population had ever been tested for HIV, approximately 80% of all respondents said they would be willing to have an HIV test in the future. Among those people who would not be willing to go for a test in the future, a majority said the reason was that they were sure they were not infected.

Figure 16: HIV testing among men and women by age categories, Juba BSS 2006



Male and female returned refugees were three times more likely to have had an HIV test and know their HIV status as people in Juba Municipality who had never been refugees. (p<.01)

Figure 17: HIV testing among men and women by history of displacement, Juba BSS 2006



p<.01

Exposure and access to interventions

Among the people surveyed, 82% received HIV information in the past 12 months, with little difference between ages and sexes. The radio followed by television and video was the most common - and the most preferred - source of HIV information for all ages and sexes. Men were more likely than women to access HIV information in written form, particularly from newspapers.

One-third of all women received HIV information from a health facility in the past 12 months, as did one-fifth of men. Health facilities were cited as preferred places to receive HIV information, while VCT and ANC/PMTCT were mentioned less frequently.

All men, and particularly those younger than 25, reported receiving information from a peer outreach worker more frequently than women. Men older than 25 were more likely to get information from a community health worker than were women, and community health workers were a preferred source of information, especially among men.

Men were more likely then women to receive HIV information from school, particularly men over the age of 25. One-third of all women received HIV information from their place of worship and cited it as their preferred source of HIV information. HIV interventions by NGOs were non-existent in Juba Municipality

Table 12: Received HIV information in the past 12 months, sources of HIV information, and preferred source of information, Juba BSS 2006

HIV information	N=351		N=458	
Received informaton on HIV/AIDS in past 12 months	289	82.3	376	82.1
Sources of and preferred sources for HIV information	**Received information from: %**	**Would prefer information from: %**	**Received information from: %**	**Would prefer information from: %**
Radio	72	88	79	90
Television/video	47	56	38	45
Newspaper	25	30	10	11
Poster/pamphlet	7	10	2	4
Health facility	21	29	34	34
VCT center	4	7	3	4
ANC/PMTCT	2	1	2	2
Community health worker	19	30	14	19
Friend	18	15	17	18
Family member	8	7	9	10
PLWHA	6	2	3	5
Peer outreach worker	7	8	2	5
School	17	17	12	11
Place of worship	17	17	29	33
Public meeting	8	5	4	5
Seminar	6	10	8	10
NGO	0	0	0	0

Conclusions and recommendations

Women comprised 57% of the population of Juba Municipality. They had less education, higher illiteracy, and fewer were engaged in formalized employment then men. Most women did not access HIV information through printed materials, and a large proportion stated their preference for receiving the HIV education was through a health facilities or their place of worship. **Female-focused interventions** are critical for HIV prevention interventions in Juba Municipality and must be designed considering the different methods and locations in which women access HIV information.

Though there is a high level of literacy among men in the area, there is not a common language read by the entire population, and one third of women cannot read at all. IEC/BCC materials should account for the fact that **no single language will reach all audiences**.

While a majority of people (82%) had received messages in the past year about HIV, most of their information was coming through mass media outlets (radio and television). **No NGO interventions** were identified as sources of HIV information and education, despite the fact that many NGOs in South Sudan are headquartered in Juba Municipality.

Most men under the age of 24 had never been married. Casual sex partners were most common among unmarried men (19%) and those under the age of 25 (16%), though a low proportion of men reported engaging in transactional sex. Few women reported a casual sex partner in the past year (2%), and only two women in the survey reported ever having exchanged sex for money. There is a high proportion fractured households where married couples are not living with their spouses, particularly among women. **Partner reduction initiatives** need to consider targeting messages towards both single and married persons, particularly young men, and what effect long-term separation between spouses may have. Alcohol consumption was common among men who had a casual sex partner, and these campaigns to should also address the role of alcohol in safe sex decision-making.

While overall knowledge about methods for reducing HIV transmission risk was high, 20% fewer people knew that condoms reduce HIV transmission than knew abstinence (89% and being faithful to mutually monogamous, uninfected partners (92%) prevented HIV. Condom use with casual sex partners was low, and less then 10% of the sexually active population in Juba Municipality had ever used a condom. There was also a large disparity between women and men in their knowledge about and use of condoms. There is a significant amount of work to be done on condom knowledge, promotion and access. **Condom promotion** must be rapidly stepped up in Juba Municipality, through both behaviour change education and increased access to services.

There continues to be **high population mobility and displacement** in Juba Municipality. A majority of IDPs (92%) and refugees (69%) had still not returned to their home communities, and half of the residents of Juba Municipality were not

originally from the area. Long-term travel away from home was common in the population, with 17% of both younger and older men and women reported traveling away from their current communities for one month or more in the past year. Interventions need to consider that a large proportion of their population is newly or temporarily settled in the community and may have less knowledge of or access to health care and other services. Targeting mobile groups with repeated interventions may prove challenging, and programmes should focus on fixed locations which a large sub-group of the community regularly access such as health facilities, places of worship, schools, and community venues.

Less than half of men in Juba are circumcised. While men who are circumcised have a lower risk of HIV transmission, **messages regarding circumcision** as preventative for HIV have to be carefully developed and potential interventions have to be considered within the local context. In-depth qualitative research on the appropriateness of such interventions is needed before moving this type of prevention strategy should be considered.

Symptoms of sexually transmitted infections, particularly of ulcerative STIs, are quite high (12%) among females over the age of 25. **STI interventions** should be integrated into comprehensive HIV programmes for both men and women. Because, for the most part, the population accesses health services to treat suspected STIs, services to prevent and treat STIs should initially be focused in public health facilities.

Of the respondents, 3% of women and no men said that they had ever been forced to have sex. None of the women in the survey who had been forced to have sex had ever been displaced. Despite these low figures, which are potentially underestimated, **reduction of sexual violence**, particularly against women, should be incorporated into comprehensive HIV programmes and more research is needed that measures the prevalence of sexual violence in the community and identifies strategies for addressing it.

Almost one-half of the men and one-third of the women would want it to remain a secret if a family member had HIV and one-third of all people felt an HIV positive teacher should not remain in their jobs. There is still a **high level of stigma against PLWH/A** in the community which requires sensitization campaigns and incorporating anti-stigmatization messages into interventions.

Only 15% of men and 7% of women in Juba Municipality had been tested for HIV and received their results. Male and female returned refugees were three times more likely to know their HIV status then people who had never been displaced outside of Sudan. Far more men then women knew where to access VCT, with most people identifying the local hospital as a VCT site. There does not appear to be stigmatization regarding HIV testing in Juba, and a majority of people surveyed said they would be willing to get tested. As HIV testing already appears to be acceptable in the area, **access to voluntary counseling and testing** in Juba Municipality needs to be increased considerably.

Juba will likely experience an increase in HIV prevalence if prevention is not stepped up significantly - **but not necessarily due to the returned refugees**. HIV already has a serious foothold in the area, with 20% of VCT clients in Juba testing positive for the virus in 2006. HIV transmission is occurring in the entire population, regardless of displacement status, and there are likely three times more PLWH/A in Juba Municipality who have never been refugees than those who had. While returned refugees were more likely to have sex outside of marriage than Juba residents who had not been displaced outside of the country, they also had much higher condom use than people who had not been refugees. In addition, reported incidence of forced sex among refugees is not high enough to influence a population-level epidemic.

National data is not adequate for understanding specific epidemic dynamics in different areas of the country. Therefore, **local HIV prevalence and behavioural data is crucial** for developing evidence-based policies and programmes. Systematic HIV surveillance in ANC clinics and later in the general population should be prioritized, and research on the prevalence of ulcerative STIs in the area would be valuable to designing effective prevention programmes.

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Appendix 1: Core indicators, Juba BSS 2006

	Indicator	Male			Female			Total		
		n	% LCI	% UCI	n	% LCI	% UCI	n	% LCI	% UCI
Sexual behavior										
1	Never-married young people aged 15-24 who have never had sex	84	68.9 58.3	77.8	84	92.3 86.7	95.7	168	78.9 72.3	84.3
2	Never-married young people aged 15-24 who have abstained from sexual intercourse for past 12 mos	100	82.0 72.4	88.7	86	94.5 89.3	97.2	186	87.3 81.8	91.4
3	Sex with a non-regular partner in past 12 mos among men and women aged 15-24[a]	23	16.4 10.2	25.3	5	2.5 1.1	5.5	28	8.3 5.6	12.0
4	Condom use at last sex with a non-regular partner among men and women aged 15-24	10	43.5 23.6	65.8	0	0.0		10	35.7 17.4	59.5
5	Sex with a transactional partner in past 12 mos among men and women aged 15-24[b]	5	3.6 1.3	9.9	1	0.5 0.7	3.7	6	1.8 0.6	4.8
6	Condom use at last sex with a transactional partner among men and women aged 15-24	0	0.0		0	0.0		0	0.0	
7	High risk sex in past 12 mos among men and women aged 15-24[c]	24	17.1 10.7	26.2	5	2.5 1.1	5.5	29	8.6 5.8	12.4
8	Condom use at last high risk sex among men and women aged 15-24	10	41.7 21.8	64.6	0	0.0		10	34.5 16.5	58.4
9	More than one sex partner in past 12 mos among men and women aged 15-49	10	2.8 1.6	4.9	3	0.7 0.2	2.0	13	1.6 0.9	2.7
HIV testing										
10	Had HIV test in past 12 mos and received results among men and women aged 15-49	24	6.8 4.1	11.1	13	2.8 1.6	5.0	37	4.6 3.1	6.7
STI health facility utilisation										
11	Had STI symptom in past 12 mos and sought treatment at health facility among men and women aged 15-49	3	75.0 17.6	97.8	23	79.3 63.8	89.3	26	78.8 64.1	88.5
Knowledge, attitudes and misconceptions										
12	Comprehensive correct knowledge of HIV/AIDS among men and women aged 15-24[d]	84	60.0 52.9	66.8	141	70.9 63.0	77.6	225	66.4 60.3	71.9
13	Accepting attitudes towards PLWH/A among men and women aged 15-49[e]	80	23.6 18.3	29.9	198	44.6 37.6	51.8	278	35.5 30.2	41.2
Displacement situations										
14	Percent of women aged 15-49 who were forced to have sex in past 12 mos				1	0.2 0.0	1.7			
15	Men and women aged 15-49 years who reside in current community for less than 12 mos	36	10.3 6.9	15.0	43	9.4 6.1	14.3	79	9.8 6.9	13.6
16	Away from home for four or more consecutive weeks in past 12 mos among men and women aged 15-49	59	16.9 12.0	23.2	80	17.5 14.2	21.4	139	17.3 13.8	21.4

Note: % - percent. LCI - Lower 95% confidence limit. UCI - Upper 95% confidence limit. Mos - months. STI - Sexually transmitted infections.

[a] A non-regular partner is defined as any sexual partner different from the one the respondent lives with or is married to and from whom the respondent does not receive or give money, gifts or favours.

[b] A transactional partner is defined as a sexual partner with whom the respondent exchanged sex for money, gifts or favours.

[c] High risk sex is defined as sex with a non-regular or transactional sex partner.

[d] Respondents have comprehensive and correct knowledge of HIV if they correctly identified two major ways of preventing HIV sexual transmission (using condoms and limiting sex to one faithful, uninfected partner) AND if they rejected two common misconceptions (mosquitoes transmit HIV, sharing food with an infected person transmits HIV) AND if they knew that a healthy-looking person can transmit HIV.

[e] Respondents have accepting attitudes if they reported to be willing to care for a family member sick with AIDS in their own household AND would buy vegetables from a shopkeeper with AIDS AND feel a teacher with HIV should be allowed to continue working AND do not feel that it should be kept a secret if a family member has HIV.

Appendix 2: Sample size calculation

$$n = D\frac{\left[\sqrt{2P(1-P)}Z_{1-\alpha} + \sqrt{P_1(1-P_1)+P_2(1-P_2)}Z_{1-\beta}\right]^2}{\Delta^2}$$

Where:

D = design effect;
P_1 = the estimated proportion at the time of the first survey;
P_2 = the proportion at some future date such that the quantity (P_2 - P_1) is the size of the magnitude of change it is desired to be able to detect;
$P = (P_1 + P_2) / 2$;
$\Delta^2 = (P_2 - P_1)^2$;
$Z_{1-\alpha}$ = the z-score corresponding to the probability with which it is desired to be able to conclude that an observed change of size (P_2 - P_1) would not have occurred by chance;
$Z_{1-\beta}$ = the z-score corresponding to the degree of confidence with which it is desired to be certain of detecting a change of size (P_2 - P_1) if one actually occurred; and
α =0.05 ($Z_{1-\alpha}$ = 1.65) β=0.20 ($Z_{1-\beta}$=0.84).

Appendix 3: Questionnaire

UNITED NATIONS HIGH COMMISSIONER FOR REFUGEES (UNHCR)

Questionnaire serial number |___|___|___|___|

Household serial number |___|___|___|___|

IDENTIFICATION	
COUNTRY	|___|
STATE	|___|
COUNTY	|___|
IDENTIFICATION NUMBER OF BOMA	|___|___|
CLUSTER NUMBER	|___|___|

NAME AND CODE OF INTERVIEWER

_____ |____|____|____|

CONTROL				
	CONTROL ON FIELD LEVEL	CONTROL IN CENTRAL OFFICE	DATA ENTRY CLERK 1	DATA ENTRY CLERK 2
NAME	----------|__|__|	----------|__|	----------|__|	----------|__|
DATE	----------	----------	----------	----------
REMARKS				

Date of interview: ***__/__/ day***
/__/__/month /__/__/__/__/year

Start of interview: __/__/ h

End of the interview: __/__/ h

HOUSEHOLD RECRUITMENT INFORMATION

If the household is present: Only one household information sheet to be completed for the head of household or his/her representative.
If the household is absent/abandoned: Only one household information sheet to be completed for household.

HEAD OF HOUSEHOLD

PARTICIPANT IS HEAD OF HOUSEHOLD OR REPRESENTATIVE OF HEAD OF HOUSEHOLD ……|___|

1 = Yes

2 = No

3 = No head of household or representative present

NUMBER OF PEOPLE IN HOUSEHOLD

Total number of people living in household ……|___|___|

Total number of eligible people aged 15-49 living in household ……|___|___|

RESULT OF HOUSEHOLD RECRUITMENT

RESULT OF HOUSEHOLD RECRUITMENT…… |___|

1 = Head of household agreed to household participation

2 = Head of household refused household participation

Reason for refusal ……

3 = Household not eligible

4 = Household temporarily absent

Date and time of first visit ……..

Date and time of second visit ……...

Date and time of third visit ……..

Reason for household's absence ……..

5 = Household abandoned

6 = Household on extended travel

7 = Other (specify) ……..

PARTICIPANT RECRUITMENT INFORMATION

To be completed for every eligible person in household including the head of household.

RELATIONSHIP TO HEAD OF HOUSEHOLD

PARTICIPANT'S RELATIONSHIP TO HEAD OF HOUSEHOLD ……..……|___|

1 = Head of household

2 = Spouse

3 = Son/Daughter

4 = Father/Mother

5 = Brother/Sister

6 = Other relative

7 = Living in household but not a relative

If participant is not recruited because refuses (3), is absent (4) or for other reason, record age and sex of non-participant:

Record sex of the respondent	1 = Male 2 = Female |___|
How old are you? **Record age in years**	Record number of years 99 = DON'T KNOW |___|___|

RESULT OF PARTICIPANT RECRUITMENT

RESULT OF PARTICIPANT RECRUITMENT…… |___|

1 = Agreed to participate and interview was completed

2 =Agreed to participate but interview was not completed

3 = Refused to participate

Reason for refusal ……

4 = Absent

Date and time of first visit ……

Date and time of second visit ……...

Date and time of third visit ……

Reason for participant's absence ……

5 = Other (specify) ……..

CONSENT FORM

Hello Sir/ Madam,
My name is ……I am an interviewer from the United Nations High Commissioner for Refugees, working in collaboration with the Ministry of Health, the South Sudan AIDS Commission, and the Southern Sudan Commission for Census Statistics and Evaluation. We are conducting a survey that looks into the behaviours of people in relation to HIV/AIDS in the community. This is important because it will assist us in providing better health services in order for your community to protect themselves from HIV transmission.

[Ask consent of the head of household: Your household has been randomly selected and we wish to have permission to interview eligible members of your household. May we proceed? ___Yes ___No]

You've been selected randomly and we wish, with your permission, to interview you.

Be assured that we want to learn from your experience and all the information we collect will be used to help us fight against AIDS in your community, country and region. Some of the questions asked, are of a sensitive nature, but please note that your name will not be recorded in the questionnaire, and any details related to your privacy will be kept confidential. It will not be used in relation to registration, food distribution or any other services.

Your participation in this survey is very important and we rely on you to provide us with accurate information that will help us to develop effective activities to fight HIV spread.

The interview will take approximately 30 minutes, but with your cooperation it can be done quickly.

May I have your permission to undertake this interview? Yes ☐ No ☐

If you do not want to participate, why……

Signature of the interviewer that a verbal consent was obtained:

SECTION I: BACKGROUND CHARACTERISTICS (37 questions)

N°	QUESTIONS	ANSWERS	SKIP
	A. SOCIO-DEMOGRAPHIC		
101.	**Record sex of the respondent**	1 = Male 2 = Female |___|	
102.	How old are you? **Record age in years**	Record number of years 99 = DON'T KNOW |___|___|	
103.	In which country were you born?	1 = Sudan 2 = Uganda 3 = Kenya 4 = Ethiopia 5 = Egypt 6 = Rwanda 7 = Somalia 8 = Congo (DRC) |___| 9 = Burundi 10 = Other (Specify) _____	
104.	What is your current nationality?	1 = Sudanese 2 = Ugandan 3 = Kenyan 4 = Ethiopian 5 = Egyptian 6 = Rwandan 7 = Somalian 8 = Congolese (DRC) |___| 9 = Burundian 10= Other (Specify) _____	
105.	What is your tribe?	1 = Bari speaking 2 = Mundari |___| 3 = Achioli 4 = Muru 5 = Madi 6 = Didinga 7 = Avukia 8= Other (Specify) _____	

N°	QUESTIONS	ANSWERS	SKIP
106.	What is your religion?	1 = Catholic 2 = Protestant 3 = Moslem |___| 4 = Jehovah's Witness 5 = Seventh Day Adventist 6 = Presbyterian 7 = Pentacostal 8 = Evangelical 9 = Other (Specify) _____	
107.	What is the highest level of schooling you have completed? **(different from a literacy program)**	0 = Have never attended school 1= Did not complete primary education 2 = Primary 3 = Secondary |___| 4 = Post-secondary school (including college, university, other diploma)	
108.	How easy is it for you to read a paper written in i. Arabic Juba? ii. Bari? iii. English? ***(Hold up a paper written in each language)*** ***CIRCLE ONE ANSWER FOR EACH QUESTION***	1 = Easy 2 = Difficult 3 = Do not read at all 1 2 3 1 2 3 1 2 3	
109.	Do you have a job?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	
110.	How do you earn a living? ***(Only one answer is possible. Record the principal income sector.)***	0 = No income 1 = Agriculture 2 = Business 3 = Pastoralism |___|___| 4 = Private services 5 = Public services 6 = Humanitarian or development group 7 = Other (Specify) _____	

B. MOBILIY AND DISPLACEMENT			
111.	Are you currently living in your home community?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	IF **YES** GO TO **113**
112.	Where is your home community?	Country _____ State _____ County _____	
113.	How long have you been living in the community where you currently live?	1 = Always 2 = Less than 6 months 3 = 6-11 months 4 = 1-2 years |___|___| 5 = 3-5 years 6 = More than 5 years 99 = Don't Know	
114.	In the last 12 months have you been away from the community where you currently live for one continuous month or more?	1 = Yes 2 = No |___|	IF **NO** GO TO **116**
115.	Why were you away from this place for one month or more?	1 = Employment 2 = Trade 3 = Family-related 4 = Political reasons 5 = Military-related |___|___| 6 = School-related 7 = In jail 8 = Health-related 9 = Holiday 10 = Religion-related 11 = Other (specify) _____	
116.	Have you ever been displaced from or forced to leave your home community?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	IF **NO** GO TO **127**
117.	What was the main reason that you were displaced or forced to leave your home community?	1 = War 2 = Looking for employment 3 = Looking for food |___| 4 = Marriage 5 = Escaping punishment for a crime 6 = Other (specify) _____	

118.	Where did you settle after you were displaced or forced to leave your home community?	1 = Elsewhere in Sudan |___| 2 = In another country (not Sudan) 3 = Both in Sudan and in another country	IF 2 GO TO 122
119.	**For internally displaced only: Cross-check 118=1 or 3** How long ago were you displaced to another area in Sudan?	Record number of years |___|___| If less than one year, record 00 99 = UNKNOWN	
120.	**For internally displaced only: Cross-check 118=1 or 3** In what areas of Sudan have you been displaced and how long did you stay in each of these areas? **Note: Locations should be recorded as counties and should begin with the most recent county where they were displaced. Time should be recorded in years. If less than one year, time should = 0.**	**County 1** Name _____ Length of time (in years) |___|___| **County 2** Name _____ Length of time (in years) |___|___| **County 3** Name _____ Length of time (in years) |___|___| **County 4** Name _____ Length of time (in years) |___|___|	
121.	**For internally displaced only: Cross-check 118=1 or 3** How long ago did you return to your home community?	0 = Has not returned to home community 1 = Less than 6 months 2 = 6-11 months 3 = 1-2 years |___|___| 4 = 3-5 years 5 = More than 5 years 99 = Don't Know	
122.	**For refugees only: Cross-check 118=2 or 3** How long ago were you displaced to another country?	Record number of years |___|___| If less than one year, record 00 99 = UNKNOWN	
123.	**For refugees only: Cross-check 118=2 or 3** How many countries you did transit through or lived in after you were displaced to another country?	Record number of countries |___|___| 99 = UNKNOWN	

124.	**For refugees only: Cross-check 118=2 or 3** What countries did you transit through or were you displaced in and how long did you stay in each of these countries? **Notes: Locations should be recorded as countries and should begin with the most recent location where they were displaced.** **Time should be recorded in years. If less than one year, time should = 0.**	**Country 1** Name _____ Length of time (in years) |___|___| **Country 2** Name _____ Length of time (in years) |___|___| **Country 3** Name _____ Length of time (in years) |___|___| **Country 4** Name _____ Length of time (in years) |___|___|	
125.	**For refugees only: Cross-check 118=2 or 3** How long ago did you return to Sudan?	1 = Less than 6 months 2 = 6-11 months 3 = 1-2 years |___|___| 4 = 3-5 years 5 = More than 5 years 99 = Don't Know	
126.	**For refugees only: Cross-check 118=2 or 3** How long ago did you return to your home community?	0 = Has not returned to home community 1 = Less than 6 months 2 = 6-11 months 3 = 1-2 years |___|___| 4 = 3-5 years 5 = More than 5 years 99 = Don't Know	
	C. ALCOHOL AND DRUG USE		
	Note to interviewers: Before proceeding with this section, re-emphasize that the survey is completely confidential and the participant will not be penalized for any of the responses that they give.		
127.	Do you ever take drinks containing alcohol?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	IF **NO** GO TO **129**

128.	In the past 4 weeks, how often have you taken drinks containing alcohol?	1 = Everyday 2 = At least once a week |___| 3 = At least once a month	
129.	There are some people who take recreational drugs, such as bangi, that they do not get from a medical facility. In the past 12 months, have you taken any recreational drugs that you did not get at a medical facility? (This can include orally, sniffing, injection, other locally common methods for using drugs) **Note: A medical facility does not include a traditional medical practioner. Recreational drugs does not include tobacco unless it is mixed with another drug.**	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	IF **NO** GO TO **133**
130.	What recreational drugs have you taken in the past 12 months?	1 = Marijuana |___| 2 = Khat/miraa |___| 3 = Heroin |___| 4 = Opium |___| 5 = Amphetamines |___| 6 = Drugs/herbs from traditional healer |___| 7 = Other (Specify) _____ |___|	
131.	In the past 12 months, have you injected any drugs that you did not get at a medical facility? **Note: A medical facility l does not include traditional medical practioners**	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	IF **NO** GO TO **133**
132.	Have you used a needle or syringe to inject the drugs that had already been used by another person in the past 12 months?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	
	D. CIRCUMCISION		
133.	Some men and women have been circumcised, have you been circumcised?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	IF **NO**, GO TO **135**
134.	At what age were you circumcised?	Record number of years 99 = DON'T KNOW |___|___|	
	E. MILITARY ACTIVITY		
135.	Have you ever been involved in any official or unofficial military, paramilitary or police activities?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	IF **NO** GO TO **201**

136.	Are you currently involved in military, paramilitary or police activities?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	IF **YES** GO TO **201**
137.	How long ago did you leave your military, paramilitary or police activities?	Record number of years If less than one year, record 00 99 = Don't know |___|___|	

SECTION II: MARRIAGE, SEXUAL HISTORY AND RISK BEHAVIOUR (48 questions)

N°	QUESTIONS	ANSWERS	SKIP
	A. MARITAL HISTORY		
201.	Have you ever been married?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	IF **NO** GO TO 207
202.	Are you married now?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	
203.	How old were you when you first married?	Age in years 99 = Don't Know |___|___|	
204.	**MEN ONLY** How many wives do you have?	Record number of wives |___|___|	
205.	**WOMEN ONLY** Are you in a co-marriage with other wives?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	
206.	How old is your spouse? ***Note: If more than one spouse, record the age of the oldest and youngest spouses***	Record age of **oldest** spouse in years 99 = Don't know |___|___| Record age of **youngest** spouse in years 99 = Don't know |___|___|	
207.	**MEN ONLY** Have you ever inherited the wife of a close relative?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	
208.	**WOMEN ONLY** Have you ever been inherited by a close relative?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	
209.	What is your current relationship status?	1 = Never married 2 = Currently married and living with spouse 3 = Currently married but not living with spouse 4 = Divorced |___| 5 = Separated 6 = Widow/ Widower	

B. SEXUAL ACTIVITY			
Note to interviewers: Before proceeding with this section, re-emphasize that the survey is completely confidential and the participant will not be penalized for any of the responses that they give.			
210.	Have you ever had sexual intercourse? **Instruction: If respondent is a woman and 201=1 (married) or 208=1 (inherited), then fill in 1.**	1 = Yes, married/inherited and has had sex 2 = Yes, unmarried and not inherited and has had sex 3 = No, unmarried and has not ever had sex |___|	IF **NO**, GO TO **240**
211.	At what age did you first have sexual intercourse?	Age in years 99 = Don't know |___|___|	
B. SEX WITH SPOUSE			
212.	**Cross-check 201=1 (yes, married) or 207=1 (yes, has inherited) or 208=1 (yes, has been inherited)** Have you had sex with (been together with) your spouse in the past 12 months?	1 = Yes, sex with one spouse 2 = Yes, sex with more than one spouse 3 = No, no sex with any spouses |___|___| 98 = No answer 99 = Don't know	IF **NO** GO TO **214**
213.	The LAST TIME you had sex with a spouse, did you use a condom?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	

Screening section to be completed for all married women	
Instruction to interviewers: **Cross-check 201=1 (yes, married) and participant is female.** *Interviewer script:* **Some people have had sexual relationships with a person they are not married to. The following two sections of the questionnaire regard sexual relationships with a person who is not a spouse. Some people may be uncomfortable answering these questions or may find them offensive. Please be assured that all of your answers will remain confidential and you do not have to answer any questions that you do not want to.**	
Would you be willing to answer the questions in the following two sections?	1 = Yes, willing to answer questions 2 = No, not willing to answer questions |___| **If yes, continue to Q214** **If no, skip to Q240**

C. CASUAL SEX PARTNERS			
214.	Have you had sex with a casual partner in the past 12 months? **(A casual sex partner is defined as any sexual partner different from your spouse and from whom you did not receive or give money, gifts or favors for sex)**	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	IF **NO** GO TO **224**
215.	How many casual partners did you have sex with in last the 12 months?	Record number 98 = No answer |___|___| 99 = Don't know	
216.	How old was your most recent casual partner?	Record age in years 99 = Don't know |___|___|	
217.	What was the marital status of your most recent casual partner?	1 = Currently married 2 = Never married 3 = Divorced/Separated |___|___| 4 = Widow/ Widower 5 = Other (Specify) _____ 99 = Don't know	
218.	What was the profession of your most recent casual partner?	1 = Businessperson 2 = Trader 3 = Student 4 = Driver/ Truck driver |___|___| 5 = Housemaid 6 = Pastoralist 7 = Farmer 8 = Military, paramilitary, police 9 = Commercial sex worker 10 = Humanitarian or development worker 11 = Unemployed 12 = Other (Specify) _____ 99 = Don't know	
219.	The last time you had sex with a casual partner, had you taken any alcohol?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	
220.	The last time you had sex with a casual partner did you use a condom?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	IF **NO** GO TO **222**
221.	Who suggested using a condom the last time you had sex with a casual partner?	1 = My partner 2 = Myself |___|___| 3 = Joint decision	GO TO **223**

		99 = Don't know	
222.	What was the *main* reason you did not use a condom the last time you had sex with a casual partner? ***Record only one answer***	1 = No condoms available 2 = Free condoms not available 3 = Too expensive 4 = Partner objected 5 = Don't like them 6 = Used other contraceptive |___|___| 7 = I trust my partner 8 = Didn't think of using one 9 = Don't know what condom is 10 = Want to have a child 11 = Religious reasons 12 = Unplanned sex 13 = Didn't think it was necessary 14 = Other (Specify) _____ 99 = Don't know	
223.	In the past 12 months, how often did you use a condom with all of your casual sex partners?	1 = Every time |___|___| 2 = Frequently (more than 50% of the time) 3 = Sometimes (less than 50% of the time) 4 = Never 99 = Don't know	
D. TRANSACTIONAL SEX			
224.	Have you ever had sex in exchange for money, a gift or a favor?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	IF **NO** GO TO 240
225.	The last time you exchanged sex, was it for money, a gift or a favor?	1 = Money 2 = Gift |___| 3 = Favor 4= More than one thing (eg: Money and gift, money and favor, gift and favor)	
226.	The last time you exchanged sex, did you *give* the money, a gift or a favor to your sex partner or did you *receive* the money, gift or favor from your sex partner?	1 = Gave money, gift or favor |___| 2 = Received money, gift or favor	
227.	Who was the last person with whom you exchanged sex for money, a gift or a favor?	1 = Refugee 2 = Person from local community 3 = Military, paramilitary, police |___|___| 4 = Humanitarian or development worker 5 = Other (Specify) _____ 99 = Don't know	
228.	**Returned refugees or IDPs only : Cross-check 116 =Yes** During which period in your life did you exchange sex for money, a gift or a favor?	**A. Before displacement** |___| 1 = Yes 2 = No	

	Record all answers	**B. = During displacement** |___| 1 = Yes 2 = No **C. = After displacement** |___| 1 = Yes 2 = No	
229.	Have you had sex in exchange for money, a gift or a favor in the past 12 months?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	IF **NO** GO TO **240**
230.	In the past 12 months, how many partners did you have sex with in exchange for money, a gift or a favor?	Record number |___|___| 99 = Don't know	
231.	The last time you exchanged sex, was it for money, a gift or a favor?	1 = Money 2 = Gift |___| 3 = Favor 4= More than one thing (example: Money and gift, money and favor, gift and favor)	
232.	The last time you exchanged sex, did you *give* the money, a gift or a favor to your sex partner or did you *receive* the money, gift or favor from your sex partner?	1 = Gave money, gift or favor |___| 2 = Received money, gift or favor	
233.	Who was the last person with whom you exchanged sex for money, a gift or a favor?	1 = Refugee 2 = Person from local community 3 = Military, paramilitary, police |___|___| 4 = Humanitarian or development worker 5 = UN peacekeeper 6 = Other (Specify) _____ 99 = Don't know	
234.	How old was the last person with whom you exchanged sex for money, a gift or a favor?	Record age in years 99 = Don't know |___|___|	
235.	The last time you exchanged sex for money, a gift or a favor, had you taken any alcohol?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	
236.	The last time you exchanged sex for money, a gift or a favor, did you use a condom?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	IF **NO** GO TO **238**
237.	Who suggested using a condom the last time you exchanged sex for money, a gift or a favor?	1 = My partner 2 = Myself |___|___|	GO TO **239**

		3 = Joint decision 99 = Don't know	
238.	What was the *main* reason you did not use a condom the last time you exchanged sex for money, a gift or a favor? ***Record only one answer***	1 = No condoms available 2 = Free condoms not available 3 = Too expensive 4 = Partner objected 5 = Don't like them 6 = Used other contraceptive |___|___| 7 = I trust my partner 8 = Didn't think of using one 9 = Don't know what condom is 10 = Want to have a child 11 = Religious reasons 12 = Unplanned sex 13 = Didn't think it was necessary 14 = Other (Specify) _____ 99 = Don't know	
239.	In the past 12 months, how often did you use a condom with all of the people with whom you exchanged sex for money, a gift or a favor?	1 = Every time 2 = Frequently (more than 50% of the time) 3 = Sometimes (less than 50% of the time) 4 = Never |___|___| 99 = Don't know	
E. FORCED SEX			
240.	Have you ever been forced to have sex against your will? **Need to review this language carefully with Eliaba**	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	IF **NO**, GO TO 301
241.	**Returned refugees or IDPs only : Cross-check 116 =Yes** During which period in your life were you forced to have sex? ***Record all answers***	**A. Before displacement** |___| 1 = Yes 2 = No **B. = During displacement** |___| 1 = Yes 2 = No **C. = After displacement** |___| 1 = Yes 2 = No	
242.	Who forced you to have sex? ***More than one answer can be given. Record all answers***	1 = Regular partner |___| 2 = Family member other than regular partner |___| 3 = Non-family member |___|	IF **REGULAR PARTNER OR OTHER FAMILY MEMBER (1 OR 2) ONLY,** GO TO 244
243.	If you were forced to have sex by a non-family member, who forced you?	1 = Person from local community |___| 2 = Military, paramilitary, police |___| 3 = Humanitarian or development worker |___|	

	More than one answer can be given. Record all answers	4 = UN peacekeeper |___| 5 = Other (Specify) _____ |___| 99 = Don't know |___|___|	
244.	Have you been forced to have sex against your will in the past 12 months?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	IF **NO**, GO TO **301**
245.	How many times were you forced to have sex in the past 12 months?	Provide Number |___|___| 99 = Don't know	
246.	Who forced you to have sex? ***More than one answer can be given. Record all answers***	1 = Regular partner |___| 2 = Family member other than regular partner |___| 3 = Non-family member |___|	IF **REGULAR PARTNER OR OTHER FAMILY MEMBER ONLY,** GO TO **248**
247.	If you were forced to have sex by a non-family member, who forced you? ***More than one answer can be given. Record all answers***	1 = Person from local community |___| 2 = Military, paramilitary, police |___| 3 = Humanitarian or development worker |___| 4 = UN peacekeeper |___| 5 = Other (Specify) _____ |___| 99 = Don't know |___|___|	
248.	How old was the last person who forced you to have sex?	1 = Older than me 2 = Younger than me |___|___| 3 = Same age as me 99 = Don't know	

SECTION III: MALE and FEMALE CONDOMS (8 questions)

N°	QUESTIONS	ANSWERS	SKIP
301.	Have you ever heard of condoms?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	IF **NO**, GO TO **401**
302.	What do you think condoms are used for? **Unprompted question. Record all answers given.**	1 = Protects against STI/HIV/AIDS |___| 2 = Prevents pregnancy |___| 3 = Family Planning |___| 4 = Other (Specify) _____ |___| 5 = Don't know |___|	
303.	Have you ever used a condom?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	IF **NO**, GO TO **308**
304.	Do you know where you can obtain a condom?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	IF **NO**, GO TO **307**
305.	Where do you usually get condoms? **Only one answer possible**	1 = Pharmacy 2 = Health facility 3 = At the market 4 = From my friends |___|___| 5 = At the shop 6 = Community health worker 7 = Other (Specify) _____ 99 = Don't know	
306.	Can you obtain a condom every time you need one?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	IF **YES,** GO TO **308**
307.	What is the *main* constraint to obtaining a condom every time you need one? ***Only one answer possible***	1 = Too far away (geographical access) 2 = Too expensive 3 = Places not open at convenient hours 4 = Not available |___|___| 5 = Fear of being seen 6 = Health worker's attitude 7 = Other (specify) _____ 99 = Don't know	
308.	Have you ever heard of a female condom?	1 = Yes 2 = No |___|___| 98 = No answer	

N°	QUESTIONS	ANSWERS	SKIP
		99 = Don't know	

SECTION IV: SEXUALLY TRANSMITTED INFECTIONS (6 questions)

N°	QUESTIONS	ANSWERS	SKIP
401.	Have you ever heard about diseases that can be transmitted through sexual intercourse?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	
402.	Have you had any unusual genital discharge in the past 12 months?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	
403.	Have you had any genital ulcers or sores in the past 12 months?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	IF **NO** TO BOTH **402 AND 403**, GO TO **501**
404.	During the last time you had genital discharge, ulcer or sore, did you seek treatment?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	IF **NO** GO TO **406**
405.	Where was the FIRST place that you went for treatment? ***Only one answer possible***	1 = Public health center 2 = Private or NGO health center 3 = Traditional healer/doctor/ practitioner |___| 4 = Pharmacy 5 = Friend or relative 6 = Other (specify) _____	
406.	During the last time you had a sexually transmitted infection did you inform your sexual partner(s)?	1 = Yes, all of them 2 = Some of them, not all |___| 3 = No, none of them	

SECTION V: KNOWLEDGE, OPINIONS, and ATTITUDES towards HIV/AIDS (18 questions)

N°	QUESTIONS –	ANSWERS	SKIP
501.	Have you ever heard of HIV or a disease called AIDS?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	IF **NO**, GO TO **614**
502.	Can people protect themselves from HIV infection by staying faithful to one uninfected faithful sex partner?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	
503.	Can people protect themselves from HIV infection by using a condom correctly every time they have sex?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	
504.	Can people protect themselves from HIV infection by abstaining from sex?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	
505.	Can people get infected with HIV through a mosquito bite?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	
506.	Can people get infected with HIV by sharing a toothbrush with someone who is infected?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	
507.	Can people get infected with HIV by having anal sex with a male partner and not using a condom?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	
508.	Can a person get infected by HIV by getting injected with a needle that was already used by someone else?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	
509.	Can people get infected with HIV by sharing food with someone who is infected?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	

510.	Is it possible for a healthy-looking person to have HIV, the virus that causes AIDS?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	
511.	Can a pregnant woman with HIV/AIDS, transmit the virus to her unborn child during pregnancy or delivery?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	
512.	Can a woman with HIV/AIDS transmit the virus to her baby during breastfeeding?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	
513.	If a member of your family got infected with the virus that causes AIDS, would you want it to remain a secret?	1 = Yes (keep it secret) 2 = No |___|___| 98 = No answer 99 = Don't know	
514.	If a relative of yours became sick with the virus that causes AIDS, would you be willing to care for him in your own household?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	
515.	If a teacher was infected with the virus that causes AIDS, should he/ she be allowed to continue teaching?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	
516.	Would you buy fresh vegetables from a shopkeeper who was infected with the virus that causes AIDS?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	
517.	Should young adolescents be taught how to use condoms?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	
518.	What do you think your chance is that you might get HIV?	1 = Good chance 2 = Moderate chance |___|___| 3 = No chance 4 = Already infected with HIV 99 = Don't know	

SECTION VI: EXPOSURE and ACCESS to INTERVENTIONS (15 questions)

N°	QUESTIONS	ANSWERS	SKIP
601.	Have you received information on HIV/AIDS in the past 12 months?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	IF **No**, GO TO **603**
602.	From what sources have you received information on HIV/AIDS in the past 12 months? ***Unprompted question. Record all answers given***	***Mass media*** 1 = Radio |___| 2 = TV/ Video |___| 3 = Newspaper |___| 4 = Poster/pamphlet |___| ***Health services*** 5 = Health facility |___| 6 = VCT center |___| 7 = ANC/PMTCT center |___| ***People*** 8 = Community health worker |___| 9 = Friend |___| 10 = Family member |___| 11 = Person living with HIV/AIDS |___| 12 = Peer outreach worker |___| ***Other place***s 13 = School |___| 14 = Place of worship |___| 15 = Public meeting |___| 16 = Seminar |___| 17 = Others (specify) _____ |___|	
603.	From what sources would you *prefer* to receive information on HIV/AIDS? ***Unprompted question. Record all answers given***	***Mass media*** 1 = Radio |___| 2 = TV/ Video |___| 3 = Newspaper |___| 4 = Poster/pamphlet |___| ***Health services*** 5 = Health facility |___| 6 = VCT center |___| 7 = ANC/MTCT center |___| ***People*** 8 = Community health worker |___| 9 = Friend |___| 10 = Family member |___| 11 = Person living with HIV/AIDS |___|	

N°	QUESTIONS	ANSWERS	SKIP
		12 = Peer outreach worker |___| ***Other place***s 13 = School |___| 14 = Place of worship |___| 15 = Public meeting |___| 16 = Seminar |___| 17 = Others (specify) _____ |___|	
604.	Do you know a place where a person can be tested for HIV?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	IF **NO OR DON'T KNOW**, GO TO **606**
605.	Where can a person be tested for HIV? ***(More than one answer is possible)***	1 = At local hospital/health centre |___| 2 = At local VCT center |___| 3 = At local PMTC center |___| 4 = Other location (specify) _____ |___| 98 = No answer |___|___| 99 = Don't know	
606.	I do not want to know the results, but have you ever been tested for HIV? ***(State that you do not want to know the result of the test)***	1 = Yes |___|___| 2 = No 98 = No answer 99 = Don't know	IF **NO**, GO TO **612**
607.	When was the last time you were tested for HIV?	1 = In the past 12 months 2 = 1-2 years ago 3 = 3 or more years ago |___|___| 98 = No answer 99 = Don't know	
608.	The last time you were tested for HIV did you yourself ask for the test, was it offered to you and you accepted, or was it required?	1 = I asked for the test 2 = It was offered and I accepted |___|___| 3 = It was required 98 = No answer 99 = Don't know	
609.	The last time you were tested for HIV did you receive counselling?	1 = Yes |___|___| 2 = No 98 = No answer 99 = Don't know	
610.	The last time you were tested for HIV, where did you get tested? ***Only one answer possible.***	**Public sector** 1 = Hospital |___|___| 2 = Health facility government 3 = Clinic/ family planning 4 = Mobile Clinic	

N°	QUESTIONS	ANSWERS	SKIP
		Private Sector 5 = Private hospital/ Clinic 6 = Pharmacy 7 = Private medical doctor 8 = Mobile clinic 9 = Traditional healer 10 = Other (Specify) _____	
611.	I do not want to know the result, but, the last time you were tested for HIV did you obtain the result of the test? ***(State again that you do not want to know the test result)***	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	
612.	Would you go for an HIV test in the future?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	IF **YES**, GO TO **614**
613.	What is the *primary* reason you don't want to go for a test? ***Only one answer possible***	1 = Don't know where to go for a test 2 = Sure of not being infected 3 = Afraid of the result 4 = Afraid of the blood taking |___|___| 5 = (Afraid of) catching an infection 6 = Fear of stigmatisation 7 = Don't think testing is confidential 8 = Too expensive 9 = Other (Specify) _____ 99 = Don't know	
614.	**Women only** Have you been pregnant in the past 5 years?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	IF **NO**, **END INTERVIEW**
615.	**Women only** When you were pregnant did you go to an ante-natal clinic?	1 = Yes 2 = No |___|___| 98 = No answer 99 = Don't know	

THAT IS THE END OF THE QUESTIONNAIRE. THANK YOU FOR TAKING THE TIME TO ANSWER OUR QUESTIONS. WE APPRECIATE YOUR HELP.