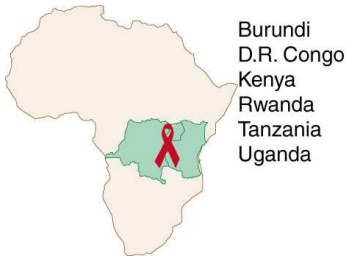

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World Bank

HIV/AIDS Behavioural Surveillance Survey (BSS)

Tanzania Refugee Camps and Surrounding Host Communities

Feb 2011

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Acknowledgements

The 2010 Tanzania Behavioural Surveillance Survey (BSS) was carried out through efforts of multiple organizations. The project is the initiative of the Great Lakes Initiative on AIDS (GLIA). The United Nations High Commissioner for Refugees (UNHCR) took the lead in coordinating the design and implementation of the survey, with the financial support of the World Bank, and in consultation with the Tanzanian Commission for AIDS (TACAIDS) and the Ministry of Health and Social Welfare's National AIDS Control Programme (NACP).

Special thanks go to Dr. Maysoon Dahab, Lead Consultant for the GLIA BSS for her technical leadership, as well as Ms. Marian Schilperoord and Dr. Patterson Njogu of UNHCR for their superb coordination of the project. Dr. Aroldia Mulokozi of TACAIDS provided invaluable assistance in coordinating the support government agencies, while Co-Investigator Dr. Samwel Sumba of TACAIDS provided excellent technical advice and assistance in training implementation and monitoring of field teams. Additional technical support was provided by Co-Investigators Dr. Valentino Bangi, the Kigoma Regional Medical Officer, and Dr. Geoffrey Somi, Head of Epidemiology at the National AIDS Control Programme. The GLIA Secretariat Monitoring and Evaluation Officer, Ms. Sophia Luhindi, lent advice in the inception phase of the project.

The survey team wishes to recognize the support of the UNHCR Kasulu and Kigoma Heads of Office, Mr. Kazuhiro Kaneko and Ms. Bernadette Castel. Their guidance was invaluable to the success of the field work, as was that of Dr. Sunday Rwebangila of the UNHCR Kasulu Office. In the field, the study team appreciated the assistance of the districts officials, including the Community Development Officer of Kigoma, Mr. Abeid Missana, and the Council HIV/AIDS Coordinators: Ms. Josephine Lusatra (Ngara), Mr. Bernard Rusomyo (Kigoma), and Mr. Issa Mwakapugi (Kasulu). The support of UNHCR partners Tanzania Red Cross Society (TRCS), Radio Kwizera, and Tanganyika Christian Refugee Service (TCRS) was much appreciated in the Ngara region and in Nyarugusu Camp.

The protocol and tool adaptation, field work, analysis, and reporting were coordinated by Ms. Aimee Rose, Principal Investigator for the Tanzania BSS, who was assisted in the field by Mr. Ressy Mashulano and Mr. Faustine Kilongo. The survey would not be possible without the hard work of more than 80 interviewers and team leaders, and the contribution of time of more than 3,900 men and women in refugee camps and host communities who participated in the interview process. The efforts of all field staff and participants are greatly appreciated.

Abbreviations and acronyms

AIS	AIDS Indicator Survey
AIDS	Acquired Immuno-deficiency syndrome
ANC	Antenatal care
ART	Anti-retroviral therapy
BSS	Behavioral Surveillance Survey
DRC	Democratic Republic of Congo
GLIA	Great Lakes Initiative on HIV/AIDS
HBC	Home Based Care
HIV	Human Immunodeficiency Virus
MOHSW	Ministry of Health and Social Welfare
MTCT	Mother-to-child transmission
NACP	National AIDS Control Programme
NGO	Non-governmental organization
PEPFAR	The U.S. President's Emergency Plan for AIDS Relief
PITC	Provider-initiated Testing & Counselling
PLHIV	People Living with HIV
PSU	Primary Sampling Unit
SGBV	Sexual Gender-Based Violence
STI	Sexually Transmitted Infections
TACAIDS	Tanzania Commission for AIDS
TRCS	Tanzania Red Cross Society
UNGASS	United National General Assembly Special Session
UNHCR	United Nations High Commissioner for Refugees
VCT	Voluntary Counselling and Testing

Executive summary

This report outlines the methodology, findings and recommendations of the 2010 Tanzania Behavioral Surveillance Survey (BSS), which was designed as a follow up to a similar baseline survey done in 2005 in and around Lugufu and Lukole Camps. It also included new survey area in and around Nyarugusu Camp. The 2005 survey explored HIV-related knowledge, behaviour and access to services in the two refugee camps and host communities in the surrounding areas. The 2010 survey was designed to measure similar indicators in the original populations, when possible, and in the new populations. The BSS was conducted between October and November of 2010 in Nyarugusu refugee camp and in 3 host communities in Western Tanzania.

Objectives

The main objectives of the 2010 Tanzania BSS were to:

1. Estimate the current prevalence of key risk, protective, and preventive behaviours and vulnerabilities known to be related to HIV infection, among refugees and surrounding host populations
2. Determine socio-demographic characteristics associated with current key risk, protective, and preventive behaviours, among refugees and surrounding host populations
3. Describe interactions between refugees and surrounding host populations
4. Measure changes in key risk, protective, and preventive behaviours between baseline and follow up, among refugees and surrounding host populations

Methodology:

Both 2005 and 2010 surveys employed similar methodology. In the host populations, a two stage cluster sampling methodology was used. In the first stage 40 clusters were assigned to subvillages *(kitongoji),* proportional to the population size in each subvillage. Within each cluster, a uniform number of households were selected using a modified Expanded Programmed on Immunisation (EPI) method. In the camps, UNHCR household registers were used to select households or addresses. In both settings, trained interviewers screened for eligibility, obtained consent of participants and administered a standardized BSS questionnaire.

Main findings: 2005 – 2010 Comparison Study

The 2005 baseline BSS revealed extremely high rates of high risk sexual behaviour in Lugufu Camp, which were of particular concern among youth. The follow up BSS found slight drops in the proportion of youth who reported having sex under age 15 (from 25.9% to 22.4%). A promising finding was the proportion of never married young men who reported never having sex increased significantly from 21.0% to 42.6%; on the other hand, the proportion of never married young women in Lugufu Camp who

never had sex increased from 51.9% to 32.1%. Another encouraging result was a dramatic drop in non-regular partnership from baseline (33.2%) to follow up (17.4%). Transactional sex remained extremely high, with 12% reporting it in the past 12 months.

In both the Lukole and Lugufu host communities, decreases were observed in the proportion reporting non-regular, transactional, and multiple partners in the past 12 months, across both sexes.

Significant increases in the HIV testing and counselling utilisation were reported at all sites, with increases of >200% at Lukole host community (16.0% to 37.6%), 265% at Lugufu Camp (18.0% to 47.7%) and 399% at Lugufu host community (11.4% to 45.5%). Comprehensive, correct knowledge also improved at each site. At baseline, comprehensive knowledge ranged from 26.8% at Lugufu Camp to 47.9% in Lukole community, while at follow up it ranged from 51.8% at Lugufu Camp to 62.4% at Lugufu host community.

Accepting attitudes of people living with HIV/AIDS saw a dramatic drop in the host communities; from more than 25% in both communities at baseline, to less than 10% in both communities. However, a slight increase was observed at Lugufu camp, from 11.8% to 14.4%.

Main findings: 2010 Nyarugusu study

The study in Nyarugusu Camp and its host community included 1,077 residents of the Camp, and 921 respondents from neighboring villages.

All categories of high risk sex, including non-regular, transactional, and sex with multiple partners, were more common in the camp as compared to the host community, across age and sex categories. In addition, 22.6% of young men in the camp reported having sex under age 15. A critical finding of the study is that never married young men in both the camp and host community exhibited high levels of risk behaviour. Among young men in the host community, proportions of high risk behaviour decreased with marriage, but not for young men in the camp

Comprehensive knowledge was found among 62.4% of host respondents, and 49.3% of refugee respondents. Just under half of respondents in both sites reported having an HIV test in the past year. As found in the other 2010 BSS sites, the proportion of respondents with accepting attitudes towards people living with HIV/AIDS was very low; in both sites, around 10%.

Chapter 1: Introduction

Section 1: HIV situation

HIV globally

The AIDS epidemic began more than 30 years ago, and today it is estimated that more than 30 million people live with HIV (UNAIDS 2010). Sub-Saharan Africa was the site of the first cases detected and it remains the most affected region in the world.

Worldwide, while the number of new infections has been declining for the past decade, the number of people living with HIV has greatly increased due to improved care and treatment and access to treatment. In many regions, including Sub-Saharan Africa and the Caribbean, AIDS-related deaths have been declining for years.

HIV in Tanzania & refugee country of origin

Tanzania is one of a few countries where national surveys show statistically significant decrease in key risk behaviours among men and women, and where HIV prevalence has decreased in both rural and urban populations, according to antenatal clinic data. While the decline is encouraging, the latest national prevalence figures are still consistent with a generalized epidemic. According to the 2007-8 Tanzania HIV/AIDS and Malaria Indicator Survey (THMIS), 5.7% of Tanzanian adults aged 15 – 49 are HIV positive (ORC Macro 2008). At the time the baseline survey was conducted, the latest data available from Tanzania HIV/AIDS indicator survey 2003-4 pointed to an adult prevalence of 7% (ORC Macro 2005).

The two regions which are represented in this study, Kigoma and Kagera, have been shown to have lower than average national prevalence. The 2007-8 THMIS found HIV prevalence to be 3.4% in Kagera region and 1.8% in Kigoma region, both well below the national average. Kigoma represented one of the lowest regional prevalence found on the mainland. A 2008 study of antenatal clinic (ANC) attendees corroborated these figures, with Kigoma found to have the mainland's lowest prevalence at 1.5%, and Kagera found to have the 5th lowest prevalence, at 4.8% (NACP 2010). For Kigoma region, the ANC results indicated a drop from a prevalence of 5.1% found in the 2003-4 ANC figures, while the results in Kagera remained essentially unchanged from the 4.7% prevalence found in 2003-4.

Across the refugee camps in Western Tanzania, voluntary counseling and testing (VCT) records show that in 2009 out of more than 6,000 clients, 1.1% tested positive for HIV. HIV prevalence for ANC attendees was 0.4% the same year. The refugee camp surveyed in 2010 is predominantly populated by refugees from Democratic Republic of Congo (DRC), where HIV prevalence is estimated to be 1.7% (UNAIDS 2008).

National Multi-sectoral Strategic Framework on HIV and AIDS

The Tanzania Commission for AIDS (TACAIDS) is responsible for coordinating the national HIV response across sectors, while the Ministry of Health and Social Welfare (MOHSW) National AIDS Control Programme (NACP) coordinates the national response of the health sector. Both bodies work according to the National Multi-sectoral Framework for 2008-2012, which emphasizes the thematic areas of

prevention, care, treatment and support, impact mitigation and enabling environment. Attention to most at risk populations such as transactional sex workers, men who sex with men, injection drug users, refugees and displaced persons, is newly outlined.

At the local level, HIV activities are coordinated by Multisector AIDS Committees, which operate at the Council, Ward, Village and Sub Village level to disseminate information, and strengthen and integrate services.

GLIA programme

The Great Lakes Initiative on AIDS (GLIA) began in 1999 as a combined effort of the Ministries of Health of Kenya, Tanzania, Rwanda, Uganda, Burundi and the Democratic Republic of the Congo (DRC), to address HIV issues that cross borders, including risk to the transportation sector and to refugees and hosting communities.

Between 2004 and 2006, the Great Lakes Initiative on AIDS (GLIA), with funding from the World Bank, undertook a regional project to examine the behavioural risks and special vulnerabilities of residents of refugee camps and the surrounding communities, and the interactions between them which may pose risk for spreading HIV. The UNHCR HIV/AIDS unit provided the administrative and technical coordination for the BSS conducted in four member countries including Tanzania, Kenya, Uganda and Rwanda.

With World Bank support, and based on the evidence generated from the country-level BSSs, GLIA has initiated programs to improve prevention care and treatment in both refugee camps and hosting communities in the Great Lakes region. In Tanzania, GLIA has worked to complement the government's effort in HIV programs. In support of people living with HIV, GLIA provides drugs, food and non-food items for distribution in HBC programs and vocational training. To address prevention in youth, GLIA supports behaviour change materials, refresher training to youth councils and the organization of Children's Parliament and Men and Boys' Club as a forum to increase knowledge and awareness. Other prevention efforts supported include procurement of HIV post-exposure prophylaxis (PEP) kits, materials and training on universal precautions, and training to program staff on issues such as sexual and gender based violence.

Section 2: The 2010 Behavioural Surveillance Survey (BSS)

Rationale

Periodic behavioural surveillance surveys (BSSs) are used to measure trends in behaviour; information that is important to planning and adjusting HIV prevention programmes. This is especially true among conflict affected populations, where despite insufficient evidence, assertions are often made that conflict and forced displacement lead to increased sexual risk behaviour or refugees spread HIV infection in host communities.

The results of the 2005 Tanzania BSS pointed to factors which place refugees in Tanzania at greater risk than the surrounding population, including earlier initiation of sex among males, limited access to

income, and the vulnerability of refugee women to transactional sex (Rowley 2008). Those findings were the basis for the GLIA-funded interventions both in refugee camps and local communities, and they were shared with local authorities and NGOs implementing local programs. In planning the baseline BSS surveys, GLIA also planned to conduct similar surveys at the end of the GLIA project. Surveys were thus designed to detect change in key indicators over time.

In addition to providing information about behaviours and risk factors in specific countries, the baseline surveys in GLIA countries also represented an important contribution to the general understanding of risks of HIV transmission in refugee settings, which is limited at the global level due to a lack of data and analysis.

Objectives

The specific objectives of the 2010 Tanzania BSS were:

1. Estimate the current prevalence of the key risk, protective, and preventive behaviours and vulnerabilities known to be related to HIV infection, among refugees and surrounding host populations
2. Determine socio-demographic characteristics associated with current key risk, protective, and preventive behaviours, among refugees and surrounding host populations
3. Describe interactions between refugees and surrounding host populations
4. Measure changes in key risk, protective, and preventive behaviours between baseline and follow up, among refugees and surrounding host populations

Section 3: Context

The high mobility of refugee populations often presents a challenge to research. The refugee camps and host communities studied in 2005 underwent significant changes which had to be accounted for in the design of the follow up study.

Populations, 2005-2010

Camps

In 2005, the year the baseline BSS was conducted, Tanzania hosted more than half a million refugees in eight refugee camps running from the Rwanda-Tanzania border along the border with Burundi. The majority of refugees were of Burundian origin, with about 150,000 Congolese refugees and a smaller number of Rwandans.

The two camps included in the baseline represented the northern most and southern most camps – one with a primarily Burundian population and one with a primarily Congolese population. Lukole camp was located in the northern Ngara district and, in 2005, housed more than 61,000 Burundian refugees. By 2007, it had closed and the vast majority of refugees repatriated. More than 400 km to the south of Ngara, Lugufu camp housed more than 94,000 Congolese refugees in 2005. Its population reduced over the years as refugees repatriated, and in late 2009, the camp was closed, with the remaining caseload of almost 22,000 Congolese refugees transferred to Nyarugusu Camp to join an existing population of approximately 37,000 Congolese refugees.

The Lugufu and Lukole camp closures were part of a dramatic reduction in the number of refugees in Tanzania in the past few years which has closed all but 2 camps. By the time the follow up BSS was conducted, the total refugee population in Tanzania was reduced to less than 60,000 Congolese, almost all of whom resided in Nyarugusu Camp and less than 60,000 Burundians, almost all of whom resided in the other remaining camp.

Given the many changes in the refugee situation, designing the follow up survey required modification. It was not possible to survey the original refugee population at Lukole camp, as the vast majority had repatriated. While Lugufu Camp had also closed, it was possible to survey refugees in Nyarugusu Camp who had been transferred from Lugufu. Thus, the camp was stratified into those who transferred from Lugufu and those who had not, in order to provide information for the Ex-Lugufu population, as well as create a picture of the camp as a whole.

Host communities

The 2010 BSS included 3 sets of surrounding communities. The communities surrounding Lukole and Lugufu camps were included, in order to examine changes from baseline. In addition, communities surrounding Nyarugusu camp were also surveyed. Members of all the communities surveyed reported some advantages of camp proximity, such as increased economic opportunities and access to the medical facilities and markets in the camp. Communities also named negative effects of the camps such as increased environmental pressure, and perceived increase in security risks. In areas which have experienced camp closure in the past few years, people are increasingly pressured to leave the community for work, either temporarily or permanently. Another common reason for leaving the community is for school. Older children are often sent to boarding schools and spend a lot of time away from their families. Both these factors increasing mobility have the potential to encourage risk behaviour, and they made it more difficult for survey teams to find eligible people at their homes.

Located in Kagera region, Ngara district, about 15 and 30km outside the former Lukole camp, respectively, Kasulo and Nyamahwa villages were included in both the baseline and follow up BSSs. With almost 20,000 residents, Kasulo is slightly larger than Nyamahwa, with 17,000 residents. Subsistence agriculture has always been an important part of the economy, although the influx of refugees in the early to mid 1990's attracted aid workers and organizations, and created many jobs and opportunities for trading. The closure of camps such as Lukole, has led many to leave the area for better economic opportunities.

To the south of Ngara, in the Kigoma region, the villages of Uvinza and Kazuramimba lie less than 25 km away in opposite directions from the former Lugufu camp. Kazuramimba has a population of approximately 27,000 while Uvinza's population is smaller at approximately 11,000. Both villages rely heavily on agriculture, although Uvinza is also home to a salt mine and more established businesses. In the past Kazuramimba used to be more of a temporary home for agricultural workers, and with the presence of the refugee camp, attracted more permanent residents. As seen in Ngara district, after camp closure, many residents had to relocate or travel distances to find work, such as fishing in Lake Tanganyika.

Also located in Kigoma region, Nyarugusu Camp is approximately 150 km north of Lugufu Camp and its host communities. To represent the Nyarugusu host community in the 2010 BSS, three of the relatively

small villages in the area were chosen. Only the household population figures were available in the villages; based on these, it is estimated that Nyamidaho village has a population of approximately 6,000, Mvugwe a population of approximately 7,000 and Makere a population of approximately 12,000. Also the largest village, Makere has more commercial activity and services available, while Mvugwe and Nyamidaho are smaller agricultural villages.

HIV programmes, 2005-2010

Camps

In the Tanzanian refugee camps, the United Nations High Commissioner for Refugees (UNHCR) is responsible for coordinating health services, including a multi-sector program for HIV/AIDS. UNHCR and its primary implementing partners for health, Tanzania Red Cross Society (TRCS) and World Vision, collaborate with the Government of Tanzania to achieve a coherent program. Provision of free treatment for people living with HIV, including antiretroviral therapy (ART), is linked to the National Antiretroviral Treatment Programme. Home based care (HBC) is also available in the camps.

Health facility data show sustained increase in VCT utilization in past years. Services for pregnant women include counseling and testing as part of a comprehensive prevention of MTCT strategy. Male partners are encouraged to test at the same time, and records show that more than 70% choose to be tested. Prevention activities are primarily focused on youth and groups such as sex workers with behavioral risks for HIV. Health services in the camp are freely accessible to the neighboring communities.

Other related health services available in the camp include treatment for sexually transmitted infections (STI), specialized counselling for HIV-positive pregnant women, and HIV post-exposure prophylaxis (PEP), as part of the sexual and gender-based violence (SGBV) team's tool kit. Health workers receive regular training on universal precautions.

Host Communities

In the host communities many HIV programmes were implemented in the time following the baseline study. The government programme has expanded and in the area it is now possible to access a range of services including voluntary counselling and testing (VCT), prevention of mother-to-child transmission (MTCT), care and treatment for HIV, and home-based care.

Programme reports in all survey areas showed that awareness has greatly increased, thanks to varied interventions implemented by multiple actors. Media campaigns, public meetings, activities around World AIDS Day, and activities targeting youth were mentioned as critical to this improvement. Access to testing had reportedly increased with the opening of more facilities, mobile VCT and a new focus on provider-initiated testing and counseling (PITC). Kigoma district officials reported improvements in integration with other health services such as antenatal care, and tuberculosis treatment. Finally, it was noted that more nutrition support for people living with HIV and more services for vulnerable children were becoming available, although still not matching the need.

Challenges noted by local managers and officials included keeping staff skills up-to-date, maintaining interest as the epidemic gets older, and reaching rural areas where literacy is low. Whereas maintaining the test kits inventory was noted as a strength in the district where Nyarugusu camp is located, test kit stock out was noted as a challenge in Ngara district, where the former Lukole camp was located.

Apart from government health and community services, numerous NGOs have been working on HIV-related issues. In communities near Nyarugusu camp, Tanzania Red Cross Society has a large presence, providing health services both inside and outside the camp. In Ngara near the former Lukole camp, the Catholic dioceses' provide many services, along with International Center for AIDS Care and Treatment Programs (ICAP), Evangelical Lutheran Church of Tanzania (ELCT), Development and Life Relief Association (DELIRA), and Human Development Trust (HDT). Near the former Lugufu camp, ICAP is one of the main NGOs providing services.

Chapter 2: Methodology

The 2005 baseline and 2010 follow up studies were conducted according to similar methodology. This chapter provides details of the methodology of each study to allow for an informed interpretation of results.

Section 1: Summary of the 2005 Tanzania BSS

Survey design

The 2005 Tanzania BSS was designed as a baseline survey, to be conducted in both refugee camps and their surrounding communities. Besides allowing for comparison to a follow up, it was also designed to be able to compare refugee and host communities and to examine indicators by sex and age group, with "youth" defined as ages 15 - 24.

The overall design and survey tools were based on the Family Health International BSS model, with an additional section added to understand displacement, mobility and networks between the refugee and host populations.

Population

Both refugee camps were organized into 2 sub-camps, called Lukole A and B, which were around 7 km apart, and Lugufu 1 and 2, which were geographically adjacent. In the host communities, villages are divided administratively into sub villages, which are grouped together. In Ngara district, Kasulo village contained 9 sub villages, while Nyamahwa contained 5. Around Lugufu Camp, Uvinza and Kazuramimba were made up of 12 and 11 sub villages, respectively. Although each of the four populations speak different languages, Swahili was used for interviewing the Tanzanian and Congolese populations, as it is common to all, while Kirundi was used for interviewing Burundian refugees.

Sample size

The sample size was designed to be able to measure at least 15% change between baseline and follow up with a precision of 0.05, and power of 0.20. Since no baseline information existed, prevalence was assumed to be 50% for the key indicators:

1. Percentage of youth aged 15-24 reporting the use of a condom during last sexual intercourse with a non-regular partner

2. Percentage of youth aged 15-24 who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission or prevention

The target number of individuals to be interviewed was determined to be 3,200, or 800 in each of the following four groups: Lukole Camp, Lukole host populations (Kasulo and Nyamahwa), Lugufu Camp, and

Lugufu host populations (Uvinza and Kazuramimba). The sample size accounted for a design effect in all populations, even though cluster sampling was not used in the camp.

Sampling

In the camp population, UNHCR household lists were used as the basis for systematic sampling. At the time of the survey registers were kept according to sub-camp, so the number of household per sub-camp was calculated first, according to the size of the population, and then households were randomly selected. It was sometimes necessary to resample from the lists when households could not be found due to repatriation or if the household had moved to a different location within the camp.

In the villages, cluster sampling was used to select households. The number of households per sub-village was determined according to the principles of proportionality to size. Teams selected the first household at random using method modeled on the Expanded Programme on Immunization (EPI) method, and selected subsequent houses based on proximity, until the target number of households had been reached. Households which were abandoned or refused were not replaced.

Eligible individuals were those aged 15-49 years of age, who were members of selected households; specifically, who had been living and sharing meals with the household for at least 2 weeks. In polygamous families maintaining separate households, only the household of selection was interviewed. However, when multiple households shared a compound they were all interviewed as separate households. When households or eligible members of a household were absent, the team visited up to three times to attempt to interview them.

Informed consent was obtained by the interviewer for before any interview was conducted. To maintain confidentiality, the consent was noted by the interviewer's signature.

Analysis

After data was entered into computers using EpiInfo, 25% of the records were verified and data entry errors were corrected. Data cleaning and analysis was done using STATA 8.2. Proper confidence intervals could not be generated for the host populations since cluster information was not available. A comprehensive report of the baseline study, entitled *Behavioural Surveillance Surveys Among Refugees and Surrounding Host Populations: Lukole and Lugufu, Tanzania*, is available at the UNHCR website.

Section 2: Follow up BSS 2010

Design

The 2010 Tanzania BSS was designed to be comparable to the 2005 survey. For sample size calculation, sampling and analysis purposes, the population was divided by site, age group, and in the case of Nyarugusu Camp, relocation from Lugufu Camp.

Study population and setting

The study population included men and women residing in Nyarugusu Camp and men and women residing in selected villages outside Nyarugusu Camp and former Lugufu and Lukole Camps, resulting in four study groups which are referred to as

- Nyarugusu Camp – both existing caseload and transfers from Lugufu
- Nyarugusu Host – residents of Makere, Mvugwe and Nyamidaho
- Lugufu Host – residents of Uvinza and Kazuramimba
- Lukole Host – residents of Kasulo and Nyamahwa

Nyarugusu Camp was further divided into those who had transferred from Lugufu Camp and the existing population, which are referred to as Ex Lugufu and Old Nyarugusu subgroups. No follow up was possible for Lukole Camp. The table below shows the 5 populations which appeared at baseline and/or follow up, and describes the changes that occurred in the years between the two.

Table 1: Populations at baseline and follow up

Survey time point	Population 1	Population 2	Population 3	Population 4	Population 5
Baseline	Lugufu camp	Lugufu host community (Uvinza and Kazuramimba)	Lukole camp	Lukole host community (Kasulo and Nyamahwa)	
Changes from Baseline to Follow up	Closed in 2009. 22,000 refugees transferred to Nyarugusu camp	Limited economic outmigration	Closed and refugees repatriated	Limited economic outmigration	
Follow up	Nyarugusu Camp including Ex Lugufu refugees and Old Nyarugusu refugees	Lugufu host community (Uvinza and Kazuramimba)	None	Lukole host community (Kasulo and Nyamahwa)	Nyarugusu host community (Makere, Mvugwe and Nyamidaho)

Inclusion Criteria

Criteria for inclusion in the study were:

1. Living and sharing meals in the sampled household for more than 2 weeks
2. Males and females aged 15-49 years

Eligible individuals who did not consent to be interviewed were excluded, as were individuals who were seriously ill or could not clearly communicate with the interviewer. Such cases were recorded, and the reasons for non participation noted on forms.

Sample Size

The sample size calculation was based on the following formula (Kirkwood 2003):

$$n = \frac{\left\{u\sqrt{[\pi_1(1-\pi_1)+\pi_0(1-\pi_0)]}+v\sqrt{[2\bar{\pi}(1-\bar{\pi})]}\right\}^2}{(\pi_0-\pi_1)^2}$$

Where:

u=1.28 (power=80%)

v=1.96 (significance level=5%)

π_0 =proportion at baseline of condom use among 15-24 year olds or comprehensive HIV knowledge among 15-24 years old

π_1 =proportion at follow-up of condom use among 15-24 year olds

$$\overline{\pi} = \frac{\pi_0 + \pi_1}{2}$$

Adjusted sample size per strata

Within each population two age strata (15-24 years old and 25-49 years old) were sampled. The table below shows the sample sizes required per strata at follow up. This was calculated to enable the detection of a 15% change from the observed baseline prevalence, in the 15-24 year old strata, for two main variables: condom use with last non-regular partner and comprehensive knowledge of HIV. These variables were chosen because they reflect both knowledge and behaviour, and because youth are a critical target for HIV programs. The baseline prevalence data was used to calculate the unadjusted sample size. In the case of the host communities, data from Lugufu Host communities was used, as for both indicators it resulted in the larger sample size.

Table 2: Prevalence of key factors at baseline & sample size required to detect a 15% change at follow up

Camp			Host		
Baseline condom use with last non-regular partner in last 12 months	Baseline comprehensive knowledge[a]	Unadjusted sample size at follow-up to detect a 15% change from baseline	Baseline condom use with last non-regular partner in last 12 months	Baseline comprehensive knowledge[a]	Unadjusted sample size at follow-up to detect a 15% change from Baseline
0.39	0.26	186	0.24	0.34	182

[a]*Comprehensive knowledge is a composite of 5 factors: 1. A healthy-looking person can have HIV, the virus that causes AIDS; 2. People can protect themselves from HIV infection by using a condom correctly every time they have sex; 3. People can protect themselves from HIV infection by staying faithful to one uninfected faithful sex partner; 4. A person cannot become infected by sharing food with a person who has the AIDS virus; and 5. The AIDS virus cannot be transmitted by mosquito bites*

The highest unadjusted sample size calculated was 186 was adjusted upwards to allow for 15% non response, since the highest non response recorded at baseline was 11%. The resulting sample size of 214 was applied across strata. Where cluster sampling necessitated a design effect of 2, the sample size required per strata was 428 individuals.

Table 3: Sample size per strata

Age strata	Unadjusted	Adjusted for 15% non response	Adjusted for design effect of 2 and non response of 15%
15-24	186	214	428
25-49	186	214	428

Since systematic random sampling was used in Nyarugusu Camp, the sample size did not need to be adjusted for design effect; however Ex Lugufu and Old Nyarugusu subgroups had to be sampled separately to ensure precision of findings for each subgroup. The tables below show the minimum sample sizes for each age strata in all surveyed groups and subgroups.

Table 4: Required sample size (SS) by strata and population

Nyarugusu Camp (Systematic Sampling)				**SS**
Ex Lugufu		Old Nyarug		
15-24	25-49	15-24	25-49	
214	214	214	214	**856**

Nyarugusu Host (Cluster Sampling)		**SS**	**Lugufu Host (Cluster Sampling)**		**SS**	**Lukole Host Community (Cluster Sampling)**		**SS**	**TOTAL (Camp + 3 Hosts)**
15-24	25-49		15-24	25-49		15-24	25-49		
428	428	**856**	428	428	**856**	428	428	**856**	**3424**

A large sample of 15-49 year olds naturally contains many more people in the 25-49 year age category than in the 15-24 year age category. To calculate the minimum number of households needed to meet all sample size requirements, the average number of youth per household was needed. Using conservatively rounded figures from DHS Tanzania, it was estimated that approximately 516 households would include 428 youth. In the areas where cluster sampling was used, this indicated 13 households per cluster. As the survey was underway in Lugufu host community, it was found that using 13 households per cluster captured more youth than necessary, and it was decided to reduce the number of households per cluster to 12 in the subsequent cluster surveys. It was anticipated that many more 25 -49 year olds would be included in the final survey than required, resulting in a total sample size of more than the 3,424 estimated in Table 4.

The number of households to sample in the Nyarugusu Camp was calculated using estimates from the UNHCR database which suggested approximately 0.6 youth per household in Ex Lugufu households and 0.8 youth per household in Old Nyarugusu households, with differences in average household size accounting for the different calculations made. The final list contained 315 Ex Lugufu households and 233 Old Nyarugusu households.

Sample selection

In all host communities, participants were selected using two stage cluster sampling. The primary sampling unit (PSU) was the sub village. In the first stage, clusters were allocated to PSUs according to probability proportional to size (PPS). Estimates of the population of each PSU were obtained from the office of the village clerk and checked against other information, including populations recorded in the baseline survey. Total population figures were used, with the exception of Nyarugusu communities, where only household populations were available.

In the second stage, households (defined as a group of individuals eating from the same pot for the past two weeks) were selected based on a modified EPI method. At the most central position in the PSU the team placed a pen on the ground and spun it in a random direction. The team walked along this random direction counting the number of households along the way and assigning each a number (e.g. 01-20), until the boundary of the PSU was reached. Numbers corresponding with each household were written on pieces of paper which were then be folded and mixed thoroughly and one was chosen at random.

The selected household was the first household in the cluster. In the selected household each person was listed by age and gender using a Cluster List Form. Eligible household members were offered participation. The remaining households in the cluster were selected by a rule of proximity.

In PSUs where there was more than one cluster, the PSU was divided into roughly equally sized segments equaling the number of clusters to be sampled. The above mentioned steps for selecting households were done in each segment. This was done in order to minimize clustering and avoid selecting the same households. A household was considered "abandoned" if it was reported that no one has lived there for more than one month. This happened seldomly, but when it did, the household was not replaced. The household selection process was often facilitated by a local guide, so teams could understand the boundaries of the sub village and appropriately divided the sub village into segments where necessary.

To select households in the Camp, first the UNHCR lists were sorted into Ex Lugufu and Old Nyarugusu households. Each list was then further sorted by assigning a random number to each household in order to remove any bias associated with original order of the list. After the target number of households was selected, the subgroup lists were sorted by village and block and divided into lists for each survey team. Each survey team was assigned to a list of all Ex Lugufu or all Old Nyarugusu households, and only surveyed households that matched their criteria.

It was known that many residents in the camp had shifted locations since Lugufu residents arrived the previous year. In pilot tests, it was found that the household living at a certain address was sometimes not the household listed. However, the household living at the address most often fit the subgroup criteria (Ex Lugufu or Old Nyarugusu). Thus, the address, and not the household name was used as the unit of selection and the household name did not appear on the interviewer's list. This reduced anxiety that can be caused by interviewers carrying lists of names, particularly in connection with such a sensitive topic, although the interviewers had to explain clearly why they were inquiring about the household's relocation status.

In cases where the household at the address did not match the team's criteria, the team was instructed to visit the nearest household. In almost all cases these steps resulted in identifying an eligible household. In rare cases, the second nearest household was visited. It was noted that a few households were contained a mixture of individuals who would be classified as Ex Lugufu or Old Nyarugusu. This was typically due to marriage or co-habitation, and individuals within the mixed household were interviewed regardless of their status. These occurrences can be seen in the table below.

Table 5: Relocation by Nyarugusu Camp subgroup

	Subgroup of Inclusion			
	Ex Lugufu		**Old Nyarugusu**	
	n/N	%	n/N	**%**
Relocated from Lugufu	578/582	99.3%	11/493	**2.2%**
Did not relocate from Lugufu	**4/582**	**0.6%**	**482/493**	**97.8%**

Study instruments

The questionnaire used in the 2010 Tanzania BSS was a slightly modified version of the questionnaire in the "Manual for Conducting HIV Behavioural Surveillance Surveys among Displaced Populations and their Surrounding Communities" developed by UNHCR, GLIA & World Bank, March 2008, which itself was modeled according to the Family Health International (FHI) BSS guidelines. The 2010 instrument retained more than 90% of the 2005 instrument's content, although some wording or answer categories were slightly changed to reflect current indicators or the regionally agreed format. The follow up instrument included many more questions than the baseline.

In addition to standard HIV BSS questions, both the baseline and follow up questionnaire included questions that located events in pre-displacement, displacement and post displacement for refugees and pre-arrival and post-arrival for host populations. Questions on interaction between refugees and host population were also included. These questions were retained despite their limited applicability in situations where many individuals could not recall pre-displacement, displacement, or pre-arrival time periods (for many, displacement or refugee arrival occurred during their childhood or even before). Similarly, questions on the interaction between refugees and the host community were difficult to answer for some in the communities surrounding Lukole or Lugufu, when the refugees had left more than a year prior to the time of the survey.

The individual questionnaire covered the following topics:

- Background characteristics including age, education, occupation, religion, nationality
- Alcohol and drug use
- Circumcision
- Military activity
- Sexual history and risk behaviour
- Concurrent sexual partnerships
- Sexually transmitted infections
- Knowledge, opinions and attitudes towards HIV/AIDS
- Exposure and access to interventions

The informed consent appeared at the beginning of the questionnaire and was read and verified before an interview commenced. The questionnaire was translated from English to Kiswahili, and back translated to English as a quality control mechanism. Wording and language was reviewed for technical correctness and local suitability by TACAIDS counterparts and changes were incorporated prior to pilot testing. Answer choices of "don't know" and "no response" appeared wherever appropriate to allow interviewers to record responses as closely as possible.

The study instruments also included Cluster List and Household List, in addition to the individual questionnaire, which were used to record non response information at the cluster and household level, and to facilitate revisiting households where eligible members were absent. The household list, which was used by all team members, was translated into Kiswahili, while the Cluster List, which was used by the Team Leaders only, was not translated from English.

Validation of study instruments
UNHCR staff and Government of Tanzania counterparts reviewed the questionnaire and made preliminary changes prior to submitting the document for ethical approval. It was also reviewed in during the training, when minor corrections were made to wording and format. Prior to data collection, the instruments and protocol were thoroughly field tested in a village outside of the study area. Final changes were made accordingly.

Study preparation

Community mobilisation
In the planning phase in each host community site, the Principal Investigator and TACAIDS representative met with district officials, including the District Executive Directors, District Community Services Officers and the District Council HIV/AIDS Coordinator, to inform them of the exercise and encourage their support and participation. District officials were thoroughly supportive and led the effort to notify community leaders. In addition, Team Leaders visited the Village Executive Officer or his/her designate, a few days in advance of data collection to explain the purpose and scope of the exercise, and the benefit of such data to the government's programs, and the steps the teams were taking to safeguard the confidentiality of participants' information.

Thorough mobilisation was especially important in the Lugufu Host community, as the survey time period overlapped with a particularly controversial general elections campaign. While the exercise may have provoked more curiosity in these villages, given the upcoming election, no problems were experienced once the exercise was explained.

In Nyarugusu Camp, mobilisation was facilitated by UNHCR partner organization Tanzania Red Cross Society. In a manner similar to that in the community, leaders were asked to spread the information that teams would be surveying. The enclosed nature of the camp community and more frequent exposure to surveys made mobilisation in Nyarugusu easier, however, sensitivities around information collecting made it important for clear messages to be conveyed in advance.

Training
Training of each survey team required 3-4 days, with an additional day for pilot testing. The trainings were coordinated by the Principal Investigator and Co-investigator, who in each training presented key modules related to ethics and protocol, which were translated to Kiswahili for the participants. In the host communities, the Co-Principal Investigator and both Supervisors led the detailed review of the questionnaire and role-playing exercises. In the camp, the last area to be surveyed, questionnaire review and exercises were led by the Camp Supervisor. In each of the communities, district officials arranged for appropriate community facilities in which the training could be conducted; in the camp, it was arranged in the TRCS training space.

The bulk of the training was spent reviewing and practicing administration of the individual questionnaire. Other presentations included:

- Overview of the BSS and its Objectives
- HIV & STI Transmission

- HIV epidemiology in Tanzania
- Ethics, Consent & Confidentiality
- Basics of Marking Forms, Following Skip Patterns, & Checking Consistency
- Interview Techniques
- Sampling Protocol

Team Leaders attended an additional briefing to explain editing and quality control procedures, recording of non response through the Cluster List and organization of repeat visits to households of absent individuals and follow up with refusals.

The pilot test was conducted immediately following training, and was used to ensure that the team members properly understood sampling procedures and administration of the questionnaire. Forms filled during the pilot test, which was conducted in a village outside the actual survey area, were corrected and explained with trainees who were asked to join the survey team.

Study team

The study team was led by a UNHCR consultant, and included individuals in TACAIDS, Tanzanian National AIDS Control Programme, and the Ministry of Health's Kigoma Regional Office. In addition, two supervisors were hired for the entire data collection period to coordinate the multiple surveys on the ground, particularly given the long distance between survey sites and the overlapping survey schedule.

In the host communities, each survey team was comprised of 2 – 4 team leaders, 9 – 12 male interviewers, 9 – 12 female interviewers (in equal numbers), and 2 drivers. Team leaders and interviewers were recruited through district authorities, and they were typically community services staff, nurses, teachers, or university students. More candidates were invited to participate in training than needed for the survey team. Performance on the pilot test which immediately followed the training period was the main basis for selecting the final team.

Survey teams in Lugufu and Lukole host communities were recruited locally. After two survey teams had completed training and data collection, the third team needed for Nyarugusu host community was assembled from high performing members of the earlier two teams, which eliminated the need for an additional training and helped ensure high quality.

In Nyarugusu Camp, the survey was conducted using staff from TRCS, the organization providing health services in the camp. Eleven men and 11 women were seconded from TRCS as interviewers during the data collection time frame. About a third of the team was Tanzanian national staff, while a third was Congolese refugee staff. Given the relatively short distances in the camp, daily form review was easily facilitated by the supervisor.

Data collection

Timeframe

Dates of data collection in each survey area are as follows:

- Lugufu Host: Oct 13 – 21, 2010
- Lukole Host: Oct 23 – Nov 1, 2010

- Nyarugusu Host: Nov 6 – 17, 2010
- Nyarugusu Camp: Nov 8 – Nov 23, 2010

Consent

When interviewers identified a selected household, they first introduced themselves to the head of household or other adult and asked permission to engage with the household members for obtaining consent. For each eligible individual, the consent form was read and if verbal consent was given, the interviewer signed the form and continued.

Interview procedure

Interviews were conducted in Kiswahili. The interviewer conducted the interview sitting face to face with participants, and reading each question, with instructions dictating whether answer choices should be read aloud or not. Responses were written down according to the format required. Before leaving the household, the interviewer reviewed each form for mistakes, which allowed for clarification with the participant.

Data quality control procedures

In addition to reviewing forms before leaving the household, interviewers were instructed to review their team member's forms as an additional check. Team leaders had the primary responsibility for checking forms in the field, while the supervisor also did so as he monitored different teams. When interviewers had questions, they were advised to contact their team leader or supervisor.

Household List and Cluster List forms were used by the data entry team to ensure that all forms in the host community were accounted for; forms for the camp were tracked using Household List and Address List forms. The data entry supervisor managed all forms as they came in from the field and ensured that they were kept organized and secure.

To ensure the quality of data entry, the first two days of data entry were closely monitored by both the Principal Investigator and data entry supervisor, with more than 20% double entry verification. Data entry clerks who were found to be having many problems had all their work double entered, and if the work did not improve they were dismissed. After the initial close monitoring period, double entry was reduced to 10%. At any time during data entry if the supervisor noticed problems she immediately discussed the errors with the whole team to ensure that everyone understood the appropriate procedure.

Data management and analysis

Data entry is often scheduled to coincide with data collection so that questionnaires can be entered soon after they are completed in the field, and any data collection mistakes could be corrected immediately. Several limitations prevented immediate data entry during this study. Survey sites near the former refugee camps no longer had UNHCR offices nearby, and other potential spaces had unreliable electricity. In addition, Lugufu host villages in particular were located quite a distance from one another; thus, transporting forms daily to one central location would have been challenging. The demands of conducting 3 survey staff trainings and monitoring data collection in geographically spread locations made it difficult to run separate data entry trainings and properly supervise staff.

Thus, one data entry office was created and one data entry team was assembled to process all forms. The team consisted of 1 supervisor and 5 data entry clerks who participated in a survey staff training in order to learn about the questionnaire and protocol, followed by a day of data entry orientation given by the Principal Investigator. Data entry began on Nov 5. As data collection finished, a few high performing survey staff with computer skills joined the team and received on-the-job training with the data entry supervisor. Data entry was completed December 1, 2010.

EpiData was used to create a data entry process whereby the data entry clerks saw the same answer choices on the questionnaire and skip patterns were automatically followed. Values outside the legal range were prohibited, thus eliminating some common data entry errors. Once data was entered, it was exported to STATA version 10.0 for data cleaning. Missing values and inconsistent data was cross checked against the original questionnaires and corrected where it was the result of data entry error. Data cross-checking and further cleaning and labeling of the dataset was completed in December.

Analysis was performed using STATA version 11.0 and accounted for the cluster survey design used in the host communities. Follow up data for Nyarugusu camp was analyzed using weights to account for the actual population size of Ex Lugufu and Old Nyarugusu subgroups.

Ethical considerations

The study team submitted the protocol and instruments for ethical review to the Tanzania National Institute of Medical Research in Dar es Salaam, and approval was granted for work to begin from September 24, 2010.

Chapter 3: 2005 – 2010 Results Comparison

This chapter compares the results from baseline to follow up in each of the three populations where comparison was possible: Lugufu Camp, Lugufu Host, and Lukole Host. Estimates for the baseline survey in the camp are presented with confidence intervals, while estimates for the baseline surveys in the host communities are presented without confidence intervals since the cluster information required for calculation was not collected.

Section 1: Response and demographics

The Tanzania 2005 BSS included a total of 3,387 participants, including 1,640 men and women from Lugufu or Lukole camps, and 1,747 men and women from those surrounding communities. Of 3,387 respondents at baseline, 2,512 belonged to a group that could be compared in the follow up survey. The survey in Lugufu Camp included 765 refugee men and women, and the survey in the Lugufu and Lukole surrounding communities included a combined 1,747 men and women.

Baseline response

Household response

The 2005 survey team in the camps encountered many absent households or households which had repatriated, in which case replacement households were selected from the register. However, household refusal was not common.

Table 6: Non-participation at the household level, baseline survey

Location	Total number of households sampled	Total number of households unavailable for participation due to abandonment, travel, repatriation, or no members within targeted age group			Number of HH available for survey	Number of HH refused survey	Non-participation rate
		Percent HH abandoned/ extended travel	Percent HH Repatriated	Percent HH not eligible (age group)			
Lugufu Camp	644	13%	5%	3%	509	4	0.8%
Lugufu Surrounding Area	528	1%	-	0.6%	520	10	2%
Lukole Surrounding Area	480	1%	-	1%	404	6	1.5%

Individual response

Individual non-response in the baseline survey was primarily due to absenteeism, which was 9% in Lugufu host community and 10% in Lugufu Camp. Refusal was not common.

Table 7: Non-participation at the individual level, baseline

Location	Total number of individuals eligible for interview	Percent of interviews fully or partially completed	Percent of HH members who were absent	Percent of HH members not interviewed for other reasons	Percent of HH members who refused	Total non-participation of HH members due to absence, refusal or other reason
Lugufu Camp	760	89%	10%	1%	0	11%
Lugufu Surrounding Area	928	91%	9%	0.2%	0.1%	9%
Lukole Surrounding Area	804	99%	1%	0	0.1%	1.1%

Follow up response

The 2010 BSS was conducted with a total of 3,911 respondents, of whom 1,077 were refugee men and women, and 2,834 were men and women from 3 surrounding host communities. Of the 3,911 respondents in 2010, 2,496 fell into one of the three populations where comparison to baseline was possible, including 583 refugee men and women who transferred from Lugufu Camp, and 1,913 men and women from the 2 surrounding host communities.

Household response

Response at the household level was very high in all the host communities, with few cases of abandoned households. In the camp, the surveyors were to find the household at the selected address or nearest to the selected address, as the address was the unit of selection. Therefore the number of abandoned or repatriated households was not recorded. Repatriation was not common during the time of the survey and not expected to affect results. Only 2 households in the camp were found not to have eligible individuals.

Table 4: Non-participation at the household level, follow-up survey

Location	Total number of households sampled	Total number of households unavailable for participation due to abandonment, travel, repatriation, or no members within targeted age group			Number of HH available for survey	Number of HH refused survey	Non-participation rate
		Number HH abandoned/ extended travel	Number HH Repatriated	Number HH not eligible (age group)			
Nyarugusu Camp							
Ex Lugufu	315	0*	0*	2	313	0	0.6%
Lugufu Surrounding Area							
Host	520	2	-	0	518	0	0.5%
Lukole Surrounding Area							
Host	480	0	-	0	480	0	0%
Total	**1,315**	**2**	**0**	**2**	**1,311**	**0**	**0.3%**

**The sampling method used in Nyarugusu did not account for abandoned households, as the address of the household was the unit, and the teams were instructed to locate the household nearest to the listed address.*

Individual response

No site experienced a high number of refusals. The overwhelming reason for non response was absenteeism, which varied from 13% and 8% in the Lugufu and Lukole host communities to 5% among Ex Lugufu refugees at the camp.

Table 5: Non-participation at the individual level, follow-up survey

Location	Total number of individuals eligible for interview	Percent of interviews fully or partially completed	Number of HH members who were absent*	Number of HH members not interviewed for other reasons†	Number of HH members who refused	Total non-participation of HH members due to absence, refusal or other reason
Nyarugusu Camp						
Ex Lugufu	614	583	24	7	0	5.0%
Lugufu Surrounding Area						
Host	1181	1021	157	2	1	13.5%
Lukole Surrounding Area						
Host	983	892	82	6	3	9.3%
Total	**2,778**	**2,496**	**263**	**15**	**4**	**10.2%**

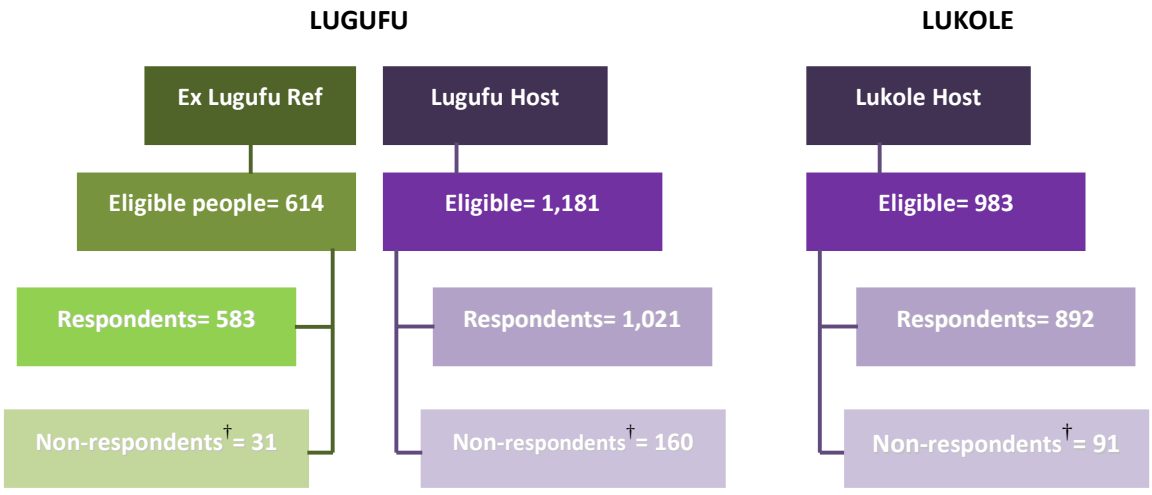
* Absence defined as not present in the household at the time of the survey after 3 attempts.

† Other reasons included illness or disability which prevented clear communication with an individual

Sample size

The final sample is shown below, in relation to the number of eligible individuals selected.

Figure 1: Sample size for comparison populations, follow up



The response recorded for the baseline and follow up surveys was similar. Employing similar methodologies and conducting both surveys in a timeframe from October to November increased the likelihood of having a comparable sample. The issue of large numbers of repatriated and absent

households in the baseline survey at Lugufu was not experienced at follow up since repatriation was not common at the time, and because the teams received a list of addresses rather than family names.

Individual absenteeism was common in both surveys, particular in the Lugufu host communities, where 9% of eligible individuals were not located at baseline and 13% were not located at follow up. Both surveys occurred around the harvest time, and 2010 survey team reported that it was difficult to locate those who were working long at hours in the field. The national election campaign was at its peak during the time of the 2010 surveys in Lugufu and Lukole communities, which may have had some effect. Another factor that villagers pointed to was the closure of the camps, which led to many adults taking work opportunities outside the village. Youth were often reported to be at residential schools. These factors may be reflected in the finding that from baseline to follow up, the proportion of young men who spent 4 weeks or longer outside the community in the past year increased from 16.7% to 30.3%. While individuals would be ineligible if they had stayed away for previous two weeks, they may have been deemed eligible if they made a visit within the time period. Absenteeism was possibly over recorded in the first completed host community study, Lugufu, where one team reported a higher than usual number of absent individuals. Upon review of the team's notes, some individuals were reclassified as ineligible if they in fact were not living at the residence, but in many cases notes were not clear enough to make a determination.

The large difference between the sample size of Ex Lugufu, relative to the host communities is due to systematic sampling done in the camp, which did not require accounting for a design effect. The 2005 survey also used systematic sampling but the sample size was the same for all populations, and thus it was larger, to accommodate cluster design in the host communities. The follow up Lugufu host community had a larger sample than the follow up Lukole host community because originally 13 households were selected per cluster, and later the number of households was reduced to 12 after the yield in Lugufu was found to be more than sufficient.

Demographic characteristics of the respondents

Refugee population

At baseline, 355 refugee men and 410 refugee women were interviewed at Lugufu Camp for a total of 765 respondents (46.4% men, 53.6% women). At follow up, 255 refugee men and 328 refugee women who transferred to Nyarugusu Camp from Lugufu Camp were interviewed, for a total of 583 "Ex Lugufu" refugee respondents (43.7% men, 56.3% women). The proportion in each age group remained steady from baseline to follow up, with approximately 45% of respondents aged 15 – 24 years, and approximately 55% of respondents aged 25 – 49.

At baseline, the Lugufu refugees interviewed were almost all Congolese (98.7%), with no other nationality having 1% or more respondents. At follow up the population remained predominantly Congolese (98.7%), but included 14 Burundians who made up 2.4%. Of the 583 follow up respondents, only 0.3% reported not being current refugees, compared to 2.0% at baseline.

At follow up, more respondents of the protestant faith were interviewed (60.7% versus 49.9% at baseline), with somewhat fewer Catholics (23.7% versus 27.4% at baseline) and fewer in the "other" category (4.1% versus 11.4% at baseline). The proportion of Muslim respondents remained steady at follow up (11.5% versus 11.4% at baseline). Levels of education seemed to have improved from baseline. More than 50% reported having at least a secondary education (57.5% versus 51.5% at baseline) and the proportion of those having no education decreased from 14.7% at baseline to 9.9% at follow up, with a statistically significant drop in the proportion of women reporting no education (24.9%, 95% CI: 20.7-29.1 at baseline versus 15.2%; 95% CI: 11.3-19.1 at follow up). Changes in educational attainment, however, were not reflected in literacy. At follow up 80.1% of respondents reported being able to read in at least one language (compared to 81.4% at baseline), and there were no significant changes by sex.

The proportion of respondents reporting that they earned income was 16.5% (95% CI: 13.9-19.2) at baseline while at follow up 6.0% reported a regular wage or salary (95% CI: 4.1-7.9). Because the income questions were differently worded, no comparison can be made. At follow up 5.1% of men reported a history of military involvement, versus 10.0% of men at baseline in the Lugufu host population.

Lukole host population

The 2005 survey in the Lugufu host communities included 381 men and 548 women (41.0% men, 59.0% women), while the 2010 survey in the same communities included 424 men and 597 women (41.5% men, 58.5% women). The proportion of youth in the sample increased from 37.6% in 2005 to 44.3% in 2010. In both surveys, the proportion of Tanzanians was greater than 99% (99.3% at baseline, 99.7% at follow up).

Religious affiliation did not change much from baseline, with approximately half of the respondents reporting to be Muslim (48.3% at baseline, 49.9% at follow up), a slight increase in the proportion of Protestants (22.5% at baseline, 29.2% at follow up) and a slight decrease in the proportion of Catholics (25.1% at baseline, 20.2% at follow up). Education levels appeared somewhat lower at follow up compared to baseline, corresponding with a drop in literacy from 84.2% at baseline to 76.5% at follow up, with a large drop in reported literacy for women (79.4% at baseline; 67.2%, 95% CI: 61.7-72.2% at follow up). At follow up, more than a third respondents reported no education or incomplete primary education (35.8%), while that figure was about a quarter at baseline (24.7%).

At follow up, many fewer respondents reported having a regular wage than reported earning any income at baseline (51.4% at baseline; 15.7% at follow up), a change which cannot be interpreted, due to the difference in question wording. History of military or police involvement increased among men, from 9.0% at baseline to 15.8% at follow up, of which 5.1% reported current involvement.

Lukole host population

In the Lukole host community, the 2005 survey included 372 men and 446 women (45.5% men, 54.5% women), while the 2010 survey included 420 men and 472 women (47.1% men, 52.9% women). The proportion of youth dropped from 40.1% at baseline to 35.8% at follow up. More Tanzanian respondents were found at follow up versus baseline (95.3% at baseline versus 97.5% at follow up), with

1.2% of respondents Burundian and 1.2% of respondents Rwandan. Compared to baseline, fewer respondents reported current refugee status (5.7% at baseline, 1.9% at follow up).

Religious affiliation of respondents changed somewhat from baseline, with 57.2% claiming Protestant affiliation (27.0% at baseline), and 37.1% claiming Catholic affiliation (47.2% at baseline). Just 5.4% of respondents claimed Muslim affiliation (versus 9.4% at baseline), and only 2 of 892 reported "other" religious affiliation (16.4% at baseline). Educational attainment remained similar to that found in 2005, with 43.1% reporting no education or incomplete primary (36.8% at baseline), about half reporting primary education only (57.5% at baseline, 51.0% at follow up), and less than 6% reporting secondary or higher (5.8% at baseline, 5.8% at follow up). Overall literacy dropped slightly to 60.4% (from 64.5% at baseline), resulting from a drop in literacy among women from 57.4% at baseline to 58.9% at follow up.

At follow up, only 6.4% of respondents reported earning a regular wage. At baseline 77.0% of respondents reported earning any income. Differences are, again, not comparable, as the phrasing of the questions was different. A history of military involvement among men increased from 9.7% at baseline to 14.3% at follow up, and 5.0% of men at follow up reported current military involvement.

Results in this section should be interpreted keeping in mind the differences between the 3 populations reviewed, and key differences in each from baseline to follow up. The proportion of youth in both Lugufu camp and Lugufu community was 44.3% at follow up, whereas at Lukole community it decreased from 40.1% at baseline to 35.8%, leaving fewer youth in the sample than anticipated (319 versus a target of 372). The drop could reflect young people moving out of the community for work or school opportunities, as reported informally. All populations were predominantly either refugee or non-refugee, according to their location, and no significant changes in nationality were seen. In the camp, Congolese made up more than 96% of the population at either time period; in the host communities, Tanzanians always made up more than 95% of the population at either time period.

Differences in religion were found between populations, as well as over time. Protestantism increased in each population, as Catholicism decreased in each population. In the surrounding areas, the changes over time were not explained by new arrivals. In the camp, it is unknown whether the change represents conversion or greater repatriation among refugees claiming Catholic or "other" religious affiliation. The proportion of Muslim respondents in each location remained steady, with about half the population at Lugufu community reporting Islam as their religion, in comparison to about 11% in the camp and less than 10% at Lukole community.

Educational attainment varied greatly among communities. More than half of the camp respondents at either time period completed secondary education or higher, with the proportion increasing from baseline to follow up, whereas less than 10% of respondents at either host community at either time period reported achieving secondary education. In both host communities, primary education completion dropped and the proportion who reported no education or incomplete primary education rose. Literacy also dropped in both host communities to about 77% in Lugufu host community and 60% in Lukole host community, while it held steady at around 80% among refugees.

Among the refugee respondents, military or police history was reported by about half as often at follow up compared to baseline, but among host community men it increased from around 9 – 10% at baseline to around 14-16% at follow up.

Figure 2: Religion at baseline and follow up, by survey population

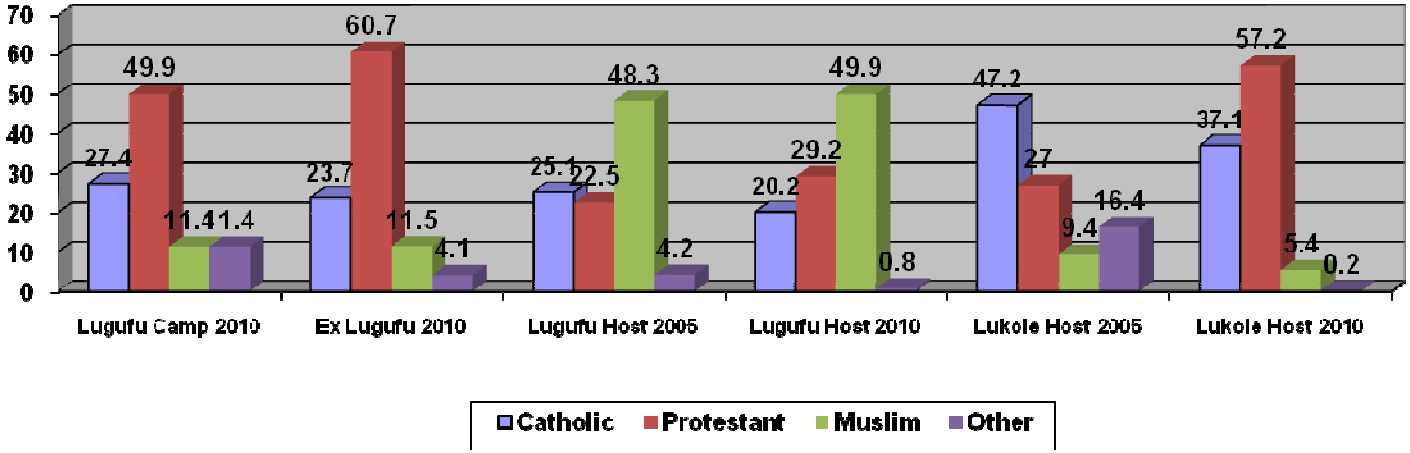


Figure 3: Education levels at baseline and follow up, by survey population

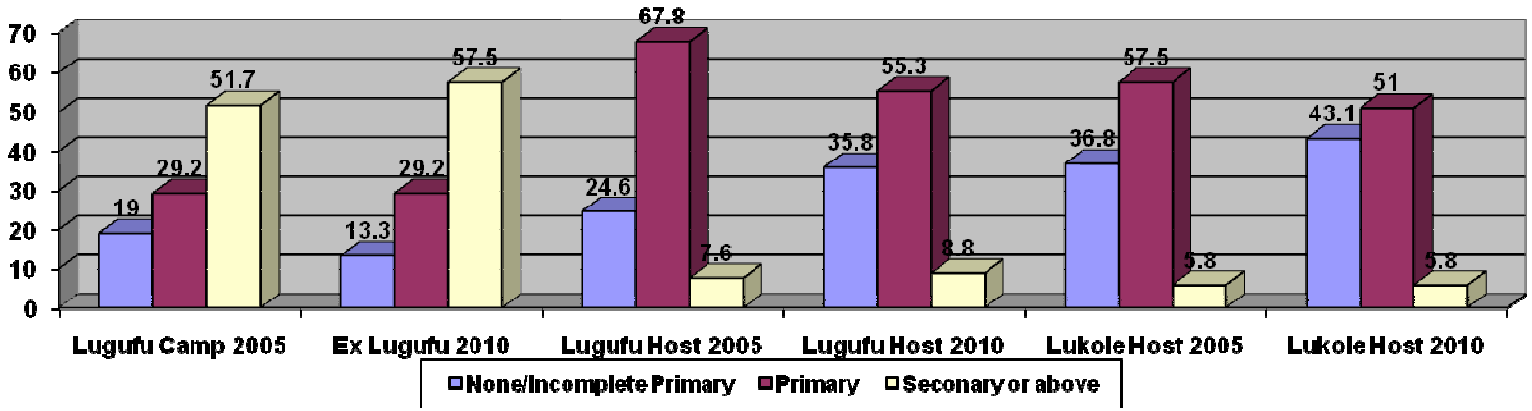


Table 8: Demographic characteristics of Lugufu Refugees at baseline and follow up

Characteristics	Men				Women				Men + Women			
	Baseline		Follow up		Baseline		Follow up		Baseline		Follow up	
	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)
Age (years)												
15-24	171/355	48.2 (43.0 ,53.4)	115/255	45.1 (39.0, 51.2)	172/410	48.2 (43.0, 53.4)	143/328	43.6 (38.2, 49.0)	343/765	44.8 (41.3, 48.4)	258/583	44.3 (40.2, 48.3)
15-19	107/171	62.6 (55.3, 69.9)	75/115	65.2 (56.4, 74.0)	97/172	56.4 (48.9, 63.9)	77/143	53.8 (45.6, 62.1)	204/343	59.5 (54.3, 64.7)	152/258	58.9 (52.8, 65.0)
20-24	64/171	37.4 (30.1, 44.7)	40/115	34.8 (26.0, 43.6)	75/172	43.6 (36.1, 51.1)	66/143	46.2 (37.9, 54.4)	139/343	40.5 (35.3, 45.7)	106/258	41.1 (35.0, 47.1)
25-59	184/355	51.8 (46.6,57.0)	140/255	54.9 (48.8, 61.0)	184/410	58.0 (53.3, 62.8)	185/328	56.4 (51.0, 61.8)	422/765	55.2 (51.6, 58.7)	325/583	55.7 (51.7, 59.8)
Current Nationality												
Tanzanian	1/355	0.3 (<0.001,0.8)	0/255	0	2/409	0. 5 (<0.001, 1.2)	1/328	0.3 (<0.001, 0.9)	3/764	0.4 (<0.001, 0.8)	1/583	0.2 (<0.001, 0.5)
DRC	353/355	99.2 (98.2, 100)	246/255	96.5 (94.2, 98.7)	402/409	98.3 (97.0, 99.5)	318/328	97.0 (95.1, 98.8)	754/764	98.7 (97.9,99.5)	564/583	96.7 (95.3, 98.2)
Burundian	2/355	0.6 (0,1.3)	7/255	2.7 (0.7, 4.8)	4/409	9.8 (0.002, 1.9)	7/328	2.1 (0.6, 3.7)	6/764	0.8 (0.2, 1.4)	14/583	2.4 (1.2, 3.6)
Other	0/355	0	2/255	0.8 (<0.001, 1.9)	1/409	0.2 (<0.001, 0.7)	2/328	0.6 (<0.001, 1.4)	1/764	0.1 (<0.001,0.4)	4/583	0.7 (0.02, 1.4)
Refugee	344/352	97.8 (96.2, 99.3)	254/255	99.6 (98.8, 99.99)	402/409	98.3 (97.0, 9.5)	327/328	99.7 (99.1, 100)	746/761	98.0 (97.0, 99.0)	581/583	99.7 (99.2, 99.96)
Religious affiliation												
Catholic	96/351	27.4 (22.7, 32.0)	52/255	20.4 (15.4, 25.4)	111/405	27.4 (23.1,31.8)	86/328	26.2 (21.4, 31.0)	207/756	27.4 (24.2, 30.6)	138/583	23.7 (20.2, 27.1)
Protestant	169/351	48.1 (42.9, 53.4)	158/255	62.0 (56.0, 67.9)	169/405	51.4 (46.5, 56.2)	196/328	59.8 (54.4, 65.1)	377/756	49.9 (46.3, 53.4)	354/583	60.7 (56.7, 64.7)
Muslim	45/351	12.8 (9.3, 16.3)	30/255	11.8 (7.8, 15.7)	41/405	10.1 (7.2, 13.1)	37/328	11.3 (7.8, 14.7)	86/756	11.4 (9.1, 13.6)	67/583	11.5 (8.9, 14.1)
Other	41/351	11.7 (8.3, 15.1)	15/255	2.7 (1.0, 4.5)	45/405	11.1 (8.0, 14.2)	9/328	2.7 (1.0, 4.5)	86/756	11.4 (9.1, 13.6)	24/583	4.1 (2.5, 5.7)
Education												
None	10/354	2.8 (1.1, 4.6)	8/255	3.1 (1.0, 5.3)	102/409	24.9 (20.7, 29.1)	50/328	15.2 (11.3, 19.1)	112/763	14.7 (12.2, 17.2)	58/583	9.9 (7.5, 12.4)

Characteristics	Men				Women				Men + Women			
	Baseline		Follow up		Baseline		Follow up		Baseline		Follow up	
	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)
Incomplete Primary	7/354	2.0 (0.5, 3.4)	1/255	0.4 (<0.001, 1.2)	26/409	6.4 (4.0, 8.7)	19/328	5.8 (3.3, 8.3)	33/763	4.3 (2.9, 5.8)	20/583	3.4 (1.9, 4.9)
Primary	51/354	14.4 (10.7, 18.1)	51/255	20.0 (15.1, 24.9)	172/409	42.1 (37.3, 46.9)	119/328	36.3 (31.1, 41.5)	223/763	29.2 (26.0, 32.5)	170/583	29.2 (25.5, 32.9)
Secondary	267/354	75.4 (70.9, 79.9)	187/255	73.3 (67.9, 78.8)	101/409	24.7 (20.5, 28.9)	140/328	42.7 (37.3, 48.1)	368/763	48.2 (44.7, 51.8)	327/583	56.1 (52.0, 60.1)
Tertiary	19/354	5.4 (3.0, 7.7)	8/255	3.1 (1.0, 5.3)	8/409	2.0 (0.6, 3.3)	0/328	0	27/763	3.5 (2.2, 4.9)	8/583	1.4 (0.4, 2.3)
Literacy												
Can easily read one language	341/355	96.1 (94.0, 98.1)	240/255	94.1 (91.2, 1.0)	282/410	68.8 (64.3, 73.3)	227/328	69.2 (64.2, 74.2)	623/765	81.4 (78.7, 84.2)	467/583	80.1 (76.9, 83.3)
Cannot easily read one language	14/355	3.9 (1.9, 6.0)	15/255	5.9 (3.0, 8.8)	128/410	31.2 (26.7, 35.7)	101/328	30.8 (25.8, 35.8)	142/765	18.6 (15.8, 21.3)	116/583	19.9 (16.6, 23.1)
Earn regular wage*	74/353	21.0 (16.7, 25.2)	25/255	9.8 (6.1, 13.5)	52/353	12.7 (9.5, 16.0)	10/328	3.0 (1.2, 4.9)	126/762	16.5 (13.9, 19.2)	35/583	6.0 (4.1, 7.9)
Ever been involved in official or unofficial military/police	34/339	10.0 (6.8, 13.2)	13/255	5.1 (2.4, 7.8)	6/397	1.5 (0.3, 2.7)	3/328	0.9 (0.002, 1.9)	40/735	5.4 (3.8, 7.1)	16/583	2.7 (1.4, 4.1)

**At baseline, the question was "Do you earn any income?" while at follow up the question referred to "regular wage or salary," thus, estimates are not comparable*

Table 9: Demographic characteristics of Lugufu Hosts at baseline and follow up

Characteristics	Men				Women				Men + Women			
	Baseline		Follow up		Baseline		Follow up		Baseline		Follow up	
	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)
Age (years)												
15-24	115/381	30.2 (25.6, 34.8)	169/424	39.9 (33.0, 47.1)	234/548	42.7 (38.6, 46.9)	283/597	47.4 (42.5, 52.3)	349/929	37.6 (34.4, 40.7)	452/1021	44.3 (39.5, 49.2)
15-19	72/115	62.6 (53.7, 71.5)	92/169	54.4 (46.6, 62.1)	99/234	42.3 (35.9, 48.7)	152/283	53.7 (47.2, 60.1)	171/349	49.0 43.7, 54.3)	244/452	54.0 (48.5, 59.3)

Characteristics	Men				Women				Men + Women			
	Baseline		Follow up		Baseline		Follow up		Baseline		Follow up	
	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)
20-24	43/115	37.4 (28.5, 46.3)	77/169	45.6 (77/169)	135/234	57.7 (51.3, 64.1)	131/283	46.3 (39.9, 52.8)	178/349	51.0 (45.7, 56.3)	208/452	46.0 (40.7, 51.5)
25-59	266/381	69.8 (65.2, 74.4)	255/424	60.1 (52.9, 67.0)	314/548	57.3 (53.1, 61.4)	314/597	52.6 (47.7, 57.5)	580/929	62.4 (59.3, 65.6)	569/1021	55.7 (50.8, 60.5)
Current Nationality												
Tanzanian	376/381	98.7 (97.5, 99.8)	423/424	99.3 (97.8, 99.8)	545/547	99.6 (99.1, 99.96)	595/597	99.7 (98.7, 99.9)	921/928	99.3 (98.7, 9.8)	1018/1021	99.7 (99.1, 99.9)
DRC	0/381	0 -	0/424	0 -	0/547	0 -	1/597	0.17 (0.02, 1.2)	0/928	0 -	1/1021	0.1 (0.01, 0.7)
Burundian	1/381	0.3 (<0.001,0.8)	0/424	0 -	0/547	0 -	0/597	0 -	1/928	0.1 (<0.001, 0.3)	0/1021	0 -
Rwanda	2/381	0.5 (<0.001,1.3)	1/424	0.2 (0.17, 0.2)	2/547	0.5 (<0.001, 1.3)	1/597	0.17 (0.02, 1.2)	4/928	0.4 (0, 0.9)	2/1021	0.2 (0.05, 0.8)
Other	2/381	0.5 (<0.001, 1.3)	0/424	0 -	0/547	0 -	0/597	0 -	2/928	0.3 (0.001, 0.7)	0/1021	0 -
Refugee	6/379	1.6 (0.3, 2.8)	6/424	1.4 (0.6, 3.5)	3/545	0.6 (<0.001,1.2)	6/597	1.0 (0.5, 2.2)	9/924	1.0 (0.3, 1.6)	12/1021	1.2 (0.7, 2.0)
Religious affiliation												
Catholic	109/381	28.6 (24.1, 33.2)	90/424	21.2 (16.0, 27.6)	123/545	22.6 (19.1, 26.1)	116/597	19.4 (14.3, 25.9)	232/926	25.1 (22.3, 27.9)	206/1021	20.2 (15.3, 26.1)
Protestant	89/381	23.4 (19.1, 27.6)	126/424	29.7 (24.0, 36.2)	119/545	21.8 (18.4, 25.3)	172/597	28.8 (23.4, 35.0)	208/926	22.5 (19.8, 25.2)	298/1021	29.2 (24.1, 34.8)
Muslim	170/381	44.6 (39.6, 49.6)	200/424	47.2 (41.0, 53.4)	277/545	50.8 (46.6, 55.0)	309/597	51.8 (44.6, 58.9)	447/926	48.3 (45.0, 51.5)	509/1021	49.9 (43.6, 56.1)
Other	13/381	3.4 (1.6, 5.2)	8/424	1.9 (0.8, 4.2)	26/545	4.7 (3.0,6.6)	0/597	0 -	39/926	4.2 (2.9, 5.5)	8/1021	0.8 (0.3, 1.8)
Education												
None	34/381	8.9 (6.1, 11.8)	27/424	6.4 (4.2, 9.6)	104/545	19.1 (15.8, 22.4)	138/597	23.1 (19.1, 27.8)	138/926	14.9 (12.6, 17.2)	165/1021	16.2 (13.3, 19.6)
Incomplete Primary	28/381	7.3 (4.7, 10.0)	67/424	15.8 (12.2, 20.2)	62/545	11.4 (8.7, 14.0)	133/597	22.3 (17.6, 27.8)	90/926	9.7 (7.8, 11.6)	200/1021	19.6 (16.6, 23.0)
Primary	278/381	73.0 (68.5, 77.4)	272/424	64.2 (60.2, 67.9)	350/545	64.2 (60.2, 68.3)	293/597	49.1 (44.2, 53.9)	628/926	67.8 (64.8, 70.8)	565/1021	55.3 (52.0, 58.6)

Characteristics	Men				Women				Men + Women			
	Baseline		Follow up		Baseline		Follow up		Baseline		Follow up	
	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)
Secondary	35/381	9.2 (6.3, 12.1)	54/424	12.7 (9.0, 17.7)	27/545	5.0 (3.1, 6.8)	31/597	5.2 (3.2, 8.2)	62/926	6.7 (5.1, 8.3)	85/1021	8.3 (6.2, 11.1)
Tertiary	6/381	1.6 (0.3, 2.8)	3/424	0.7 (0.2, 2.2)	2/545	0.4 (<0.001, 0.9)	2/597	0.3 (0.1, 1.3)	8/926	0.9 (0.3, 1.5)	5/1021	0.5 (0.2, 1.1)
Literacy												
Can easily read one language	347/381	91.1 (88.2, 93.)	380/424	89.6 (85.0, 92.9)	435/548	79.4 (76.0, 82.8)	401/597	67.2 (61.7, 72.2)	782/929	84.2 (81.8, 86.5)	781/1021	76.5 (72.4, 80.1)
Cannot easily read one language	34/381	8.9 (6.1, 11.8)	44/424	10.4 (7.1, 15.0)	113/548	20.6 (17.2, 24.0)	196/597	32.8 (27.8, 38.3)	147/929	15.8 (13.5, 18.2)	240/1021	23.5 (19.9, 27.6)
Earn regular wage*	211/378	55.8 (50.8, 60.8)	111/424	26.2 (17.0, 38.1)	263/544	48.3 (44.1, 52.6)	49/597	8.2 (5.3, 12.5)	474/922	51.4 (48.2, 54.6)	160/1021	15.7 (10.3, 23.1)
Ever been involved in official or unofficial military/police	34/379	9.0 (6.1, 11.9)	67/424	15.8 (11.3, 21.7)	6/546	1.1 (0.2, 2.0)	10/597	1.7 (0.9, 3.1)	40/925	4.3 (3.0, 5.6)	77/1021	7.5 (5.6, 10.1)

**At baseline, the question was "Do you earn any income?" while at follow up the question referred to "regular wage or salary," thus, estimates are not comparable*

Table 10: Demographic characteristics of Lukole Hosts at baseline and follow up

Characteristics	Men				Women				Men + Women			
	Baseline		Follow up		Baseline		Follow up		Baseline		Follow up	
	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)
Age (years)												
15-24	137/372	36.8 (31.9, 41.7)	150/420	35.7 (31.0, 40.7)	191/446	42.8 (38.2, 47.4)	169/472	35.8 (31.5, 40.3)	328/818	40.1 (36.7, 43.5)	319/892	35.8 (32.3, 39.4)
15-19	84/137	61.3 (53.1, 69.5)	69/150	46.0 (38.5, 53.7)	91/191	47.6 (40.5, 54.8)	67/169	39.6 (31.8, 48.0)	175/328	53.4 (47.9, 58.8)	136/319	42.6 (37.6, 47.8)
20-24	53/137	38.7 (30.5, 46.9)	81/150	54.0 (46.3, 61.6)	100/191	52.4 (45.2, 59.5)	102/169	60.4 (52.0, 68.2)	153/328	46.7 (41.2, 52.1)	183/319	57.4 (52.2, 62.4)
25-59	235/372	63.2 (58.3, 68.1)	270/420	64.3 (59.3, 69.0)	255/446	57.2 (52.6, 61.8)	303/472	64.2 (59.7, 68.5)	490/818	60.0 (56.5, 63.3)	573/892	64.2 (60.6, 67.8)
Current Nationality												
Tanzanian	356/371	96.0 (93.9, 98.0)	408/420	97.1 (94.9, 98.4)	422/445	94.8 (92.8, 96.9)	462/472	97.9 (96.0, 98.9)	778/816	95.3 (93.9, 6.8)	870/892	97.5 (96.2, 98.4)
Burundian	9/371	2.4	8/420	1.9	9/445	2.0	3/472	0.6	18/816	2.2	11/892	1.2

Characteristics	Men				Women				Men + Women			
	Baseline		Follow up		Baseline		Follow up		Baseline		Follow up	
	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)
		(0.9, 4.0)		(0.8, 4.3)		(0.7, 3.3)		(0.2, 2.0)		(1.2, 3.2)		(0.6, 2.3)
Rwandan	6/371	1.6 (0.3, 2.9)	4/420	1.0 (0.4, 2.5)	13/445	2.9 (1.4, 4.5)	7/472	1.5 (0.7, 3.0)	19/816	2.3 (1.3, 3.4)	11/892	1.2 (0.7, 2.1)
Refugee	15/369	4.1 (2.0, 6.1)	4/420	1.0 (0.3, 3.1)	31/443	7.0 (4.6, 9.4)	13/472	2.8 (1.5, 5.0)	46/812	5.7 (4.1, 7.3)	17/892	1.9 (1.1, 3.2)
Religious affiliation												
Catholic	174/367	47.4 (42.3, 52.5)	156/420	37.1 (30.2, 44.6)	208/443	47.0 (42.3, 51.6)	175/472	37.1 (30.4, 44.3)	382/810	47.2 (43.7, 50.6)	331/892	37.1 (30.7, 44.0)
Protestant	104/367	28.3 (23.7, 33.0)	241/420	57.4 (50.1, 64.3)	115/443	26.0 (21.9, 30.0)	269/472	57.0 (50.1, 63.7)	219/810	27.0 (24.0, 30.1)	510/892	57.2 (50.5, 63.6)
Muslim	33/367	9.0 (6.1, 11.9)	23/420	5.5 (3.2, 9.2)	43/443	9.7 (6.9, 12.5)	25/472	5.3 (3.1, 8.8)	76/810	9.4 (7.4, 11.4)	48/892	5.4 (3.3, 8.7)
Other	56/367	15.3 (11.6, 18.9)	0/420	0 -	77/443	17.4 (13.8, 20.9)	2/472	0.4 (0.1, 3.2)	133/810	16.4 (13.9, 19.0)	2/892	0.2 (0.03, 1.7)
Education												
None	74/372	19.9 (15.8, 24.0)	64/420	15.4 (11.7, 19.6)	157/445	35.3 (30.8, 39.7)	162/472	34.3 (29.3, 39.8)	231/817	28.3 (25.2, 31.4)	226/892	25.3 (21.7, 29.3)
Incomplete Primary	33/372	8.9 (6.0, 11.8)	69/420	16.4 (12.6, 21.1)	36/446	8.1 (5.5, 10.6)	90/472	19.1 (15.9, 22.7)	69/817	8.5 (6.5, 10.4)	159/892	17.8 (15.3, 20.7)
Primary	240/372	64.5 (59.6, 69.4)	256/420	61.0 (54.9, 66.7)	230/446	51.7 (47.0, 56.3)	199/472	42.2 (36.8, 47.8)	470/817	57.5 (54.1, 60.9)	455/892	51.0 (46.4, 55.6)
Secondary	12/372	3.2 (1.4, 5.0)	29/420	6.9 (4.0, 11.5)	15/446	3.4 (1.7, 5.1)	19/472	4.0 (2.6, 6.3)	27/817	3.3 (2.1, 4.5)	48/892	5.4 (3.5, 8.2)
Tertiary	13/372	3.5 (1.6, 5.4)	2/420	0.5 (0.1, 1.9)	7/446	1.6 (4.1, 2.7)	2/472	0.4 (0.1, 1.7)	20/817	2.5 (1.4, 3.5)	4/892	0.4 (0.2, 1.2)
Literacy												
Can easily read one language	272/372	73.1 (68.6, 77.6)	308/420	73.3 (67.9, 78.2)	256/446	57.4 (52.8, 62.0)	231/472	48.9 (42.4, 55.5)	528/818	64.5 (61.3, 67.8)	539/892	60.4 (55.1, 65.6)
Cannot easily read one language	100/372	26.9 (22.4, 31.4)	112/420	26.7 (21.8, 32.1)	190/446	42.6 (38.0, 31.4)	241/472	51.1 (44.5, 57.6)	290/818	35.5 (32.2, 38.7)	353/892	39.6 (34.5, 44.9)
Earn regular wage*	293/372	78.8 (74.6, 82.9)	21/420	5.0 (3.0, 8.2)	333/441	75.5 (71.5, 79.5)	36/472	7.6 (5.6, 10.3)	626/813	77.0 (74.1, 79.9)	57/892	6.4 (5.1, 8.0)
Ever been involved in official or unofficial	36/370	9.7 (6.7, 12.8)	60/420	14.3 (10.9, 18.6)	12/442	2.7 (1.2, 4.2)	24/472	5.1 (3.4, 7.6)	48/812	5.9 (4.3, 7.5)	84/892	9.4 (7.6, 11.7)

Characteristics	Men				Women				Men + Women			
	Baseline		Follow up		Baseline		Follow up		Baseline		Follow up	
	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)
military/police												

**At baseline, the question was "Do you earn any income?" while at follow up the question referred to "regular wage or salary," thus, estimates are not comparable*

Marital status

For Lugufu camp respondents, current marriage was similar at follow up and baseline (55.0% at baseline, 56.4% at follow up), though cohabitation was less common (60.2% at baseline and 51.5% at follow up). Mean age at first marriage increased for both men and women (21.3 and 16.8 for men and women at baseline, 23.4 and 17.6 for men and women at follow up), and the proportion of respondents in a polygamous marriage dropped by 17.1% to 12.4%.

Among Lugufu host respondents, 64.6% were currently married at both baseline and follow up, and mean age at first marriage was similar at both time periods, though higher for men (23.4 and 18.6 for men and women at baseline, 23.7 and 18.8 for men and women at follow up). Polygamous marriage dropped slightly from 15.0% at baseline to 13.2% at follow up.

In 2010 respondents at Lukole host community were more likely to have been married ever (82.0% versus 68.9% at baseline) or currently (76.0% versus 61.8% at baseline). Polygamous marriage was reported by 16.5% of Lukole host respondents in 2010 compared to 30.8% in 2005.

Large differences in marriage history between Lugufu and Lukole host communities (69.0% ever married at Lugufu, 82.0% ever married at Lukole), are partly the result of age composition differences, and partly due to differences in marriage history among youth, with 56% of youth at Lukole having been married ever and 35% of youth at Lugufu surrounding community having been married ever; among those 25 years and older, 96.1% and 96.5% at Lugufu and Lukole communities had ever been married.

Respondents in the camp were less likely to be currently married (55.0 at baseline, 56.4% at follow up) compared to respondents in the communities (64.6% at both baseline and follow up in Lugufu host; 61.8% at baseline, 76.0% at follow up in Lukole), and more likely to be divorced, separated or widowed. Mean age at first marriage increased for both sexes at all sites, except for Lukole host community, where it decreased from 18.9 to 18.2 among women. Mean age at first marriage at follow up was lowest for Ex Lugufu women (17.6), though it had slightly increased from 16.8 years at baseline. The proportion of respondents in polygamous marriages decreased to between 12.4 – 16.5% at follow up from 15.0-30.8% at baseline.

Table 11: Marital Status of Respondents, baseline and follow up

Characteristics	Men				Women				Men + Women			
	Baseline		Follow up		Baseline		Follow up		Baseline		Follow up	
	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)

Lugufu Camp Population												
Ever married	194/354	54.9 (49.6, 60.0)	154/255	60.4 (54.4, 66.4)	307/409	75.1 (70.9, 79.3)	260/328	79.3 (74.9, 83.7)	501/763	65.7 (62.3, 69.0)	414/583	71.0 (67.3, 74.7)
Marital status												
Single/Never married	158/352	44.9 (39.7, 50.9)	101/255	39.6 (33.7, 45.8)	93/408	22.8 (18.7, 26.9)	68/328	20.1 (16.7, 25.5)	251/760	33.0 (29.7, 36.4)	169/583	29.0 (25.4, 32.8)
Married	184/352	52.3 (47.0, 57.5)	137/255	53.7 (47.6, 59.8)	234/408	57.4 (52.5, 62.2)	192/328	58.5 (53.1, 63.8)	418/760	55.0 (51.4, 58.5)	329/414	56.4 (52.4, 60.4)
Divorced/separated	9/352	2.6 (09, 4.2)	8/255	3.1 (1.6, 6.2)	49/408	12.0 (8.8, 15.2)	42/328	12.8 (9.6, 16.9)	58/760	7.6 (5.7, 9.5)	50/414	8.6 (6.6, 11.2)
Widowed	1/352	0.3 (<0.001, 08)	9/255	3.5 (1.8, 6.7)	32/408	7.8 (5.2, 10.5)	26/328	7.9 (5.4, 11.4)	33/760	4.3 (2.9, 5.8)	35/414	6.0 (4.3, 8.3)
Currently living with spouse or another sexual partner	206/349	59.2 (53.9, 64.2)	115/255	45.1 (39.0, 51.2)	248/405	61.2 (56.5, 66.0)	185/327	56.6 (51.1, 62.0)	454/754	60.2 (56.7, 63.7)	300/582	51.5 (47.5, 55.6)
Polygamous Marriage	25/188	13.3 (8.4, 18.2)	7/137	5.1 (1.4, 8.8)	49/244	20.0 (15.0, 25.1)	34/192	17.7 (12.3, 23.1)	74.432	17.1 (13.6, 20.7)	41/329	12.4 (8.9, 16.0)
Mean age at first marriage (years)	--	21.3 (20.8, 21.9)	-	23.4 (21.5, 25.2)	-	16.8 (16.4, 17.1)		17.6 (16.5, 18.7)	-	18.6 (18.3, 19.0)		19.8 (18.7,20.8)
Lugufu Host Population												
Ever married	266/381	69.8 (65.2, 74.4)	265/424	62.5 (54.4, 69.9)	411/546	75.3 (71.6, 78.9)	439/597	73.5 (69.0, 77.6)	677/927	75.9 (70.2, 75.9)	704/ 1021	69.0 (63.7, 73.8)
Marital status												
Never married/Single	115/381	29.7 (25.1, 34.3)	160/424	37.7 (30.2, 45.9)	128/545	23.5 (19.1, 27.1)	159/597	26.6 (22.6, 31.1)	240/922	26.0 (23.2, 28.9)	319/ 1021	31.2 (26.4, 36.5)
Married	245/377	65.0 (60.2, 69.8)	260/424	61.3 (53.1, 68.9)	351/545	64.4 (60.4, 68.4)	400/597	67.0 (61.7, 71.9)	596/922	64.6 (61.5,67.7)	660/ 1021	64.6 (58.8, 70.1)
Divorced/separated	17/377	4.5 (2.4, 6.6)	4/424	0.9 (0.4, 2.5)	54/545	9.9 (7.4, 12.4)	29/597	4.9 (3.0, 7.7)	71/922	7.7 (6.0, 9.4)	33/ 1021	3.2 (2.1, 5.0)
Widowed	3/377	.07 (0.002, 1.7)	0/424	-	12/545	2.2 (1.0, 3.4)	9/597	1.5 (0.8, 2.9)	15/922	1.6 (0.8, 2.4)	9/ 1021	0.9 (0.4, 1.7)
Currently living with spouse or another sexual partner	243/379	64.1 (59.2, 69.0)	243/424	57.3 (48.6, 65.6)	358/546	65.6 (61.6, 69.6)	386/597	64.7 (58.1, 70.7)	601/925	65.0 (61.9, 68.1)	629/ 1021	61.6 (55.1, 67.3)
Polygamous Marriage	24/259	9.4 (5.8, 13.0)	22/260	8.5 (5.5, 12.8)	71/380	18.7 (14.8, 22.6)	65/399	16.3 (11.6, 22.4)	95/636	15.0 (12.2, 17.7)	87/659	13.2 (9.5, 18.1)
Mean age at first marriage (years)	-	23.4 (22.9, 23.9)	-	23.7 (23.1, 24.3)	-	18.6 (18.3, 18.9)	-	18.8 (18.3, 19.2)	-	20.5 (20.1, 20.8)	-	20.7 (20.3, 21.1)
Lukole Host Population												

Ever married	236/368	64.1 (59.2, 69.0)	316/420	75.2 (69.8, 80.0)	323/443	72.9 (68.8, 77.1)	415/472	87.9 (83.9, 91.1)	559/811	68.9 (65.7, 72.1)	731/892	82.0 (78.0, 85.3)
Marital status												
Never married/Single	138/368	35.9 (31.0, 40.8)	104/420	24.8 (20.0, 30.2)	120/443	27.1 (22.9, 31.2)	57/472	12.1 (8.9, 16.1)	252/811	31.1 (27.9, 34.3)	161/892	18.1 (14.7, 22.0)
Married	229/372	61.6 (56.6, 66.5)	306/420	72.9 (67.1, 77.9)	275/443	62.1 (57.5, 66.6)	372/472	78.8 (73.5, 83.3)	504/815	61.8 (58.5, 65.2)	678/892	76.0 (71.4, 80.1)
Divorced/separated	2/372	0.5 (<0.001, 1.3)	9/420	2.1 (1.1, 4.2)	32/443	7.2 (4.8, 9.6)	28/472	5.9 (4.0, 8.7)	34/815	4.2 (2.8, 5.5)	37/892	4.1 (2.9, 5.9)
Widowed	5/372	1.3 (0.7, 2.5)	1/420	0.2 (0.04, 1.8)	21/443	4.7 (2.8, 6.7)	15/472	3.2 (1.6, 6.2)	26/815	3.2 (2.0, 4.4)	16/892	1.8 (0.9, 3.4)
Currently living with spouse or another sexual partner	239/367	65.1 (60.2, 70.0)	302/420	72.0 (65.7, 77.4)	283/441	64.2 (60.0, 68.7)	339/472	71.8 (65.1, 77.7)	522/808	64.6 (61.3, 68.0)	641/892	71.9 (66.3, 76.9)
Polygamous Marriage	59/235	25.1 (19.5, 30.7)	39/305	12.8 (9.4, 17.1)	102/287	35.5 (30.0, 41.1)	73/372	19.6 (15.5, 24.5)	161/522	30.8 (26.9, 34.8)	112/677	16.5 (13.1, 20.7)
Mean age at first marriage (years)	-	21.3 (20.7, 21.8)	-	22.2 (21.7, 22.7)	-	18.9 (18.6, 19.3)	-	18.2 (17.9, 18.5)	-	20.0 (19.6, 20.3)	-	19.9 (19.6, 20.2)

Displacement and mobility

In 2005, 79.3% of Lugufu Camp respondents reported being in the camp for more than 5 years. Those Ex Lugufu refugees who were surveyed in Nyarugusu camp in 2010 had been transferred in fall of 2009. About three-quarters (75.5%) of the Ex Lugufu refugees reported that they had lived in the current community for 1 -2 years, while 22.3% judged their stay to have been 6 – 12 months. When asked about leaving home in the last 12 months, fewer Ex Lugufu refugees reported having left for 4 weeks of more, as compared to baseline (22.4% at baseline, 14.5% at follow up). At follow up, 64.0% of Ex Lugufu respondents reported never going to the host community, while 14.9% reported going frequently (more than once a month). This was similar to the 2005 findings (70.2% never visiting the host community, 6.9% visiting frequently).

In the Lugufu host community, around three-quarters reported that they had lived in the community always, or more than five years, both at baseline and follow up, while 22.0% at baseline and 23.5% at follow up reported that had lived in the community for 5 years or less. At follow up, 36.5% of Lugufu host respondents reported leaving home for a month or longer in the last year, a large increase from 16.5% in 2005. When asked about frequency of visits to the camp, respondents in the 2010 survey were asked to refer to the period just before camp closure. Responses were not very different from baseline. At follow up, about half of Lugufu host respondents reported never visiting the camp, compared to 66.9% in 2005, while 11.7 reported visiting frequently, as compared to 6.2% at baseline.

In 2005 and 2010, 73.1% and 83.1% of respondents from Lukole host community reported living in the area for 5 years or more. Slightly more respondents at follow up reported long travel in the past year (12.2% at baseline, 18.4% at follow up). The information on visits to Lukole camp was collected, but since Lukole camp closed 3 years prior to the survey, it was not expected that respondents would be able to accurate report the frequency of visit to the camp before it closed.

Displacement and mobility figures for Ex Lugufu refugee reflect their transfer from the Lugufu camp in the fall of 2009 and their interaction with their current host community at Nyarugusu. Given that many questions in the BSS instrument utilise a one year recall period, it is important to consider that all services received, and behaviour reported within one year would have occurred while at Nyarugusu Camp, rather than at Lugufu Camp.

In the host areas, time living in the community was similar to that found at baseline. Data on interaction between host and refugees was collected as part of the standard GLIA BSS format, but cannot be interpreted reliably as it relies on long recall periods. Of note is the large increase in proportion of residents of Lugufu host community who left home for long periods in the past one year. This change may explain the increased absenteeism at Lugufu community and may be another indicator of decreased economic opportunity following the refugee camp closure.

Table 12: Length of time living in current community, absences from home and visits to host communities or camps, baseline and follow up

Characteristics	Men				Women				Men + Women			
	Baseline		Follow up		Baseline		Follow up		Baseline		Follow up	
	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)
Lugufu Camp Population												
Less than 6 months	1/351	0.3 (<0.001,0.8)	1/255	0.4 (<0.001, 2.7)	4/404	1.0 (0.02,1.9)	2/328	0.6 (0.2, 2.4)	5/755	0.6 (0.08, 1.2)	3/583	0.5 (0.2, 1.6)
6-12 months	0/351	0 -	83/255	32.6 (27.1, 38.6)	1/404	0.2 (<0.001, 0.7)	47/328	14.3 (10.9, 18.6)	1/755	0.1 (<0.001, 0.4)	130/583	22.3 (19.1, 25.9)
1-2 years	5/351	1.4 (0.2, 2.7)	163/255	63.9 (57.8, 69.6)	9/404	2.2 (0.7, 3.7)	277/328	84.5 (80.1, 88.0)	14/755	1.9 (0.9, 2.8)	440/583	75.5 (71.8, 78.8)
2-5 years	59/351	16.8 (12.9,20.7)	0/255	0 -	76/404	18.8 (15.0, 22.6)	0/277	0 -	135/755	17.9 (15.1, 20.6)	0/583	0 -
Over 5 years	286/351	81.5 (77.4,85.6)	6/255	2.4 (1.1, 5.2)	313/404	77.5 (73.4, 81.6)	2/328	0.6 (0.2, 2.4)	599/755	79.3 (76.4, 82.2)	8/583	1.4 (0.6, 2.7)
Always	0/351	0 -	2/255	0.8 (0.2, 3.1)	1/404	0.2 (<0.001, 0.7)	0/277	0 -	1/755	0.1 (<0.001, 0.4)	2/583	0.3 (0.1, 1.4)

Characteristics	Men				Women				Men + Women			
	Baseline		Follow up		Baseline		Follow up		Baseline		Follow up	
	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)
Left home for longer than 4 weeks in the last 12 months	120/355	33.8 (28.9,38.7)	51/255	20.0 (15.5, 25.4)	51/409	12.5 (9.3, 15.7)	33/325	10.2 (7.3, 14.0)	171/764	22.4 (19.4, 25.3)	84/580	14.5 (11.8, 17.6)
Frequency of visits to surrounding community												
Never	204/351	58.1 (52.9,63.3)	136/255	53.3 (47.2, 59.4)	327/405	80.7 (76.9, 84.6)	237/328	72.3 (67.2, 76.9)	531/756	70.2 (67.0, 73.5)	373/583	64.0 (60.0, 67.8)
Less than once a month	63/351	17.9 (13.9,22.0)	34/255	13.3 (9.8, 18.1)	36/405	8.9 (6.1, 11.7)	14/328	4.3 (2.5, 7.1)	99/756	13.1 (10.7, 15.5)	48/583	8.2 (6.3, 10.8)
Once a month	50/351	14.2 (10.6,17.9)	44/255	17.3 (13.1, 22.4)	24/405	5.9 (3.6, 8.2)	31/328	9.5 (6.7, 13.1)	74/756	9.8 (7.7, 11.9)	75/583	12.9 (10.4, 15.8)
Many times a month	34/351	9.7 (6.6,12.8)	41/255	16.1 (12.1, 21.3)	18/405	4.4 (2.4, 6.4)	46/328	14.0 (10.7, 18.2)	52/756	6.9 (5.1, 8.7)	87/583	14.9 (12.3, 18.1)
Lugufu Host Population												
Time living in community												
Less than 6 months	9/375	2.4 (0.8,3.9)	17/424	4.0 (2.0, 8.0)	17/539	3.2 (1.7, 4.6)	42/594	7.1 (5.0, 9.8)	26/914	2.8 (1.8, 3.9)	59/1018	5.8 (4.3, 7.8)
6-12 months	14/375	3.7 (1.8,5.7)	5/424	1.2 (0.5, 2.7)	23/539	4.3 (2.6, 6.0)	18/594	3.0 (2.0, 4.5)	37/914	4.0 (2.8, 5.3)	23/1018	2.3 (1.5, 3.3)
1-2 years	20/375	5.3 (3.0,7.6)	21/424	5.0 (2.7, 9.0)	26/539	4.8 (3.0, 6.6)	25/594	4.2 (2.5, 7.0)	46/914	5.0 (3.6, 6.5)	46/1018	4.5 (2.9, 7.0)
2-5 years	33/375	8.8 (5.9, 11.7)	45/424	10.6 (7.6, 14.7)	60/539	11.1 (8.5, 13.8)	66/594	11.1 (8.4, 14.6)	93/914	10.2 (8.2, 12.1)	111/1018	10.9 (8.4, 14.1)
Over 5 years	115/375	30.7 (26.0,35.3)	225/424	53.1 (46.6, 59.5)	166/539	30.8 (26.9, 34.7)	256/594	43.1 (37.9, 48.5)	281/914	30.7 (27.7, 33.7)	481/1018	47.3 (42.9, 51.6)
Always	184/375	49.1 (44.0,54.1)	111/424	26.2 (19.7, 33.9)	247/539	45.8 (41.6, 50.0)	187/594	31.5 (26.2, 37.3)	431/914	47.2 (43.9, 50.4)	298/2018	29.2 (24.7, 34.3)
Left home for longer than 4 weeks in the last 12 months	74/380	19.5 (15.5,23.5)	154/424	36.3 (31.0, 42.0)	79/547	14.4 (11.5, 17.4)	219/597	36.7 (32.5, 41.1)	153/927	16.5 (14.1, 18.9)	373/1021	36.5 (33.1, 40.1)
Frequency of visits to settlement												
Never	236/381	61.9 (57.1,66.8)	184/424	43.4 (35.9, 51.2)	383/544	70.4 (66.6, 74.2)	330/597	55.3 (48.8, 61.6)	619/925	66.9 (63.9, 70.0)	514/1021	50.3 (45.2, 55.5)
Less than once a month	40/381	10.5 (7.4,13.6)	72/424	16.7 (13.9, 20.7)	56/544	10.3 (7.7, 12.9)	136/597	22.8 (18.0, 28.4)	96/925	10.4 (8.4, 12.3)	208/1021	20.4 (17.4, 23.8)

Characteristics	Men				Women				Men + Women			
	Baseline		Follow up		Baseline		Follow up		Baseline		Follow up	
	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)
Once a month	71/381	18.6 (14.7,22.6)	94/424	22.2 (17.1, 28.3)	82/544	15.1 (12.1, 18.1)	86/597	14.4 (10.7, 19.2)	153/925	16.5 (14.1, 18.9)	180/1021	17.6 (14.2, 22.0)
Many times a month	34/381	8.9 (6.1, 11.8)	74/424	14.5 (13.4, 22.4)	23/544	4.2 (2.5, 5.9)	45/597	7.5 (5.1, 11.1)	57/925	6.2 (4.6, 7.7)	119/1021	11.7 (9.1, 14.2)
Lukole Host Population												
Time living in community												
Less than 6 months	4/371	1.1 (0.02,2.1)	25/420	6.0 (3.9, 8.9)	13/442	2.9 (1.3, 4.5)	42/472	8.9 (6.3, 12.4)	17/813	2.1 (1.1, 3.1)	67/892	7.5 (5.5, 10.1)
6-12 months	7/371	1.9 (0.4,3.3)	9/420	2.1 (1.0, 4.5)	12/442	2.7 (1.2, 4.2)	16/472	3.4 (1.9, 5.9)	19/813	2.3 (1.3, 3.4)	25/892	2.8 (1.7, 4.6)
1-2 years	15/371	4.0 (2.0,6.1)	15/420	3.6 (2.0, 6.5)	28/442	6.3 (4.0, 8.6)	38/472	8.1 (5.9, 10.9)	43/813	5.3 (3.7, 6.8)	53/892	5.9 (4.4, 7.9)
2-5 years	19/371	5.1 (2.9,7.4)	35/420	8.3 (5.5, 12.3)	40/442	9.1 (6.4, 11.7)	51/472	10.8 (8.3, 14.0)	59/813	7.3 (5.5, 9.0)	86/892	9.6 (7.3, 12.6)
Over 5 years	64/371	17.3 (13.4,21.1)	124/420	29.5 (22.9, 37.2)	100/442	22.6 (18.7, 26.5)	187/472	39.6 (34.2, 45.3)	164/813	20.2 (17.4, 22.9)	311/892	34.9 (30.0,40.0)
Always	262/371	70.6 (66.0,75.3)	212/420	50.5 (41.4, 59.5)	249/442	56.3 (51.7, 61.0)	138/472	29.2 (23.0, 36.4)	511/813	62.9 (59.5, 66.2)	350/892	39.2 (32.6, 46.3)
Left home for longer than 4 weeks in the last 12 months	51/368	13.9 (10.3,17.4)	88/420	21.0 (15.9, 29.1)	48/443	10.8 (7.9, 13.7)	76/472	16.1 (12.3, 20.9)	99/811	12.2 (9.9, 14.5)	164/892	18.4 (14.9, 22.5)
Frequency of visits to settlement												
Never	147/371	39.6 (34.6,44.6)	112/418	26.8 (21.1, 33.4)	193/440	43.9 (39.2, 48.5)	177/471	37.6 (31.1, 44.6)	340/811	41.9 (38.5, 45.3)	289/889	32.5 (27.3, 38.2)
Less than once a month	54/371	14.6 (11.0,18.2)	35/418	8.4 (6.1, 11.4)	64/440	14.5 (11.2, 17.8)	51/471	10.8 (8.3, 14.1)	118/811	14.5 (12.1, 17.0)	86/889	9.7 (7.9, 11.8)
Once a month	72/371	19.4 (15.4,23.4)	70/418	16.8 (13.0, 21.3)	101/440	23.0 (19.0, 26.9)	112/471	23.8 (18.9, 29.5)	173/811	21.3 (18.5, 24.2)	182/889	20.5 (17.1, 24.4)
Many times a month	98/371	26.4 (21.9,30.9)	201/418	48.1 (42.4, 53.8)	82/440	18.6 (15.0, 22.3)	131/471	27.8 (23.1, 33.1)	180/811	22.2 (19.3, 25.1)	332/889	37.4 (33.4, 41.5)

Section 2. Core indicators

GLIA has standardized the use of 17 indicators for monitoring the HIV situation among refugees and host communities across its member countries. At the time of the baseline, the core indicators were not in place. Thus, baseline information is available for only 14 of the 17 indicators.

Youth and sexual experience.

For Lugufu camp youth, both baseline and follow up surveys recorded extremely high rates of sexual experience under age 15. At follow up, 22.4% of all 15 - 24 year olds indicated that they had sexual intercourse before age 15, compared to 25.9% in 2005. At follow up, mean age at first sex for youth who had had sex was 15.8. For never married male youth, the proportion who had never had sex increased significantly from 21.0% (95% CI: 14.3-27.7%) to 42.6% (95% CI: 32.4-52.7%). On the other hand, the proportion of never married female youth who had never had sex decreased from 51.9% (95% CI: 40.9-62.8%) to 32.1% (95% CI: 19.3-44.9%; not a statistically significant change).

At Lugufu host community, the overall proportion of youth who reported having sex before age 15 decreased slightly from 6.4% to 4.3%, reflecting a decrease in the proportion of female youth who had had sex under age 15 (6.4% at baseline, 2.0% at follow up). The proportion of never married youth who had not had sex increased from 55.7% at baseline to 67.8% at follow up. This was, again, the result of a large increase of female youth who had not had sex (47.8% at baseline, 72.2% at follow up

In Lukole host community, the proportion of youth reporting sexual intercourse before age 15 rose from 3.4% at baseline to 6.8% at follow up, reflecting an rise in male youth reporting sex under age 15 (2.2% at baseline, 8.7% at follow up). Overall, the proportion of never married youth who had not had sex decreased from 75.4% in 2005 to 59.6% in 2010, again driven by increasing sexual behavior of male youth. At baseline 79.8% of never married male youth reported not having had sex, compared to only 54.3% of never married male youth at follow up who had not had sex.

Recommendations

In the camp, although some improvement was seen from baseline, the proportion of youth under 15 and never married youth having had sex was extremely high. In particular the increased proportion of never married young women who had had sex is concerning. Programs should continue focusing on delaying sexual debut and targeting messages for most vulnerable youth. Integrating HIV-related objectives with protection, education, and community services may help address needs in this group in a coherent way.

In the Lukole host communities risky sexual behaviour among young men was found to be increasing, while in Lugufu host communities it appeared to be decreasing for young women, but not for young men. Both facts indicate that programs may need to heighten focus on young men and boys to encourage delayed sexual debut, while keeping in mind that sexual behaviour at an early age is worrisome, but not widespread. Program managers may be able to target particular groups at risk, and continue to deliver more general messages and interventions to all youth.

Sexual partnerships

The BSS measured three types of sexual partnership: regular partnership (with spouse or live-in sexual partner), non-regular partnership (with non-spouse, non-live-in, non-paid partner), and transactional partnership (where sex is exchanged for money, gift, favor or a combination). In addition, multiple partnerships, which was defined as more than one sex partner in the past 12 months, were calculated.

At Lugufu camp, the follow up survey found that 17.4% (95% CI: 14.3, 20.4) of adults had at least one non-regular partner in the last 12 months (22.4% and 13.5% for men and women respectively), compared to 33.2% (95% CI: 29.9, 36.5) of adults at baseline (41.7% and 25.9% for men and women respectively). Decreases in non-regular partnership for men, women, and all respondents were statistically significant. The proportion of men, women, and all respondents reporting transactional sex in the past 12 months also decreased from baseline (17.8% for men, 10.7% for women, 14.0% for both sexes) to follow up (14.9% for men, 9.8% for women, and 12.0% for both sexes), although the changes were not statistically significant. Decreases in transactional sex were the result of decreases among a subset of youth: while transactional sex among those 25 years of age and older increased slightly from 12.3% to 13.2%, it dropped from 16.0% to 10.5% among youth. At follow up, fewer refugee men and women from Lugufu camp reported multiple partnerships in the the last 12 months, with the proportion decreasing from 32.6% at baseline (95% CI: 29.2, 35.9) to 20.1% (95% CI: 16.8, 23.2). Comparing multiple partnerships by age category reveals larger decreases in youth (36.7% at baseline, 17.4% at follow up) than in respondents 25 years or older (29.2% at baseline, 22.2% at follow up).

In the Lugufu surrounding area, decreases were also seen in non-regular, transactional, and multiple sexual partnerships, in both sexes. At baseline, 20.3% of respondents reported a non-regular partner, while at follow up just 9.7% did. At baseline, transactional sex was not as high as it was in the camp (6.8% for men, 2.6% for women, and 4.3% for both sex), but also decreased at follow up (3.1% for men, 0.2% for women, and 1.6% for both sexes). Finally, a large reduction in multiple partnerships was seen in men (28.5 at baseline, 15.5% at follow up), in women (18.1% at baseline, 1.1% at follow up) and both sexes (22.4% at baseline, 8.1% at follow up).

As for Lugufu community, results for Lukole community were encouraging, with reductions in non-regular, transactional and multiple partnerships. Non-regular partnerships were reported by 15.3% at baseline, compared to 8.1% at follow up, with decreases found among both sexes. Transactional sex went from 6.2% in men at baseline to 4.0% at follow up, from 6.3% in women at baseline to 1.9% at follow up, and from 6.2% overall at baseline to 2.9% at follow up. Multiple partnerships decreased in each category, with particular decreases for women (13.0% at baseline to 2.3% at follow up), which led to an overall decrease from 18.2% to 9.6%.

Discussion and recommendations

The substantial decreases in non-regular, transactional and multiple partnerships among Ex Lugufu refugees are encouraging, particularly as the changes appear particularly driven by decreases in such sexual partnerships among youth. Many programs have been focused at achieving such reductions. Now is a good time to review programs which may have contributed to such change and document lessons learned. It should be noted that despite great improvement, the absolute proportions of refugees engaging in high-risk sexual partnerships are still high.

In the host communities, reductions in transactional sex and multiple partnerships can be attributed to reductions among people in both age categories, with the exception of non-regular partnerships, where reductions were mostly found among older respondents. Non-regular partnership among youth in both host communities remained stagnant, and may indicate an opportunity for increased programmatic focus.

Condom use at higher risk sex

Both baseline and follow up BSSs measured condom use at the last non-regular and transactional sex. The 2010 BSS was also able to measure condom use at last sex among those who reported more than one partner, data which was not collected at baseline.

For Lugufu camp respondents, condom use during the last non-regular sex was slightly higher at follow up (43.9% for men, 30.2% for women, and 38.0% for both sexes) compared to baseline (35.3% for men, 30.0% for women and 33.1% for both sexes), although the change was not statistically significant. Condom use during last transactional sex decreased for men (46.8% at baseline, 10.5% at follow up), for women (30.2% at baseline, 9.4% at follow up), and both sexes (40.0% at baseline, 10.0% at follow up). Decreases were statistically significant for men and for the total. Condom use was higher at last sex among men and women who had more than one sexual partner (19.4% for men, 14.0% for women, and 17.1% for both).

In the Lugufu host community, reported condom use increased for men (31.3% at baseline, 45.3% at follow up), but decreased for women (19.8% at baseline, 16.0% at follow up). Recent transactional sex was only reported by 14 men and 1 woman. Out of 15, 10 reported using a condom at last transactional sex (66.7%, 95% CI: 37.6, 86.9). Among those reporting multiple partners, condom use at last sex was 21.3%.

Condom use at last non-regular sex increase at Lukole host community from 23.6% at baseline to 48.6% at follow up, with larger increases for men than women (28.1% and 18.6% for men and women at baseline, 55.4% and 25.0% for men and women at follow up). Condom use at last transactional sex also increased from 38.0% to 53.9%. For men and women reporting more than one sex partner, condom use was less frequently reported, by just 15.1% (16.0% for men and 9.1% for women).

Discussion and recommendations

The findings for condom use must be interpreted in the context of decreased high risk in almost all age and sex categories. For example, condom use during transactional sex remained quite low among Ex Lugufu men and women, but the number reporting transactional sex has also greatly decreased. Similarly, in Lugufu community, non-regular partnerships decreased substantially, particularly for women, but condom use at last non-regular sex also decreased. In both cases, the pattern could point to a group of people not yet reached by awareness or accessibility and availability of condoms. Decreased condom use at

transactional sex in the camp may indicate need for further targeting sex workers and their clients. For female sex workers, condom negotiation skills may be needed. More important may be targeted messages for the clients of sex workers who typically have greater decision power.

Forced sex

Among women in Lugufu Camp, a similar proportion reported recent forced sex at follow up (2.4%, 95% CI: 0.8, 4.1), compared to baseline (3.2%, 95% CI: 0.1, 4.9). At follow up in Lugufu host community, just one woman reported recent forced sex (0.2%, 95% CI: 0.03, 1.6), compared to 1.5% (95% CI: 0.5, 2.5) in the baseline survey. At Lukole host community the opposite was found, with more women reporting recent forced at baseline (4.4%, 95% CI: 2.7, 7.1), compared to follow up (0.7%).

Discussion and recommendations

Forced sex can be difficult to measure, as response is influenced by numerous factors, and it is usually a rare occurrence, particularly when measured in the past 12 months. Care is needed when interpreting results. The follow up findings generally point to decreased recent forced sex among Lugufu host community women, increased forced sex in the Lukole host community women, and no change among Ex Lugufu refugee women. In Lukole host community, the change measured deserves further inquiry, including a review of SGBV activities and services.

HIV-related services

GLIA indicators include HIV testing, the reach of HIV prevention programmes, and care-seeking for STIs. The core indicator measures HIV testing in the past 12 months where the respondent indicates that s/he received the results of the test. A respondent was said to have been "reached" by HIV prevention programmes if s/he both knew where to go for HIV testing and received condoms by HIV programmes in the past 12 months. Appropriate care-seeking for STIs was defined as visiting a health facility as the first place for treatment, among individuals who reported STI symptoms, unusual genital discharge, or genital sores/ulcers in the past 12 months. Results for programme reach and STI care-seeking are only available for the follow up survey, as all the requisite questions were not included in the 2005 questionnaire.

For Lugufu camp respondents, recent HIV testing increased 265% from 18.0% (95% CI: 15.3, 20.8) at baseline to 47.7% (95% CI: 43.6, 51.8) at follow up. More male respondents were found to have been reached by HIV programmes than female respondents (27.8% of men, 11.0% of women). Very few respondents reported symptoms consistent with an STI in the past 12 months; among those who did, 75% of men, women, and both sexes sought care at a health facility.

At follow up in Lugufu host community, 45.5% of respondents reported having a test and getting their results, a 399% increase from 11.4% observed at baseline. Only 9.3% of men and 2.5% of women were considered reached by HIV programmes (5.9% overall). Out of those reporting STI symptoms, 42.5% sought treatment at a health facility.

The proportion of those receiving appropriate HIV testing at Lukole host community more than doubled at follow up (37.6%) compared to baseline (16.0%). Among both sexes, 10.1% reported being reached by HIV programmes, though this was noticeably higher for men (14.5%, 95% CI: 10.4, 18.7) compared to women (6.6%, 95% CI: 4.1, 10.4). STI care-seeking was approximately 60% for those reporting symptoms in the past 12 months.

Discussion and recommendations

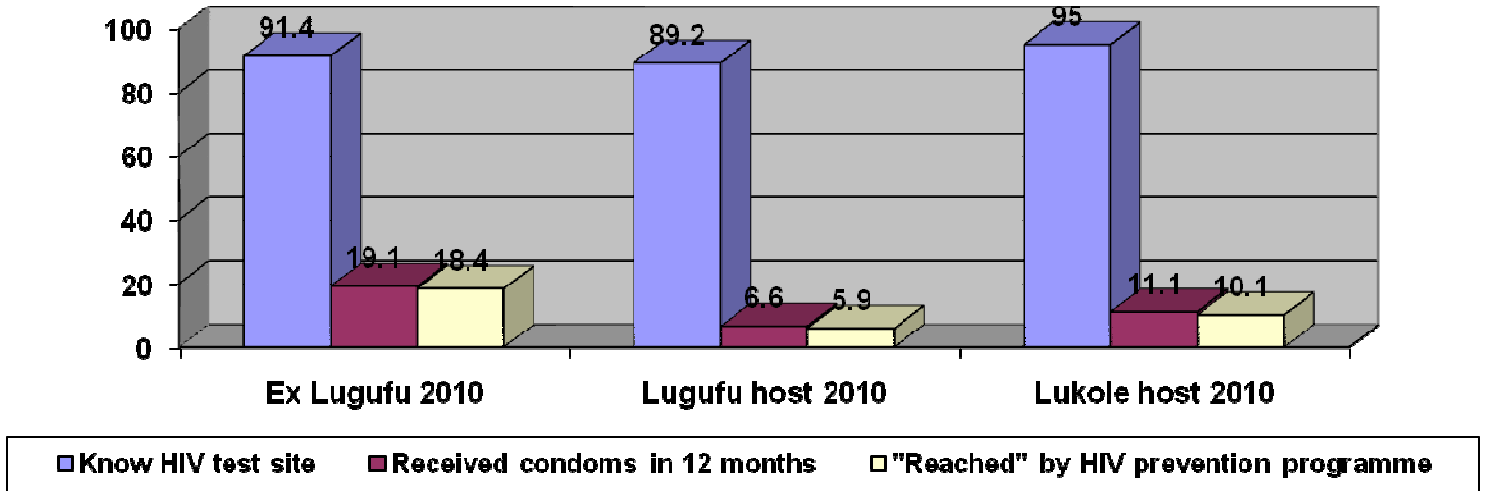
The large increases in HIV testing are impressive. Among Ex Lugufu refugees, HIV testing was higher among those reporting multiple, non-regular, and transactional partnerships. For example, among those who reported multiple partnerships in the last 12 months, 59.8% had had a test, while among those who did not report multiple partnership, 44.6% had had a test. This reflects good targeting of services.

Meanwhile, in the Lugufu host community, HIV testing was reporting by approximately 33 – 35% of those who did and did not report non-regular, transactional or multiple partnerships. In Lukole camp, the proportion who had had an HIV test was approximately 37% regardless of whether they had had a non-regular partner in the past 12 months. Among those having transactional sex, 30.8% had had an HIV test in the last 12 months, compared to 37.8% for those who did not have transactional sex. Similarly, among those having multiple partners, just 34.9% had had an HIV test. This points to an opportunity to outreach specifically to people whose behaviour puts them at higher risk.

STI care-seeking was lowest at Lugufu host community, and highest among Ex Lugufu refugees. While the questions at baseline don't allow for exact comparison, the proportion of Lugufu Camp respondents who sought any STI treatment at baseline was 75% (the same as those seeking treatment at a health facility at follow up), 67% in the Lugufu host community (compared to just 42.5% seeking treatment at a health facility at follow up), and 84% in the Lukole host community (compared to just 59.6% seeking treatment at a health facility at follow up). Camp closure and loss of access to camp health facilities may partly explain this suggested decrease in access in the host communities. There is a need to strengthen the available health facilities in the community to be able to provide STI services.

The proportion of respondents found to be "reached" by HIV prevention programmes was limited by the low number of people reporting receipt of condoms by HIV prevention programmes. The chart below shows the two indicators that combine to make the composite indicator of being "reached" by HIV prevention programmes. While high proportions of respondents at each site knew where one could be tested for HIV, the composite indicator was driven down by low proportions of respondents who had received condoms in the past 12 months. It should be noted that between 10 – 20% of each population had never had sex, reducing their need for condoms.

Figure 4: HIV programme "reach" indicator and components, at follow up



Whereas HIV testing did not necessarily link to risk behavour in the host communities, condom distribution did, with 21% and 24% of respondents in Lukole and Lugufu who had multiple partners receiving condoms, while just 2.9% and 5.8% of respondents in Lukole and Lugufu who had never had sex receiving condoms. Among Ex Lugufu refugees, 35.7% of respondents with multiple partners received condoms, compared to 5.3% of those who had never had sex. Thus, condom distribution appears to be reaching those who are in most need, although it could certainly be increased.

HIV Knowledge and attitudes

The GLIA indicator for HIV knowledge is a composite, with comprehensive, correct knowledge defined as answering correctly to the following questions:

1. Can people protect themselves from HIV by staying faithful to one uninfected partner?
2. Can people protect themselves from HIV by using a condom correctly every time they have sex?
3. Is it possible for a healthy-looking person to have HIV, the virus that causes AIDS?
4. Can people get infected through a mosquito bite?
5. Can people get infected through by sharing food with someone who is infected with HIV?

The indicator for attitudes towards people living with HIV is similarly constructed, with those giving accepting answers to each of the following questions considered to have "accepting attitudes":

1. If a member of your family got infected with the virus that causes AIDS, would you want it to remain a secret?
2. 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?
3. If a teacher was infected with the virus that causes AIDS, should he/she be allowed to continue teaching?
4. Would you buy fresh vegetables from a shopkeeper who was infected with the virus that causes AIDS?

Among Lugufu camp respondents, comprehensive knowledge was significantly higher at follow up than at baseline (26.8%, 95% CI: 23.7, 29.9 at baseline; 51.8%, 95% CI: 47.7, 55.9 at follow up). The proportion of Lugufu camp respondents with accepting attitudes increased slightly overall from 11.8% at baseline to 14.4% at follow up, with a decrease among men from 13.4% at baseline to 11.0% at follow up.

Knowledge within Lugufu host community was even higher than in the camp, with 62.4% of respondents knowing all 5 facts, an increase of nearly 200% from the baseline figure at 31.3%. On the other hand, accepting attitudes were much less prevalent at follow up (9.9%) than at baseline (25.1%), particularly for women, with a decrease in accepting attitudes from 25.4% at baseline to 7.1% at follow up.

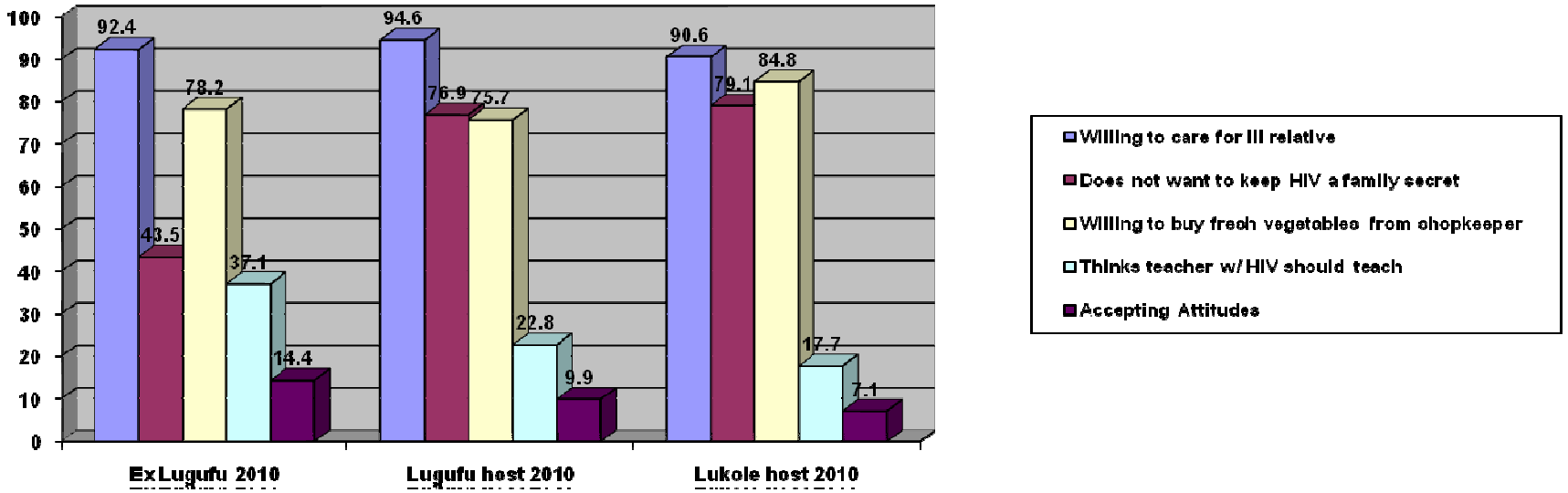
In Lukole host community, knowledge was higher at baseline than the other two areas (47.9%), and increased to 58.1%. Accepting attitudes, however, fell 76% from 29.0% to 7.1%.

Discussion and recommendations

The chart on the following page shows that the accepting attitudes indicator is low primarily because many people at each site believe that teachers with HIV should not continue teaching. Willingness to care for family members with HIV or buy vegetables from a shopkeeper with HIV were high in all populations; in

the host communities most people did not express a need for keeping a family member's HIV status a secret, while Ex Lugufu refugees were more likely to indicate that HIV should be kept a family secret.

Figure 5: Components of accepting attitudes composite indicator, at follow up



The comprehensive knowledge results are also driven by certain elements rather than others, although not so dramatically. In all locations, the fewest people knew that mosquito bites do not transmit HIV (67.8% among Ex Lugufu respondents, 71.6% at Lugufu host community, and 83.5% at Lukole community). Among Ex Lugufu and Lukole host respondents, the most known fact was that they could protect themselves by having only one uninfected partner (97.9% and 91.7% respectively). Among Lugufu host respondents, the most known fact was that a healthy person could have HIV (92.5%).

Knowledge was found to be generally high in all locations, although there is room for improvement. The different attitudes towards buying vegetables from an HIV-positive shopkeeper and allowing an HIV-positive teacher to teach should be further explored to learn whether point to moral judgments about people living with HIV.

Table 13: Comparison of GLIA core indicators at baseline and follow up among Lugufu Refugees and Lugufu Hosts, by gender

	LUGUFU AREA											
	Lugufu Hosts Baseline			Lugufu Hosts Follow-up			Lugufu Camp Baseline			Lugufu Camp Follow-up		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N
Young men and women aged 15-24 who have had sexual intercourse before the age of 15	6.5% - 7/108	6.4% - 14/219	6.4% - 21/327	6.9% (4.0 – 11.4%) 12/175	2.0% (0.8 – 5.2%) 4/199	4.3% (2.6 – 7.1%) 16/374	30.2% (22.8 – 37.6%) 45/149	21.7% (15.1 - 28.3%) 33/152	25.9% (20.9 – 30.9%) 78/301	22.6% (14.9 – 30.3%) 26/115	20.3% (13.6 – 26.9%) 29/143	22.4% (16.3 – 26.3%) 55/258
Never married young people aged 15-24 who have never had sex	65.2% - 60/92	47.8% - 53/111	55.7% - 113/203	63.2% (52.8 – 72.5%) 91/144	72.2% (61.3 – 81.0%) 109/155	67.8% (59.6 – 75.0%) 200/295	21.0% (14.3 – 27.7%) 30/143	51.9% (40.9 – 62.8%) 42/81	32.1% (26.0 – 38.3%) 72/224	42.6% (32.4 – 52.7%) 40/94	32.1% (19.3 – 44.9%) 17/53	38.8% (30.8 – 46.7%) 57/147
More than one sexual partner in the past 12 months	28.5% - 109/381	18.1% - 99/548	22.4% - 208/929	15.5% (12.1 – 19.8%) 70/451	1.1% (0.4 – 3.0%) 5/470	8.1% (6.2 – 10.6%) 75/921	45.1% (39.9 – 50.3%) 160/355	21.7% (17.7 – 25.7%) 89/410	32.6% (29.2 – 35.9%) 249/765	26.3% (20.9 – 31.7%) 67/255	15.2% (11.3 – 19.1%) 50/328	20.1% (16.8 – 23.3%) 117/583
More than one sexual partner and reported using a condom during last sexual intercourse*				20.0% (12.9 – 29.6%) 14/70	40.0% (7.4 – 84.8%) 2/5	21.3% (14.4 – 30.4%) 16/75				19.4% (9.8 – 29.0%) 13/67	14.0% (4.2 – 23.8%) 7/50	17.1% (10.1 – 24.0%) 20/117

	LUGUFU AREA											
	Lugufu Hosts Baseline			Lugufu Hosts Follow-up			Lugufu Camp Baseline			Lugufu Camp Follow-up		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N
Sex with a non-regular partner(s) in the last 12 months	20.7% - 79/381	20.1% - 110/548	20.3% - 189/929	14.2% (11.0 – 18.1%) 64/451	5.3% (3.4 – 8.1%) 25/470	9.7% (7.7 – 12.1%) 89/921	41.7% (36.6 – 46.8%) 148/355	25.9% (21.6 – 30.1%) 106/410	33.2% (29.9 – 36.5%) 254/765	22.4% (17.2 – 27.5%) 57/255	13.5% (9.7 – 17.2%) 44/327	17.4% (14.3 – 20.4%) 101/582
Condom use at last sex with a non-regular partners in the last 12 months	31.3% - 25/80	19.8% - 22/111	24.6% - 47/191	45.3% (32.8 – 57.8%) 29/64	16.0% (6.3 – 34.9%) 4/25	37.1% (27.6 – 47.7%) 33/89	35.3% (27.6 – 43.0%) 53/150	30.0% (21.4 – 38.6%) 33/110	33.1% (27.3 – 38.8%) 86/260	43.9% (30.7 – 57.0%) 25/57	30.2% (16.2 – 44.3%) 13/43	38.0% (28.3 – 47.7%) 38/100
Sex with a transactional partner(s) in the last 12 months	6.8% - 26/381	2.6% - 14/548	4.3% - 40/929	3.1% (1.8 – 5.2%) 14/451	0.2% (0.03 – 1.6%) 1/470	1.6% (1.0 – 2.7%) 15/921	17.8% (13.8 – 21.7%) 63/355	10.7% (7.7 – 13.7%) 44/410	14.0% (11.5 – 16.4%) 107/765	14.9% (10.5 – 19.3%) 38/255	9.8% (6.5 – 13.0%) 32/328	12.0% (9.4 – 14.7%) 70/583
Condom use at last sex with transactional partners in the last 12 months	42.3% - 11/26	42.9% - 6/14	42.5% - 17/40	64.3% (34.6 – 86.0%) 9/14	100% 1/1	66.7% (37.6 – 86.9%) 10/15	46.8% (34.2 – 59.4%) 29/62	30.2% (16.3 – 44.2%) 13/43	40.0% (30.5 – 49.5%) 42/105	10.5% (0.5 – 20.6%) 4/38	9.4% (0.2 – 19.8%) 3/32	10.0% (2.8 – 17.2%) 7/70
Women forced to have sex in the past 12 months		1.5% - 8/548			0.2% (0.03 – 1.6%) 1/470			3.2% (0.1 – 4.9%) 13/410			2.4% (0.8 – 4.1%) 8/328	
Received an HIV test in the past 12 months and know the results	11.3% - 43/381	11.5% - 63/548	11.4% - 106/929	41.0% (36.1 – 45.7%) 184/451	50.0% (45.3 – 54.7%) 235/470	45.5% (41.7 – 49.3%) 419/921	18.9% (14.8 – 23.0%) 67/355	17.3% (13.6 – 21.0%) 71/410	18.0% (15.3 – 20.8%) 138/765	41.6% (35.5 – 47/6%) 106/255	52.4% (47.0 – 57.9%) 172/328	47.7% (43.6 – 51.8%) 278/583
Reached by an HIV prevention programme in the past 12 months*				9.3% (6.4 – 13.3%) 42/451	2.5% (1.2 – 5.3%) 12/470	5.9% (4.3 – 8.0%) 54/921				27.8% (22.3 – 33.4%) 71/255	11.0% (7.6 – 14.4%) 36/328	18.4% (15.2 – 21.5%) 107/583
Had an STI symptom and sought treatment in the past 12 months*				38.5% (17.6 – 64.6%) 5/13	44.4% (27.9 – 62.3%) 15/27	42.5% (27.6 – 58.9%) 17/40				75.0% (41.1 – 100%) 6/8	75.0% (51.9 – 98.1%) 12/16	75.0% (56.3 – 93.7%) 18/24

	LUGUFU AREA											
	Lugufu Hosts Baseline			Lugufu Hosts Follow-up			Lugufu Camp Baseline			Lugufu Camp Follow-up		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N
Comprehensive correct knowledge of HIV/AIDS	30.5% - 116/381	31.9% - 175/548	31.3% - 291/929	63.6% (57.6 – 69.3%) 287/451	61.3% (55.1 – 67.1%) 288/470	62.4% (57.6 – 67.0%) 575/921	28.7% (24.0 – 33.4%) 102/355	25.1% (20.9 – 29.3%) 103/410	26.8% (23.7 - 29.9%) 205/765	58.0% (52.0 – 64.1%) 148/255	47.0% (41.5 – 52.4%) 154/328	51.8% (47.7 – 55.9%) 302/583
Accepting attitudes towards PLHIV	24.7% - 91/369	25.4% - 132/519	25.1% - 223/888	12.9% (10.1 – 16.2%) 58/451	7.1% (4.5 – 10.9%) 33/468	9.9% (7.8 – 12.5%) 91/919	13.4% (9.4 – 17.4%) 38/283	10.3% (7.0 – 13.6%) 33/321	11.8% (9.2 – 14.3%) 71/604	11.0% (7.1 – 15.0%) 27/245	17.0% (12.9 – 21.1%) 55/324	14.4% (11.5 – 17.3%) 82/569
Residing in current community for 12 months or less	6.0% - 23/381	7.3% - 40/548	6.8% - 63/929	3.8% (2.1 – 6.7%) 17/451	5.1% (3.1 – 8.3%) 24/470	4.5% (2.9 – 6.8%) 41/921	0.3% (<0.001 – 0.8%) 1/355	1.2% (0.2 – 2.3%) 5/410	0.8% (0.2 – 1.4%) 6/765	32.9% (27.1 – 38.7%) 84/255	15.0% (11.1 – 18.8%) 49/328	22.8% (19.4 – 26.2%) 133/583
Away from home 1 month or more in the past 12 months	19.5% - 74/380	14.4% - 79/547	16.5% - 153/927	24.2% (19.1 – 30.1%) 109/451	14.7% (10.5 – 20.2%) 69/470	19.3% (15.3 – 24.1%) 178/921	33.8% (28.9 – 38.7%) 120/355	12.5% (9.3 – 15.7%) 51/409	22.4% (19.4 – 25.3%) 171/764	20.0% (15.1 – 24.9%) 51/255	10.2% (6.9 – 13.4%) 33/325	14.5% (11.6 – 17.4%) 84/580
Visiting the neighbouring community one or more times per month	27.6% - 105/381	19.1% - 105/548	22.6% - 210/929	53.4% (47.0 – 59.7%) 241/451	40.9% (35.3 – 46.6%) 192/470	47.0% (42.1 – 52.0%) 433/921	23.7% (19.2 – 28.1%) 84/355	10.2% (7.3 – 13.2%) 42/410	16.5% (13.8 – 19.1%) 126/765	33.3% (27.5 – 18.9%) 85/255	23.5% (60.9 – 72.5%) 77/328	27.8% (24.1 – 31.4%) 162/583

**the information required to calculate this indicator was not collected at baseline*

Table 14: Comparison of GLIA core indicators at baseline and follow up among Lukole Hosts, by gender

	Lukole Hosts Baseline			Lukole Hosts Follow-up		
	Male	Female	All	Male	Female	All
	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N
Young men and women aged 15-24 who have had sexual intercourse before the age of 15	2.2% - 3/137	4.2% - 8/191	3.4% - 11/328	8.7% (4.8 – 15.0%) 13/150	4.7% (2.2 – 9.9%) 8/169	6.6% (4.0 – 10.8%) 21/319
Never married young people aged 15-24 who have never had sex	79.8% - 79/99	70.8% - 68/96	75.4% - 147/195	54.3% (43.0 – 65.1%) 51/94	70.2% (57.4 – 80.5%) 33/47	59.6% (31.6 – 49.9%) 84/141
More than one sexual partner in the past 12 months	24.5% - 91/372	13.0% - 58/446	18.2% - 149/818	17.9% (14.1 – 22.3%) 75/420	2.3% (1.3 – 4.2%) 11/472	9.6% (88.1 – 92.3%) 86/892
More than one sexual partner and reported using a condom during last sexual intercourse*				16.0% (8.6 – 27.8%) 12/75	9.1% (1.1 – 47.3%) 1/11	15.1% (8.1 – 26.5%) 13/86
Sex with a non-regular partner(s) in the last 12 months	17.7% - 66/372	13.2% - 59/446	15.3% - 125/818	13.3% (9.8 – 17.9%) 56/420	3.4% (2.2 – 5.2%) 16/472	8.1% (6.2 – 10.5%) 72/892
Condom use at last sex with a non-regular partners in the last 12 months	28.1% - 18/64	18.6% - 11/59	23.6% - 29/123	55.4% (41.6 – 68.3%) 31/56	25.0% (8.9 – 53.2%) 4/16	48.6% (37.3 – 60.0%) 35/72
Sex with a transactional partner(s) in the last 12 months	6.2% - 23/372	6.3% - 28/446	6.2% - 51/818	4.0% (2.1 – 7.6%) 17/420	1.9% (1.0 – 3.8%) 9/472	2.9% (1.8 – 4.7%) 26/892
Condom use at last sex with transactional partners in the last 12 months	39.1% - 9/23	37.0% - 10/27	38.0% - 19/50	58.8% (31.8 – 81.4%) 10/17	44.4% (14.0 – 79.7%) 4/9	53.9% (34.2 – 72.4%) 14/26
Women forced to have sex in the past 12 months		0.7% - 3/446			4.4% (2.7 – 7.1%) 21/472	

	Lukole Hosts Baseline			Lukole Hosts Follow-up		
	Male	**Female**	**All**	**Male**	**Female**	**All**
	% (95% CI) n/N	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**
Received an HIV test in the past 12 months and know the results	17.0% - 63/372	15.3% - 68/446	16.0% - 131/818	39.1% (32.2 – 46.4%) 164/420	36.2% (30.5 – 42.4%) 171/472	37.6% (32.0 – 43.5%) 335/892
Reached by an HIV prevention programme in the past 12 months*				14.1% (10.4 – 18.7%) 59/420	6.6% (4.1 – 10.4%) 31/472	10.1% (7.6 – 13.3%) 90/892
Had an STI symptom and sought treatment in the past 12 months*				66.7% (31.5 – 89.7%) 6/9	57.9% (39.2 – 74.6%) 22/38	59.6% (42.2 – 74.8%) 28/47
Comprehensive correct knowledge of HIV/AIDS	47.3% - 176/372	48.4% - 216/446	47.9% - 392/818	62.1% (56.0 – 67.9%) 261/420	54.5% (49.3 – 59.5%) 257/472	58.1% (53.7 – 62.4%) 518 /892
Accepting attitudes towards PLHIV	30.1% - 106/352	28.1% - 114/406	29.0% - 220/758	7.9% (4.9 – 12.3) 33/420	6.5% (4.3 – 9.6%) 30/463	7.1% (5.3 – 9.6%) 63/883
Residing in current community for 12 months or less	3.0% - 11/372	5.6% - 25/446	4.4% - 36/818	8.1% (5.4 – 12.0% 34/420	12.3% (9.0 – 16.5%) 58/472	10.3% (7.8 – 13.4%) 92/892
Away from home 1 month or more in the past 12 months	13.9% - 51/368	10.8% - 48/443	12.2% - 99/811	21.0% (15.9 – 27.1%) 88/420	16.1% (12.3 – 20.9%) 76/472	18.4% (14.9 – 22.5%) 164/892
Visiting the neighbouring community one or more times per month	45.7% - 170/372	41.0% - 183/446	43.2% - 353/818	64.5% (58.6 – 70.0%) 271/420	51.5% (44.3 – 58.6%) 243/472	57.6% (52.1 – 63.0%) 514/892

**the information required to calculate this indicator was not collected at baseline*

Chapter 4: 2010 BSS Results

This chapter discusses the results of the 2010 BSS conducted at Nyarugusu Refugee Camp and in the surrounding areas. Nyarugusu Camp is one of two refugee camps currently operating in Tanzania; thus, findings here have implications for a good proportion of refugee-related HIV programming in Tanzania. While the preceding chapter discussed only results of Ex Lugufu residents of Nyarugusu Camp for the purpose of comparison to baseline, in this chapter camp results refer to results for the camp as a whole.

It is important to note that the population was stratified for sampling, to allow results for the Ex Lugufu respondents to be analyzed separately. Results presented in this chapter are weighted to reflect the true proportion of Ex Lugufu and Old Nyarugusu refugees found in the camp, and this means that estimates will not always correspond to the numerator divided by the denominator.

Section 1. Response and demographics

Response and sample size

Household response

Response at the household level was 100% in the surrounding community. In the camp, the number of abandoned or repatriated households was not recorded since the surveyors were instructed to find or nearest to the selected address, rather than to find a head of household listed. Repatriation was not common during the time of the survey and not expected to affect results. Only 2 households in the camp were found not to have eligible individuals.

Table 15: Non-participation at the household level, follow-up survey, Nyarugusu area

Location	Total number of households sampled	Total number of households unavailable for participation due to abandonment, travel, repatriation, or no members within targeted age group			Number of HH available for survey	Number of HH refused survey	Non-participation rate
		Number HH abandoned/ extended travel	Number HH Repatriated	Number HH not eligible (age group)			
Nyarugusu Camp and Surrounding Area							
Camp	548	0*	0*	2	546	0	0.4%
Host	480	0	-	0	480	0	0%
Total	**1,028**				**1,026**		**0.2%**

**The sampling method used in Nyarugusu did not account for abandoned households, as the address of the household was the unit, and the teams were instructed to locate the household nearest to the exactly address.*

Individual response

Surveyors only recorded one refusal among individuals in the host community, and no refusals among individuals at the camp. The overwhelming reason for non response was absenteeism, which was 7.4%

in Nyarugusu Camp and 5.4% in the surrounding communities. Non-participation for other reasons, such as sickness or disability was 0.7% in the camp and 0.1% in the surrounding community.

Table 16: Non-participation at the individual level, follow-up survey, Nyarugusu area

Location	Total number of individuals eligible for interview	Percent of interviews fully or partially completed	Number of HH members who were absent*	Number of HH members not interviewed for other reasons†	Number of HH members who refused	Total non-participation of HH members due to absence, refusal or other reason
Nyarugusu Camp and Surrounding Area						
Camp	1172	1077	87	8	0	8.1%
Host	976	921	53	1	1	5.6%
Total	**2,148**	**1,998**	**140**	**9**	**1**	**7.0%**

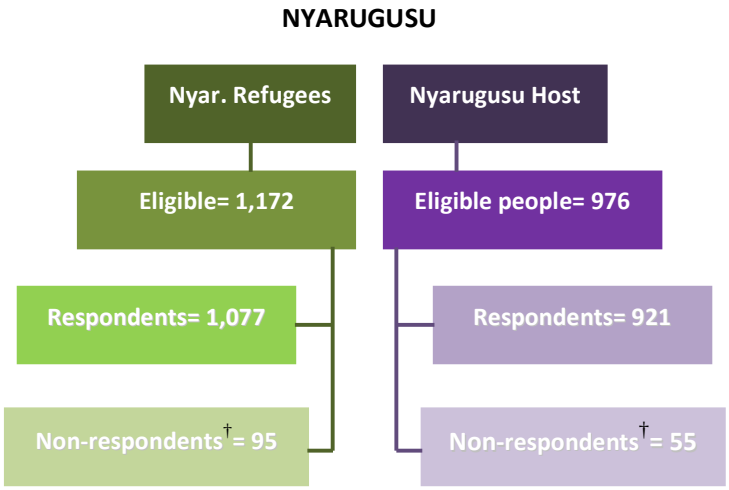
*** Absence defined as not present in the household at the time of the survey after 3 attempts.**

† Other reasons included illness or disability which prevented clear communication with an individual

Sample size

The final samples at Nyaruygusu Camp and host community included 1,077 refugee men and women and 921 men and women from the surrounding community. The final sample is displayed in the figures below.

Figure 6: Sample size for Nyarugusu Camp and surrounding communities, follow up



Demographic characteristics of the respondents

The 2010 survey at Nyarugusu Camp included a total of 485 men and 592 women (45.0% and 55.0% respectively), while the survey in the host community included 451 men and 470 women (49.0% and 51.0%). In the camp, youth aged 15-24 made up 49.7% of the sample, while older adults made up 50.3%. In the host community the sample was older, with just 40.6% youth and 59.4% older adults. Approximately 28% of the camp population was between the ages of 15-19, compared to just 17.4% in the host population.

The host population was more than 99% Tanzanian, with 4 Rwandans. Similarly, 99.5% of the respondents in the host community reported that they were not refugees, compared to 99.7% in the camp who said they were refugees. Both populations were predominantly Christian, with 68.4% of refugees claiming Protestant religion and 21.1% Catholic, while the hosts were 40.8% Protestant and 48.8% Catholic. Muslims accounted for 6.9% of the camp population and 9.7% of the camp population.

While literacy among camp and host respondents was similar (82.1% and 77.8%, respectively), more respondents in the camp reported to have completed secondary education or beyond (65.5% compared to 7.5%), while more respondents from the host community reported to have completed just primary (70.0%). In both populations, just less than 10% reported earning a regular wage or salary (9.1% in the camp, 9.9% in the host community).

Discussion

The differences in age structure and sex balance in the two populations must be considered when interpreting data. Other key characteristics were fairly comparable across populations.

Table 17: Demographic characteristics of Nyarugusu respondents, at follow up

	Nyarugusu Refugee Population						Nyarugusu Host Population					
	MEN		WOMEN		MEN + WOMEN		MEN		WOMEN		MEN + WOMEN	
	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)
Age (years)												
15-24	239/485	50.8 (46.1, 55.5)	280/592	48.7 (44.5, 53.0)	519/1077	49.7 (46.5, 52.8)	175/451	38.8 (32.9, 45.0)	199/470	42.3 (38.5, 46.8)	374/921	40.6 (36.6, 44.7)
15-19	145/239	59.2 (52.5, 65.6)	160/280	58.3 (52.1, 64.2)	305/519	58.7 (54.2, 63.1)	82/175	46.9 (38.9, 55.0)	78/199	39.2 (32.1, 46.8)	160/374	42.8 (37.0, 48.7)
20-24	94/239	40.8 (34.4, 47.5)	120/280	41.7 (35.8, 47.9)	214/519	41.3 (36.9, 45.8)	93/175	53.1 (45.0, 61.1)	121/199	60.8 (53.2, 68.0)	214/374	57.2 (51.3, 63.0)
25-59	246/485	49.2 (44.5, 53.9)	312/592	51.3 (47.0, 55.5)	558/1077	50.3 (47.2, 53.5)	276/451	61.2 (54.9, 67.1)	271/470	57.7 (53.2, 62.2)	547/921	59.4 (55.3, 63.4)
Current Nationality												
Kenyan	3/485	0.6 (0.2, 1.8)	1/592	0.1 (0.01, 0.8)	4/ 1077	0.3 (0.1, 0.9)	0/451	0	0/470	0	0/921	0
Rwandan	0/485	0	1/592	0.1 (0.01, 0.8)	1/ 1077	0.06 (0.00, 0.4)	3/451	0.6 (0.2, 2.1)	1/470	0.2 (0.02, 1.6)	4/921	0.4 (0.1, 1.4)

	Nyarugusu Refugee Population						Nyarugusu Host Population					
	MEN		WOMEN		MEN + WOMEN		MEN		WOMEN		MEN + WOMEN	
	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)
Tanzanian	0/485	0	2/592	0.4 (0.08, 1.5)	2/ 1077	0.2 (0.04, 0.8)	448/451	99.3 (97.9, 99.8)	469/470	99.8 (98.4, 100.)	917/921	99.6 (98.5, 99.9)
DRC	470/485	97.1 (95.0, 98.3)	575/592	97.2 (95.4, 98.3)	1045/ 1077	97.1 (95.9, 98.0)	0/451	0	0/470	0	0/921	0
Burundian	11/485	2.1 (1.1, 3.9)	13/592	2.2 (1.3, 3.9)	24/ 1077	2.2 (1.4, 3.3)	0/451	0	0/470	0	0/921	0
Ugandan	1/485	0.3 (0.04, 2.0)	0/592	0	1/ 1077	0.1 (0.02, 0.9)	0/451	0	0/470	0	0/921	0
Refugee	484/485	99.9 (99.0, 99.9)	590/592	99.6 (98.5, 99.96)	1074/ 1077	99.7 (99.2,99.94)	3/451	0.7 (0.2, 2.1)	2/470	0.4 (0.1, 1.7)	5/921	0.5 (0.2, 1.5)
Religious affiliation												
Catholic	93/485	18.7 (15.4, 22.7)	142/592	23.1 (19.8, 26.9)	235/1077	21.1 (18.7, 23.8)	221/449	49.2 (41.7, 56.8)	226/466	48.5 (41.3, 55.8)	447/915	48.8 (42.1, 55.6)
Protestant	328/485	69.7 (65.3, 73.8)	386/592	67.3 (63.3, 71.2)	714/1077	68.4 (65.4, 71.2)	180/449	40.1 (33.0, 47.6)	193/466	41.4 (34.5, 48.7)	373/915	40.8 (34.2, 47.6)
Muslim	41/485	7.3 (5.3, 9.9)	47/592	6.6 (4.9, 8.9)	88/1077	6.9 (5.6, 8.6)	45/449	10.0 (6.1, 16.1)	44/466	9.4 (5.8, 15.0)	89/915	9.7 (6.0, 15.3)
Other	23/485	4.3 (2.8, 6.6)	17/592	2.9 (1.8, 4.8)	40/1077	3.6 (2.6, 4.9)	3/449	0.7 (0.2, 2.1)	3/466	0.6 (0.2, 2.0)	6/915	0.7 (0.3, 1.6)
Education												
None	10/485	1.7 (0.9, 3.2)	81/592	13.1 (10.5, 16.2)	91/1077	7.9 (6.4, 9.7)	19/451	4.2 (2.3, 7.5)	75/469	16.0 (12.0, 21.0)	94/920	10.2 (7.6, 13.6)
Incomplete Primary	5/485	1.3 (0.5, 3.1)	47/592	8.8 (6.6, 11.6)	52/1077	5.4 (4.1, 7.0)	52/451	11.5 (8.1, 16.1)	61/469	13.0 (9.9, 16.9)	113/920	12.3 (9.5, 15.7)
Primary	66/485	11.3 (8.8, 14.4)	186/592	29.5 (25.8, 33.5)	252/1077	21.2 (18.8, 23.8)	324/451	71.8 (66.8, 76.4)	320/469	68.2 (61.9, 73.9)	644/920	70.0 (65.4, 74.2)
Secondary	385/485	81.6 (77.8, 84.8)	275/592	47.9 (43.7, 52.2)	660/1077	63.2 (60.2, 66.2)	55/451	12.2 (8.5, 17.2)	13/469	2.8 (1.5, 5.2)	68/920	7.4 (5.1, 10.6)
Tertiary	19/485	4.2 (2.6, 6.6)	3/592	0.7 (0.2, 2.2)	22/1077	2.3 (1.5, 3.5)	1/451	0.2 (0.02, 1.6)	0/469	0	1/920	0.1 (0.01, 0.8)
Literacy												
Can easily read one language	463/485	95.9 (93.8, 97.4)	415/592	70.5 (66.4, 74.2)	878/1077	82.1 (79.5, 84.3)	389/451	86.2 (81.7, 90.1)	328/470	69.8 (64.7, 74.4)	717/921	77.8 (73.4, 81.7)
Cannot easily read one language	22/485	4.0 (2.6, 6.2)	177/592	29.6 (25.8, 33.6)	199/1077	17.9 (15.7, 20.5)	62/451	13.7 (9.8, 18.8)	142/470	30.2 (25.6, 35.3)	204/921	22.2 (18.3, 26.6)

	Nyarugusu Refugee Population						Nyarugusu Host Population					
	MEN		WOMEN		MEN + WOMEN		MEN		WOMEN		MEN + WOMEN	
	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)
Earn regular wage	66/485	15.0 (11.8, 18.8)	23/592	4.2 (2.8, 6.4)	89/1077	9.1 (7.4, 11.2)	70/450	15.6 (11.3, 21.0)	21/469	4.5 (2.1, 9.5)	91/919	9.9 (7.2, 13.5)
Ever been involved in official or unofficial military/police	24/485	4.9 (3.2, 7.4)	6/592	1.1 (0.5, 2.4)	30/1077	2.8 (1.9, 4.1)	39/450	8.7 (6.3, 11.9)	13/467	2.8 (1.5, 5.0)	52/917	5.7 (4.4, 7.3)

Marital status

Marital status for refugees and hosts appear to be very different, with just 51.2% currently married in the camp, versus 70.9% in the host community. Part of the difference can be accounted for by the younger population at the camp. However, examining by age groups reveals that current marriage was far less common in the camp, across age groups. In the camp 28.3% of youth were currently married, compared to 44.9% in the host community. Polygamous marriage was similar in both locations (11.1% in the camp and 12.3% in the host population), as was the mean age at first married (22.3 for men and 19.5 for women in the camp, 22.1 for men and 18.4 for women in the host community).

Discussion

Camp respondents of any age group were less likely to be married or cohabitating than their counterparts in the host community. This difference has implication for interpreting the data about never married youth (as they are more common in the camp), and non-regular partnerships, since youth who are not married may be more likely to engage in non-regular partnership than youth who are married.

Table 18: Marital status of Nyarugusu respondents, at follow up

Characteristics	NYARUGUSU CAMP						NYARUGUSU HOSTS					
	Men		Women		Men + Women		Men		Women		Men + Women	
	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)
Ever married	274/485	55.1 (50.4, 59.7)	438/592	71.9 (67.9, 75.7)	712/ 1077	64.3 (61.1, 67.3)	298/451	66.1 (60.7, 71.7)	396/469	84.4 (79.9, 88.1)	694/920	75.4 (71.0, 79.4)
Marital status												
Single/Never married	211/485	44.9 (40.3, 49.7)	154/592	28.1 (24.3, 32.1)	365/ 1077	35.7 (32.7, 38.9)	153/451	33.9 (28.3, 40.0)	73/470	15.7 (12.1, 20.3)	227/921	24.6 (20.7, 29.0)

Married	246/485	49.6 (44.9, 54.3)	321/438	52.5 (48.3, 56.8)	567/ 1077	51.2 (48.1, 54.4)	293/451	65.0 (58.6, 0.8)	360/470	76.6 (71.8, 80.8)	653/921	70.9 (66.1, 75.3)
Divorced/separated	17/485	3.6 (2.2, 5.9)	72/438	11.9 (9.4, 14.9)	89/ 1077	8.1 (6.6, 10.0)	5/451	1.1 (0.5, 2.6)	27/470	5.7 (3.9, 8.3)	32/921	3.5 (2.5, 4.8)
Widowed	11/485	1.8 (1.0, 3.6)	45/438	7.5 (5.5, 10.0)	56/ 1077	4.9 (3.7, 6.4)	0/451	0 -	9/470	1.9 (0.9, 4.1)	9/921	1.0 (0.5, 2.1)
Currently living with spouse or another sexual partner	257/484	56.0 (51.3, 60.6)	330/590	55.8 (51.5, 60.0)	587/ 1074	55.9 (52.7, 59.0)	299/450	66.4 (60.3, 72.1)	364/469	77.6 (72.8, 81.8)	663/919	72.1 (67.3, 76.5)
Polygamous Marriage	20/246	9.3 (6.0, 14.2)	45/321	12.4 (9.2, 16.5)	65/567	11.1 (8.6, 14.1)	29/293	9.9 (7.0, 13.8)	51/359	14.2 (11.0, 18.2)	80/652	12.3 (9.5, 15.8)
Mean age at first marriage (years)	-	22.3 (21.4, 23.1)	-	19.5 (18.0, 21.1)	-	20.6 (19.6, 21.6)	-	22.1 (21.7, 22.5)	-	18.4 (18.1, 18.7)	-	20.2 (20.0, 20.4)

Displacement and mobility

Camp data is weighted to adjust estimates according to the exact proportions of ExLugufu refugees in Nyarugusu Camp. Therefore, proportions describing relocation and time lived in community refer to the proportions expected in the camp at large, rather than the make-up of the sample. Approximately 58% of the camp has been living in the community for more than 5 years. In the host community, 88.0% of the population has lived in their currently community for more than 5 years.

In the host community, 47.1% of respondents reported making a trip to the camp at least once a month, which was much higher than the 30.2% of refugee respondents who reported making a trip to the host community. More than 60% of the camp report never visiting the surrounding community, while just 29.0% of the host community reported never visiting the camp. Long trips outside the community were estimated to be taken by 15.5% of the refugee community, comparable to 19.3% of the host population reporting long trips.

Discussion

The difference in interaction between camp and host community is notable and can be explored in relation to access to services and various knowledge indicators.

Table 19: Length of time living in current community, absences from home and visits to host communities or camps, Nyarugusu respondents at follow up

	MEN		WOMEN		MEN + WOMEN	
	n/N	% (CI)	n/N	% (CI)	% (CI)	n/N
Nyarugusu Camp Population						
Relocated from another camp	259/485	36.8 (32.7, 41.1)	330/590	39.0 (35.2, 43.0)	589/1075	38.0 (35.2, 40.9)
Time living in community						
Less than 6 months	6/485	1.5 (0.7, 3.4)	5/592	0.9 (0.4, 2.3)	11/1077	1.2 (0.6, 2.2)
6-12 months	85/485	12.1 (9.8, 14.9)	48/592	5.7 (4.3, 7.5)	133/1077	8.6 (7.3, 10.2)
1-2 years	171/485	24.9 (21.5, 28.6)	280/592	32.8 (29.3, 36.5)	451/1077	29.2 (26.7, 31.8)
2-5 years	5/485	1.4 (0.6, 3.3)	8/592	1.9 (0.9, 3.7)	13/1077	1.7 (1.0, 2.8)
Over 5 years	150/485	41.28 (36.6, 46.1)	181/592	42.2 (38.0, 46.7)	331/1077	41.8 (38.6, 45.1)
Always	65/485	17.8(14.1, 22.2)	63/592	14.8(11.8, 18.4)	128/1077	16.2(13.9, 18.9)
Left home for longer than 4 weeks in the last 12 months	98/484	20.3 (16.8, 24.4)	65/586	11.5 (9.0, 14.5)	163/1070	15.5 (13.3, 18.0)
Frequency of visits to surrounding community						
Never	252/485	51.5 (46.8, 56.2)	417/592	69.7 (65.6, 73.5)	669/1077	61.4 (58.3, 64.5)
Less than once a month	57/485	11.2 (8.6, 14.4)	33/592	6.1 (4.3, 8.6)	90/1077	8.4 (6.8, 10.3)
Once a month	97/485	21.0 (17.4, 25.2)	65/592	11.6 (9.1, 14.7)	162/1077	15.9 (13.7, 18.4)
Many times a month	79/485	16.4 (13.2, 20.2)	77/592	12.6 (10.1, 15.7)	156/1077	14.3 (12.3, 16.7)
Nyarugusu Host Population						
Time living in community						
Less than 6 months	15/450	3.3 (1.7, 6.4)	13/469	2.8 (1.5, 5.1)	28/919	3.0 (1.7, 5.3)
6-12 months	2/450	0.4 (0.1, 1.8)	11/469	2.3 (1.3, 4.1)	13/919	1.4 (0.8, 2.6)
1-2 years	5/450	1.1 (0.4, 3.1)	17/469	3.6 (2.2, 5.9)	22/919	2.4 (1.5, 3.9)
2-5 years	28/450	6.2 (4.0, 9.7)	19/469	4.1 (2.4, 6.7)	47/919	5.1 (3.3, 7.8)
Over 5 years	106/450	23.6 (18.6, 29.4)	80/469	17.1 (12.1, 23.5)	186/919	20.2 (15.7, 25.6)
Always	294/450	65.3(58.0, 72.0)	329/469	70.2 (62.0, 77.2)	623/919	67.8 (60.8, 74.1)
Left home for longer than 4 weeks in the last 12 months	109/451	24.2(19.1, 30.1)	69/470	14.7 (10.5, 20.2)	178/921	19.3 (15.3, 24.1)
Frequency of visits to settlement						
Never	104/451	23.1 (17.2, 30.2)	163/469	34.8 (29.2, 40.8)	267/920	29.0 (25.3, 33.0)
Less than once a month	106/451	23.5 (19.8, 27.7)	114/469	24.3 (19.6, 29.7)	220/920	23.9 (21.1, 27.0)
Once a month	115/451	25.5 (20.7, 31.0)	123/469	26.2 (21.6, 31.4)	238/920	25.9 (22.7, 29.4)
Many times a month	126/451	27.9 (23.1, 33.3)	69/469	14.7 (11.5, 18.6)	195/920	21.2 (17.9, 24.9)

Section 2. Core indicators

Chapter 3 included a description of the GLIA core indicators. In this section, the core indicators for Nyarugusu camp and host population are displayed. Results are discussed within the following sections.

Table 20: GLIA core indicators among Nyarugusu respondents, at follow up, by gender

	Nyarugusu Camp Population			Nyarugusu Host Population		
	Male	Female	All	Male	Female	All
	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N
Young men and women aged 15-24 who have had sexual intercourse before the age of 15	22.6 (17.5, 28.7) 54/239	14.1 (10.5, 18.8) 44/280	18.1 (14.9, 21.8) 98/519	6.9 (4.0, 11.4) 12/175	2.0 (0.8, 5.2) 4/199	4.3 (2.6, 7.1) 16/374
Never married young people aged 15-24 who have never had sex	35.1 (28.5, 42.3) 73/198	49.8 (40.8, 58.9) 59/128	41.0 (35.5, 46.8) 132/326	59.2 (48.5, 69.2) 77/130	77.3 (67.6, 84.7) 51/66	65.3 (57.4, 72.5) 128/196
More than one sexual partner in the past 12 months	28.4 (24.3, 32.9) 135/485	14.5 (11.7, 17.7) 87/592	20.8 (18.4, 23.5) 222/1077	15.5 (12.1, 19.8) 70/451	1.1 (0.4, 3.0) 5/470	8.1 (6.2, 10.6) 75/921
More than one sexual partner and reported using a condom during last sexual intercourse*	17.2 (11.5, 25.0) 24/135	17.0 (10.0, 27.3) 14/87	17.1 (12.5, 23.1) 38/222	20.0 (12.9, 29.6) 14/70	40.0 (7.4, 84.8) 2/5	21.3 (14.4, 30.4) 16/75
Sex with a non-regular partner(s) in the last 12 months	19.8 (16.4, 23.8) 99/483	11.2 (8.8, 14.1) 70/591	15.1 (13.0, 17.5) 169/1074	14.2 (11.0, 18.1) 64/451	5.3 (3.4, 8.1) 25/470	9.7 (7.7, 12.1) 89/921
Condom use at last sex with a non-regular partners in the last 12 months	41.8 (31.9, 52.4) 42/99	34.8 (23.8, 47.7) 23/69	39.0 (31.4, 47.1 65/168	45.3 (33.8, 57.4) 29/64	16.0 (6.3, 34.9) 4/25	37.1 (27.6, 47.7) 33/89
Sex with a transactional partner(s) in the last 12 months	10.3 (7.9, 13.4) 56/485	11.0 (8.6, 14.0) 63/592	10.7 (8.9, 12.8) 119/1077	3.1 (1.8, 5.2) 14/451	0.2 (0.03, 1.6) 1/470	1.6 (1.0, 2.7) 15/921

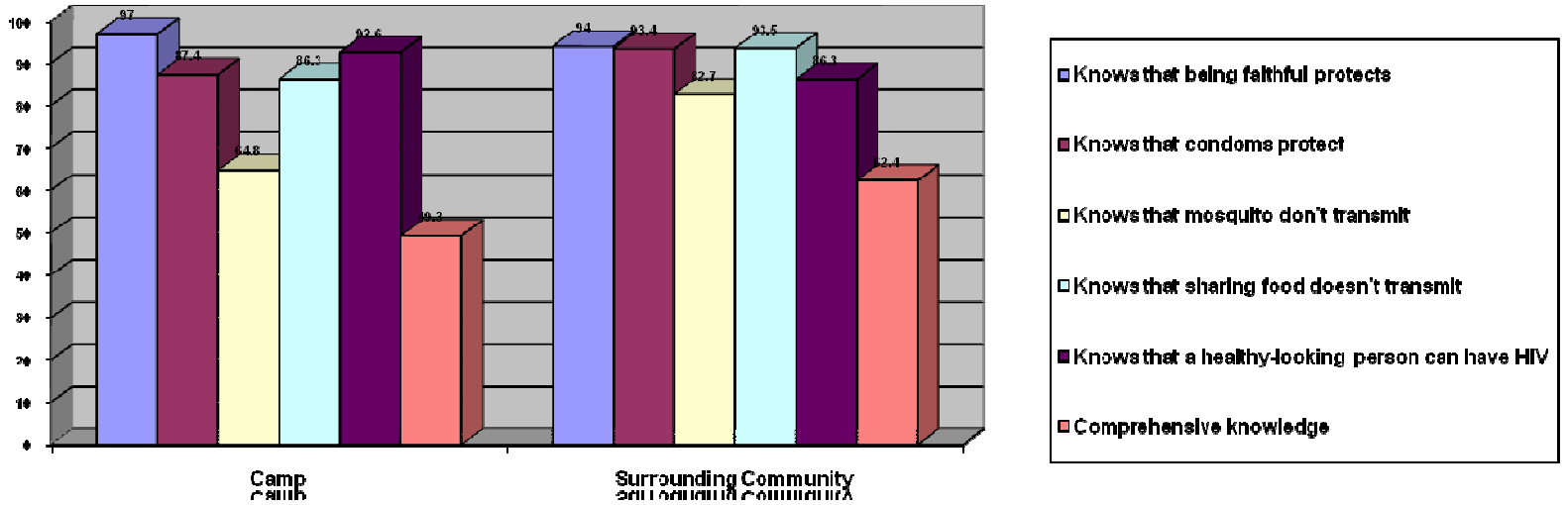
	Nyarugusu Camp Population			Nyarugusu Host Population		
	Male	Female	All	Male	Female	All
	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N
Condom use at last sex with transactional partners in the last 12 months	19.0 (9.9, 33.4) 9/56	11.7 (5.4, 23.5) 7/63	14.9 (9.1, 23.5) 16/119	64.3 (34.6, 86.0) 9/14	100 - 1/1	66.7 (37.6, 86.9) 10/15
Women forced to have sex in the past 12 months		2.6 (1.5, 4.3) 15/592			0.2 (0.03, 1.6) 1/470	
Received an HIV test in the past 12 months and know the results	42.2 (37.7, 47.0) 204/485	44.6 (40.4, 48.9) 277/592	43.5 (40.4, 46.7) 481/1077	40.8 (36.1, 45.7) 184/451	50.0 (45.3, 54.7) 235/470	45.5 (41.7, 49.3) 419/921
Reached by an HIV prevention programme in the past 12 months*	26.4 (22.5, 30.8) 130/485	10.5 (8.2 , 13.4) 63/592	17.8 (15.5, 20.3) 193/1077	9.3 (6.4, 13.3) 42/451	2.6 (1.2, 5.3) 12/470	5.9 (4.3, 8.0) 54/921
Had an STI symptom and sought treatment in the past 12 months*	66.6 (38.6, 86.4) 11/16	59.0 (39.0, 76.4) 19/30	61.7 (45.4, 75.8) 30/46	80.0 (38.4, 96.3) 4/5	60.0 (39.1, 77.8) 15/25	63.3 (44.0, 9.2) 19/30
Comprehensive correct knowledge of HIV/AIDS	52.0 (47.3, 56.7) 260/485	47.0 (42.7, 51.2) 278/592	49.3 (46.1, 52.4) 538/1077	63.6 (57.6, 69.3) 287/451	61.3 (55.1, 67.1) 288/470	62.4 (57.6, 67.0) 575/921
Accepting attitudes towards PLHIV	9.8 (7.4, 13.0) 48/473	10.5 (8.3, 13.3) 72/583	10.2 (8.5, 12.2) 120/1056	12.9 (10.1, 16.2) 58/451	7.1 (4.5, 10.9) 33/468	9.9 (7.8, 12.5) 91/919
Residing in current community for 12 months or less	13.6 (11.1, 16.7) 91/485	6.6 (5.0, 8.7) 53/592	9.8 (8.3, 11.5) 144/1077	3.8 (2.1, 6.7) 17/451	5.1 (3.1, 8.3) 24/470	4.5 (2.9, 6.8) 41/921
Away from home 1 month or more in the past 12 months	20.3 (16.8, 24.4) 98/484	11.5 (9.0, 14.5) 65/586	15.5 (13.3, 18.0) 163/1070	24.2 (19.1, 30.1) 109/451	14.7 (10.5, 20.2) 69/470	19.3 (15.3, 24.1) 178/921
Visiting the neighbouring community one or more times per month	37.4 (32.9, 42.0) 176/485	24.2 (20.7, 28.0) 142/592	30.2 (27.3, 33.2) 318/1077	53.4 (47.0, 59.7) 241/451	40.9 (35.3, 46.6) 192/470	47.0 (42.1, 52.0) 433/921

Section 3. Knowledge of HIV

Questions about faithfulness, abstinence and condom use's role in protecting against HIV were correctly answered by at least 91% of men in both the camp and community. Questions about faithfulness and abstinence were correctly answered by at least 92% of women in either location or of either age category, but knowledge about the protection of condoms ranged from 83.8% among women aged 25 and older in the camp to 89.5% among younger women in the camp, with about 85% of both groups in the host community responding correctly.

Misconceptions about transmission of HIV were fairly common, with 28% of respondents in the camp and 13% of respondents in the host community agreeing that mosquitoes did transmit HIV, while another 7% and 3%, respectively, did not know. Respondents in the camp, however, were more likely to know that a healthy-looking person can have HIV (92.6%), compared to respondents in the host community (86.3%). The chart below shows the indicator for comprehensive, correct knowledge along with each of its 5 component parts.

Figure 7: Comprehensive knowledge indicators and its composite indicators, Nyarugusu area



Differences in knowledge are sometimes observed by age category, particularly as schools can be an important channel for information. Comprehensive knowledge among youth in the camp was slightly lower than that of their older counterparts (48.3% among those aged 15-24, 50.2% among those aged 25-49). The same pattern was observed in the host community, with 59.4% of youth having comprehensive knowledge, compared to 64.5% of adults aged 25-49.

Comprehensive, correct knowledge was 62.4% in the host community and 49.3% in the camp. The lower level in the camp is due to lower levels of knowledge of mosquito bites not being a mode of transmission. The difference between camp and host community, in each age category, was statistically significant.

Discussion

Knowledge about ways to protect against HIV transmission was high in both the camp and host community. Knowledge about condoms as a way to protect against HIV could be increased among women as they were found to have lower knowledge than men. Knowledge of women who attended antenatal clinics in the past 4 years was higher than that of the average woman (98.9% for women who attended ANC in the camp, 96.8% for women who attended ANC in the host community), which suggests that antenatal clinics may already be using the opportunity to increase knowledge. In general, knowledge among youth could be higher, given that messages can usually be passed through school or media. Schools may be an area for increased information targeting, particularly around misconceptions about mosquito bites causing HIV.

The chart below shows that compared to data generated from the Kigoma region (in which Nyarugusu Camp is located), host community youth have similar levels of comprehensive, correct knowledge[1] as recorded in the region, while youth in the camp had lower levels of comprehensive knowledge. As mentioned above, these figures could be improved, but are primarily driven by the misconceptions around mosquito bite transmission. With increased funding for malaria programs, it may be important to review messaging about malaria in the camp to ensure that messages could not be misinterpreted.

Table 21: Comprehensive knowledge among youth aged 15-24, 2010 Nyarugusu BSS compared to 2007-8 Tanzania Malaria and HIV/AIDS Indicator Survey

	2007-8 TMHIS – Kigoma Region	2010 BSS – Nyarugusu Host	2010 BSS – Nyarugusu Camp
Young Women	62.1%	56.3% (49.3, 63.0)	47.3% (41.1, 53.5)
Young Men	56.2%	62.9% (54.2, 70.8)	49.6% (42.9, 56.3)

[1] The THMIS indicator for comprehensive, correct knowledge is constructed using the same questions as the BSS.

Section 4. Knowledge of condoms

In the host community, almost all respondents (98.6%) had heard of condoms. Of those who had heard of condoms, only 28.9% of men and 16.9% of women had ever used a condom. Restricting this indicator to those who had heard of condoms and had had sex increases the proportion to 35.8% of men and 18.9% of women; restricting the indicator further to those who had heard of condoms, and had either a non-regular or transactional partner in the last 12m months increases the proportion to 62.5% for men and 34.6% of women. Comparatively, experience using condoms appears much higher in Nyarugusu camp, where 40.7% of all men who had heard of condoms, and 21.6% of all women who had heard of condoms had used them. However, when restricting the indicator to those who had heard of condoms and had either a non-regular partner or transactional partner in the last 12 months, the proportions look similar to the host community: 64.4% for men, and 38.3% for women.

More than 92% of respondents in either location or of either sex named HIV protection as a purpose of condoms. The survey tool captured whether the respondent offered "family planning" or "prevention of pregnancy" as a purpose of condoms. In the camp, 68.0% mentioned one or both, compared to 64.7% of respondents in the host community.

More than 94% of respondents in the camp, and more than 98% of respondents in the host community reported knowing where they could get condoms. While 94.6% of the host community respondents said they could get a condom every time they needed one, in the camp 89.1% of respondents reported the same, with young men the least likely to report the ability to get one when needed (79.3%). Among the reasons reported for not being able to obtain condoms, camp respondents cited fear of being seen (38.5%), unavailability (30.8%), distance (11.5%), and health worker attitude (11.5%).

Discussion

Knowledge of condoms was fairly high. When most respondents were asked about their purpose, the vast majority mentioned their role in protecting against HIV, but only 64 – 68% mentioned their role in family planning/preventing pregnancy. Increasing awareness about those uses of condoms may help decrease stigma around their use as well and increase knowledge of family planning options. Knowledge of where to obtain condoms was fairly high in the host community, and slightly lower in the camp. This indicator could be a target for improvement among HIV awareness programs.

When asked about teaching condom use to young adolescents, only 68.3% of respondents in the camp and 73.0% of respondents in the host community agreed that it was appropriate. Particularly in the camp, where very high levels of sexual activity were found among young people, efforts are needed to increase acceptance about teaching condoms to youth. This could be done through community and religious leaders in the communities, and would pave the way for school-based programs.

Table 22: Knowledge and access regarding male and female condoms among Nyarugusu Refugees

Characteristics	Men						Women						Men + Women					
	15-24 yrs		25-49 yrs		15-49 yrs		15-24 yrs		25-49 yrs		15-49 yrs		15-24 yrs		25-49 yrs		15-49 yrs	
	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)
Ever heard of condoms	222/239	93.1 (88.9, 95.8)	234/245	96.3 (93.2, 98.0)	456/484	94.7 (92.2, 96.4)	263/280	94.3 (90.7, 96.5)	288/312	92.3 (88.4, 94.9)	551/592	93.2 (90.8, 95.1)	485/519	93.7 (91.1, 95.6)	522/557	94.1 (91.7, 95.8)	1007/1076	93.9 (92.2, 95.2)
Among those who ever heard of condoms																		
Ever used a male condom	84/222	38.8 (32.2, 45.8)	96/234	42.6 (36.0, 49.5)	180/456	40.7 (36.0, 45.6)	60/261	23.4 (18.4, 29.3)	53/288	19.8 (15.2, 25.3)	113/549	21.6 (18.1, 25.5)	144/483	30.6 (26.4, 35.1)	149/522	30.2 (26.1, 34.6)	293/1005	30.4 (27.4, 33.5)
Condoms are used for:																		
Protection against HIV	208/222	92.0 (86.9, 95.2)	228/234	97.3 (93.9, 98.9)	436/456	94.7 (91.8, 96.6)	239/263	90.6 (86.1, 93.7)	271/288	93.8 (90.0, 96.2)	510/551	92.2 (89.5, 94.3)	447/485	91.2 (88.0, 93.6)	499/522	95.4 (93.0, 97.0)	946/1007	93.3 (91.4, 94.8)
Pregnancy Prevention	122/222	55.9 (49.0, 62.7)	135/234	57.7 (50.9, 64.2)	257/456	56.8 (52.0, 61.5)	163/263	62.4 (56.0, 68.3)	172/288	59.8 (53.6, 65.6)	335/551	61.0 (56.6, 65.3)	285/485	59.4 (54.7, 63.9)	307/522	58.8 (54.3, 63.2)	592/1007	59.1 (55.9, 62.3)
Family Planning	64/222	24.5 (19.2, 30.6)	115/234	44.3 (37.7, 51.1)	179/456	34.4 (30.1, 39.0)	120/263	43.7 (37.5, 50.1)	156/288	51.6 (45.4, 57.7)	276/551	47.7 (43.3, 52.1)	184/485	34.8 (30.6, 39.4)	271/522	48.3 (43.7, 52.8)	455/1007	41.6 (38.4, 44.8)
Among those who ever used a condom																		
Know where to obtain a condom	77/83	92.3 (83.3, 96.6)	93/96	96.5 (89.2, 98.9)	170/179	94.5 (89.5, 97.2)	58/60	96.7 (86.7, 99.3)	49/53	91.2 (78.2, 96.8)	107/113	94.1 (87.2, 97.4)	135/143	94.1 (88.3, 97.1)	142/149	94.6 (88.8, 97.5)	277/292	94.4 (90.7, 96.7)
Can get a condom every time needed	64/78	79.3 (67.7, 87.5)	87/93	92.8 (84.3, 96.9)	151/171	86.5 (79.8, 91.2)	54/58	90.9 (78.0, 96.6)	47/49	95.9 (83.7, 99.1)	101/107	93.2 (85.4, 97.0)	118/136	84.2 (76.1, 89.9)	134/142	93.9 (87.8, 97.0)	252/278	89.1 (84.3, 92.5)

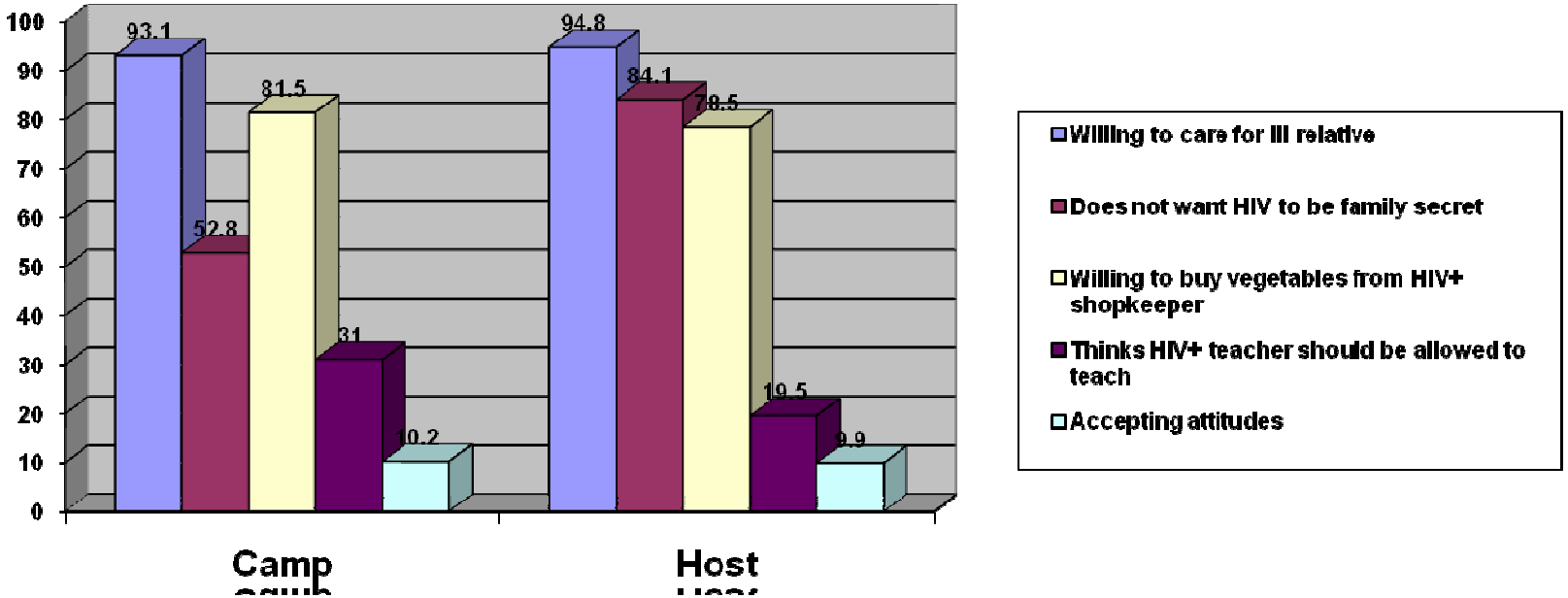
Table 23: Knowledge and access regarding male and female condoms among Nyarugusu Hosts

Characteristics	Men						Women						Men + Women					
	15-24 yrs		25-49 yrs		15-49 yrs		15-24 yrs		25-49 yrs		15-49 yrs		15-24 yrs		25-49 yrs		15-49 yrs	
	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)
Ever heard of condoms	175/175	100	275/276	99.6 (97.3, 99.99)	450/451	99.8 (98.3, 99.99)	194/198	98.0 (93.5, 99.4)	263/271	97.1 (93.9, 98.6)	457/469	97.4 (94.6, 98.8)	369/373	98.9 (96.4, 99.7)	538/547	98.4 (96.8, 99.2)	907/920	98.6 (97.1, 99.3)
Among those who ever heard of condoms																		
Ever used a male condom	39/175	22.3 (16.6, 29.3)	91/275	33.1 (27.2, 39.6)	130/450	28.9 (24.6, 33.6)	34/194	17.5 (12.2, 24.6)	43/263	16.4 (11.5, 22.7)	77/457	16.9 (12.5, 22.3)	73/369	19.8 (15.3, 25.3)	134/538	24.9 (20.2, 30.3)	207/907	22.8 (19.1, 27.0)
Condoms are used for:																		
Protection against HIV	173/175	98.9 (95.5, 99.7)	268/275	97.5 (95.0, 98.7)	441/450	98.0 (96.4, 98.9)	186/194	95.9 (91.6, 98.0)	251/263	95.4 (91.3, 97.7)	437/457	95.6 (93.2, 97.2)	359/369	97.3 (95.0, 98.6)	519/538	96.5 (93.9, 98.0)	878/907	96.8 (95.3, 97.9)
Pregnancy Prevention	116/175	66.3 (56.3, 75.0)	138/275	50.2 (42.4, 58.0)	254/450	56.4 (48.9, 63.7)	86/194	44.3 (36.2, 52.8)	83/263	31.6 (25.1, 38.8)	169/457	37.0 (31.1, 43.3)	202/369	54.7 (47.7, 61.6)	221/538	41.1 (35.3, 47.2)	423/907	46.6 (40.8, 52.6)
Family Planning	37/175	21.1 (15.0, 28.9)	99/275	36.0 (29.2, 43.4)	136/450	30.2 (24.2, 21.4)	34/194	17.5 (11.5, 25.8)	61/263	23.2 (18.3, 28.9)	95/457	20.8 (16.2, 26.3)	71/369	19.2 (14.5, 25.0)	160/538	29.7 (25.2, 34.7)	231/907	25.5 (21.3, 30.2)
Among those who ever used a condom																		
Know where to obtain a condom	39/39	100	91/91	100	130/130	100	32/34	94.1 (79.3, 98.5)	42/43	97.7 (83.7, 99.7)	74/77	96.1 (88.6, 98.7)	71/73	97.3 (90.4, 99.3)	133/134	99.3 (94.3, 99.9)	204/207	98.6 (95.7, 99.5)
Can get a condom every time needed	37/39	94.9 (83.4, 98.6)	86/91	94.5 (85.0, 98.1)	123/130	94.6 (88.2, 97.6)	31/32	96.9 (79.5, 99.6)	39/42	92.9 (80.9, 97.6)	70/74	94.6 (83.9, 98.3)	68/71	95.8 (88.1, 98.6)	125/133	94.0 (88.1, 97.1)	193/204	94.6 (90.1, 97.1)

Section 5: Attitudes towards people living with HIV/AIDS

According to the standard composite indicator, the proportion of respondents with accepting attitudes in either location was extremely low, at just 10.2% in the camp and 9.9% in the host community. Although these numbers are concerning, examination of each of the component indicators shows a more complex picture. Most respondents in both locations reported that they would be willing to buy vegetables from an HIV-positive shopkeeper or care for an ill relative with HIV. Almost 80% of respondents in the host community said they would not want it to be a secret if a family member was HIV-positive, while just around half of respondents in the camp shared that view.

Figure 8: Accepting attitudes indicator and its composite parts, Nyarugusu area



Respondents in the host community who had comprehensive knowledge of HIV were more than twice as likely to have accepting attitudes as those who were not found to have comprehensive knowledge (12.9% versus 4.9%). Those who completed primary school were almost twice as likely to have accepting attitudes as those who had no education or incomplete primary (11.1% versus 5.8%; p=0.021). However accepting attitudes were not associated with younger or older age (8.6% for youth, 10.8% for older adults; p=0.313).

Discussion

The analysis shows that "accepting attitudes" among both camp and host community respondents is around 10%, which is exceptionally low. In both sites, the limiting factor was a perception that HIV-positive teachers should not be allowed to continue teaching. This particular idea about people living with HIV needs to be explored, as it could point to a moral perception of HIV-positive people through which others would hesitant to permit them to work with children. In the camp, there was also a common view that a family member's HIV-positive status should remain a secret, which may be the result of an atmosphere of stigmatisation.

Table 24: Accepting attitudes towards those living with HIV/AIDS, Nyarugusu area

Characteristics	Men		Women		Men + Women	
	Expressed accepting attitudes towards PLWHA		Expressed accepting attitudes towards PLWHA		Expressed accepting attitudes towards PLWHA	
	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)
Nyarugusu Camp Population						
Among those who heard of HIV						
Age						
15-24	20/93	21.5 (14.8,30.2)	32/87	36.8 (26.5,48.4)	52/180	28.9 (22.7,35.9)
25-59	73/93	78.5 (69.8,85.2)	55/87	63.2 (51.6,73.5)	128/180	71.1 (64.1,77.3)
15-59	93/180	51.7 (44.4, 58.9)	87/180	48.3 (41.1, 55.7)	180/908	19.8 (16.9, 23.1)
Education						
None	19/93	20.4 (13.3,30.1)	44/87	50.6 (38.7,62.4)	63/180	35.0 (28.6,42.0)
Primary Incomplete	37/93	39.8 (28.4,52.4)	32/87	36.8 (27.1,47.6)	69/180	38.3 (31.5,45.6)
Primary	26/93	28.0 (19.3,38.6)	9/87	10.3 (5.1,19.8)	35/180	19.4 (14.4,25.7)
Secondary	10/93	10.8 (4.4,24.0)	2/87	2.3 (0.6,9.1)	12/180	6.7 (2.6,15.9)
College/university	-	-	-	-	-	-
Nyarugusu Host Population						

Among those who heard of HIV						
Age						
15-24	24/158	15.2 (10.2,22.1)	56/159	35.2 (29.0,42.0)	80/317	25.2 (20.4,30.8)
25-59	134/158	84.8 (77.9,90.0)	103/159	64.8 (58.0,71.0)	237/317	74.8 (69.2,79.7)
15-59	158/317	49.84 (44.2, 55.5)	159/317	50.1 (44.5, 55.8)	317/898	35.3 (31.5, 39.3)
Education						
None	21/158	13.3 (8.6,20.1)	45/159	28.3 (19.7,39.0)	66/317	20.8 (15.5,27.4)
Primary Incomplete	75/158	47.5 (38.7,56.4)	76/159	47.8 (40.0,55.7)	151/317	47.6 (42.4,52.9)
Primary	50/158	31.7 (24.3,40.1)	29/159	18.2 (13.2,24.7)	79/317	24.9 (19.6,31.2)
Secondary	8/158	5.1 (2.7,9.4)	7/159	4.4 (2.1,9.0)	15/317	4.7 (2.8,7.9)
College/university	-	-	-	-	-	-

**Accepting attitudes towards PLWHA is defined as reporting:1)Willing to care for a family member sick with AIDS in their own household AND 2)Would buy fresh vegetables from a shopkeeper with HIV AND 3)Feel a teacher with HIV should be allowed to continue working AND 4)Does not feel that it should be kept a secret if a family member had HIV*

Section 6: Sexual behaviour

Sexual debut among never married 15-24 year olds

Among Nyarugusu camp youth, the BSS found that 18.1% reported sex before age 15. While similar to the figure reported for Ex Lugufu refugees only (22.4%), it is more than 400% higher than the 4.3% estimation for Nyarugusu host community. In both locations male youth had higher proportions of early sexual debut than female youth (22.6% for men and 14.1% for women at the camp, 6.9% for men and 2.0% for women in the host community).

Never married youth at Nyarugusu camp were significantly less likely to never have had sex than their counterparts in the host community (41.0%, 95% CI: 35.5, 46.8, in the camp, 65.3%, 95% CI: 57.4, 72.5, in the host community). This difference was observed across all age categories and sexes.

Table 25: Sexual debut among never married 15-24 year olds, Nyarugusu area

Characteristics	Nyarugusu Camp Population						Nyarugusu Host Population					
	Men		Women		Men + women		Men		Women		Men + women	
	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)
Sex before 15 years	54/239	22.6 (17.5, 28.7)	44/280	14.1 (10.5, 18.8)	98/519	18.1 (14.9, 21.8)	12/175	6.9 (4.0, 11.4)	4/199	2.0 (0.8, 5.2)	16/374	4.3 (2.6, 7.1)
Mean age at first sex in years	-	21.4 (19.3, 23.5)	-	19.1 (17.6, 20.6)	-	20.1 (18.9, 21.4)	-	18.9 (18.5, 19.3)	-	17.9 (17.7, 18.2)	-	18.4 (18.2, 18.6)
Among never married 15-24 year olds												
Never had sex by age (years):												
15-19	64/73	86.8 (75.7, 93.3)	58/59	98.0 (86.9, 99.7)	122/132	92.3 (85.8, 95.9)	59/77	76.6 (66.0, 84.7)	44/51	86.3 (72.6, 93.7)	103/128	80.5 (72.4, 86.6)
20-24	9/73	13.2 (6.8, 24.3)	1/59	2.0 (0.3, 13.1)	10/132	7.7 (4.1, 14.2)	18/77	23.4 (15.3, 34.0)	7/51	13.7 (6.3, 27.4)	25/128	19.5 (13.4, 27.6)
Never had sex by education:												
None	0/73	-	1/59	2.0 (0.3, 13.1)	1/132	1.0 (0.1, 6.7)	4/77	5.2 (1.9, 13.4)	4/51	7.8 (2.4, 23.0)	8/128	6.3 (2.8, 13.5)
Primary Incomplete	0/73	-	2/59	2.0 (0.5, 7.7)	2/132	1.0 (0.2, 3.8)	8/77	10.4 (4.0, 24.5)	8/51	15.7 (7.3, 30.7)	16/128	12.5 (5.7, 25.2)
Primary	13/73	17.9 (10.3, 29.4)	13/59	20.8 (12.0, 33.4)	26/132	19.3 (13.2, 27.4)	38/77	49.4 (38.6, 60.2)	31/51	60.8 (47.0, 73.1)	69/128	53.9 (43.5, 64.0)
Secondary	59/73	80.2 (68.4, 88.3)	43/59	75.3 (62.4, 84.8)	102/132	77.8 (69.4, 84.4)	27/77	35.1 (24.8, 47.0)	8/51	15.7 (8.3, 27.6)	35/128	27.3 (19.5, 37.0)
College/university	1/73	2.0 (0.3, 12.5)	0/59	-	1/132	1.0 (0.1, 6.7)	-	-	-	-	-	-

na = Not applicable due to censoring, a = Omitted because <50% of respondents had sex for the first time before reaching the beginning of the age group

Sexual partnerships

Compared to Nyarugusu camp respondents, Nyarugusu host community respondents were less likely to report having multiple partnerships (20.8% in the camp, 8.1% in the host community), non-regular partnerships (15.1% in the camp, 9.7% in the host community), and transactional sex partnership (10.7% in the camp, 1.6% in the community). As mentioned in the demographic section, the differences in age and sex composition should also be considered for purposes of comparison. The table below displays the proportion of never married young men and women in each location who had each type of higher risk partner. Analysed in this way, we see the proportion of never married young men and women engaging in high risk sex in each location, compared to their ever married peers. Never married young men at the camp and host community had more similar rates of each sexual partnership. In Nyarugusu camp, having been married was not associated with less non-regular, transactional or multiple partnership. However, in the camp, ever married men had lower proportion of non-regular partnership than never married men. In both locations, the proportion of non-regular partnerships was lower in ever married young women compared to never married young women.

Figure 9: Different partnerships among youth at Nyarugusu, by sex and marriage history

	Nyarugusu Camp				Nyarugusu Host			
	Never married young men	Never married young women	Ever married young men	Ever married young women	Never married young men	Never married young women	Ever married young men	Ever married young women
Non-regular partner in last 12 mos	24.8% (19.1, 31.7)	24.1% (17.4, 31.7)	18.6% (9.1, 34.4)	5.6% (2.8, 10.1)	23.1% (15.5, 32.9)	15.2% (8.7, 25.0)	8.9% (3.8, 19.3)	3.0% (1.2, 19.3)
Transactional partner in last 12 mos	7.9% (4.8, 12.9)	8.4% (4.6, 14.7)	9.8% (3.9, 22.7)	11.2% (6.8, 18.0)	4.6% (1.9, 10.8)	0	4.4% (1.1, 16.3)	0.8% (<0.01, 5.5)
Multiple partner in last 12 mos	18.9 (13.9, 25.4)	14.7% (9.6, 22.0)	29.5% (17.0, 46.2)	12.2% (7.6, 19.0)	10.0% (5.7, 17.0)	0	11.1% (5.5, 21.3)	2.3% (0.5, 9.3))

Table 26: Summary table of sexual intercourse with different partner types in the last 12 months, Nyarugusu area

[note: categories are not mutually exclusive, one can have partners in different categories]

Characteristics	Men						Women						Men + Women					
	Regular sex partner		Non regular sex partner		Transactional sex partner		Regular sex partner		Non regular sex partner		Transactional sex partner		Regular sex partner		Non regular sex partner		Transactional sex partner	
	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)
Nyarugusu Camp Population																		
Age																		
15-24	69/239	31.2 (25.2, 37.8)	59/238	23.8 (18.6, 29.9)	21/239	8.3 (5.3, 12.7)	155/ 280	53.5 (47.2, 59.6)	44/280	14.6 (10.8, 19.4)	28/280	9.8 (6.7, 14.2)	224/ 519	43.1 (38.6, 47.6)	103/ 518	18.9 (15.6, 22.6)	49/519	9.1 (6.8, 12.0)
25-49	212/ 246	87.5 (82.7, 91.2)	40/245	15.7 (11.5, 21.1)	35/246	12.5 (8.9, 17.3)	231/ 312	75.2 (69.8, 79.9)	26/311	8.0 (5.4, 11.8)	35/312	12.1 (8.7, 16.6)	443/ 558	80.7 (77.0, 83.9)	66/556	11.4 (8.9, 14.5)	70/558	12.3 (9.7, 15.4)
15-49	281/ 485	58.9 (54.2, 63.4)	99/483	19.8 (16.4, 23.8)	56/485	10.3 (7.9, 13.4)	386/ 592	64.6 (60.4, 68.6)	70/591	11.2 (8.8, 14.1)	63/592	11.0 (8.6, 14.0)	667/ 1077	62.0 (58.9, 65.0)	169/ 1074	15.1 (13.0, 17.5)	119/ 1077	10.7 (8.9, 12.8)
Marital status																		
Married	234/ 246	95.8 (92.5, 97.7)	34/245	12.7 (9.0, 17.7)	34/246	11.5 (8.1, 16.0)	315/ 321	98.2 (95.9, 99.2)	3/320	0.7 (0.2, 2.0)	32/321	10.5 (7.3, 14.7)	549/ 567	97.2 (95.4, 98.3)	37/565	6.0 (4.3, 8.3)	66/567	10.9 (8.5, 13.9)
Divorced/ separated	9/17	53.9 (29.6, 76.5)	4/17	27.0 (10.1, 54.7)	1/17	7.7 (1.0, 39.8)	26/72	39.3 (27.8, 52.1)	17/72	23.5 (14.6, 35.7)	7/72	9.8 (4.5, 20.2)	35/89	42.2 (31.6, 53.6)	21/89	24.2 (15.9, 35.2)	8/89	9.4 (4.5, 18.5)
Widowed	2/11	31.0 (8.5, 68.6)	4/11	38.5 (14.1, 70.5)	3/11	23.0 (6.9, 54.6)	6/45	15.7 (6.9, 31.9)	5/45	10.9 (4.2, 25.4)	4/45	7.8 (2.7, 20.6)	8/56	18.3 (9.1, 33.2)	9/56	15.6 (7.8, 28.7)	7/56	10.4 (4.7, 21.4)
Education																		
None	6/10	66.8 (34.9, 88.3)	1/10	8.3 (1.1, 43.0)	2/10	16.6 (3.9, 49.6)	50/81	65.2 (53.6, 75.3)	7/81	7.1 (3.2, 14.9)	5/81	5.3 (2.1, 13.0)	56/91	65.4 (54.5, 74.9)	8/91	7.2 (3.5, 14.5)	7/91	6.4 (2.9, 13.6)
Primary Not complete	4/5	89.0 (45.6, 98.7)	1/5	11.0 (1.3, 54.4)	0/5	**0** -	36/47	80.0 (65.7, 89.4)	2/47	4.0 (0.9, 16.3)	8/47	20.0 (10.1, 35.9)	40/52	81.0 (67.8, 89.6)	3/52	4.7 (1.4, 15.2)	8/52	17.9 (9.0, 32.6)
Primary	29/66	44.5 (32.3, 57.3)	13/66	16.0 (9.3, 26.1)	11/66	13.5 (7.5, 23.2)	136/ 186	72.7 (65.3, 79.0)	17/185	7.9 (4.8, 12.7)	19/186	10.3 (6.5, 16.0)	165/ 252	65.9 (59.4, 71.8)	30/251	9.9 (6.8, 14.0)	30/252	11.1 (7.6, 15.7)

Characteristics	Men						Women						Men + Women					
	Regular sex partner		Non regular sex partner		Transactional sex partner		Regular sex partner		Non regular sex partner		Transactional sex partner		Regular sex partner		Non regular sex partner		Transactional sex partner	
	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)
Secondary	227/385	59.4 (54.1, 64.4)	79/383	20.6 (16.6, 25.2)	41/385	9.9 (7.3, 13.5)	162/275	56.6 (50.2, 62.7)	44/275	15.9 (11.8, 21.0)	31/275	11.5 (8.0, 16.1)	389/660	58.2 (54.2, 62.1)	123/658	18.6 (15.7, 22.0)	72/660	10.6 (8.4, 13.3)
College/ university	15/19	76.6 (48.7, 91.9)	5/19	23.3 (8.6, 49.5)	2/19	10.0 (2.0, 37.3)	2/3	66.7 (12.9, 96.4)	0/3	**0** -	0/3	**0** -	17/22	75.0 (49.5, 90.1)	5/22	19.4 (7.1, 43.0)	2/22	8.3 (1.7, 32.4)
Nyarugusu Host Population																		
Age																		
15-24	50/175	28.6 (20.5, 38.3)	34/175	19.4 (13.5, 27.2)	8/175	4.6 (2.2, 9.1)	127/199	63.8 (55.4, 71.5)	14/199	7.0 (4.0, 12.1)	1/199	0.5 (0.1, 3.7)	177/374	47.3 (39.6, 55.2)	48/374	12.8 (9.3, 17.4)	9/374	2.4 (1.3, 4.6)
25-49	251/276	90.9 (85.3, 94.6)	30/276	10.9 (8.0, 14.7)	6/276	2.2 (1.0, 4.5)	235/271	86.7 (81.5, 90.7)	11/271	4.1 (2.0, 8.1)	0/271	**0** -	486/547	88.9 (84.7, 92.0)	41/547	7.5 (5.6, 10.0)	6/547	1.1 (0.5, 2.3)
15-49	301/451	66.7 (60.2, 72.7)	64/451	14.2 (11.0, 18.1)	14/451	3.1 (1.8, 5.2)	362/470	77.0 (71.9, 81.4)	25/470	5.3 (3.4, 8.1)	1/470	0.2 (0.03, 1.6)	663/921	72.0 (66.9, 76.6)	89/921	9.7 (7.7, 12.1)	15/921	1.6 (1.0, 2.7)
Marital status																		
Married	291/293	99.3 (97.2, 99.8)	23/293	7.9 (5.3, 11.4)	6/293	2.0 (1.0, 4.2)	353/360	98.1 (95.6, 99.2)	3/360	0.8 (0.3, 2.6)	0/360	-	644/653	98.6 (97.3, 99.3)	26/653	4.0 (2.6, 6.0)	6/653	0.9 (0.4, 2.0)
Divorced/ separated	2/5	40 (8.9, 82.0)	1/5	20.0 (2.3, 72.5)	0/5	-	4/27	14.8 (5.0, 36.4)	8/27	29.6 (14.0, 52.2)	1/27	3.7 (0.4, 25.2)	6/32	18.8 (8.0, 37.9)	9/32	28.1 (13.8, 48.8)	1/32	3.1 (0.4, 21.8)
Education																		
None	15/19	79.0 (53.8, 92.4)	2/19	10.5 (3.3, 29.1)	0/19	-	63/75	84.0 (71.6, 91.6)	4/75	5.3 (2.0, 13.6)	1/75	1.3 (0.2, 9.8)	78/94	83.0 (72.4, 90.1)	6/94	6.4 (3.1, 12.9)	1/94	1.1 (0.1, 8.0)
Primary Not complete	38/52	73.1 (56.4, 85.1)	4/52	7.7 (2.9, 19.0)	-	-	46/61	75.4 (63.1, 84.6)	4/61	6.6 (2.5, 16.2)	-	-	84/113	74.3 (62.4, 83.5)	8/113	7.1 (3.4, 14.0)	-	-
Primary	243/324	75 (68.4, 80.6)	40/324	12.4 (9.1, 16.5)	9/324	2.8 (1.4, 5.3)	250/320	78.1 (72.9, 82.6)	15/320	4.7 (2.8, 7.8)	0/320	-	493/644	76.6 (71.8, 80.7)	55/644	8.5 (6.6, 11.0)	9/644	1.4 (0.7, 2.7)
Secondary	5/55	9.1 (3.5, 21.6)	17/55	30.9 (18.4, 47.0)	5/55	9.1 (3.4, 22.2)	3/13	23.1 (4.8, 64.1)	2/13	15.4 (4.3, 42.5)	0/13	-	8/68	11.8 (5.7, 22.6)	19/68	27.9 (16.7, 42.8)	5/68	7.4 (2.8, 18.1)

Characteristics	Men						Women						Men + Women					
	Regular sex partner		Non regular sex partner		Transactional sex partner		Regular sex partner		Non regular sex partner		Transactional sex partner		Regular sex partner		Non regular sex partner		Transactional sex partner	
	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)
College/ university	0/1	0	1/1	100	0/1	0	-	-	-	-	-	-	0/1	0	1/1	100	0/1	0

Multiple partnerships

People age 25 and older were more likely to have multiple partners in the camp (24.8% compared to 16.8% for those age 15-24), and to a lesser extent in the host community (9.9% for those aged 15-24, 5.6% for those aged 25-49). Multiple partnerships were more common in the camp among those with secondary education, whereas the difference was not found in the host population.

In both locations, multiple partnerships were more commonly reported by those who took long trips (4 weeks or more) away from home in the past year. The difference was particularly stark in the camp, where 37.6% (95% CI: 30.2-45.6) of those who took longer trips also reported multiple partnership, compared to 17.9% (95% CI: 15.4, 20.8) of those who did not report longer trips.

Figure 10: Reported multiple partnerships by history of trips more than 4 weeks in the past 12 months

	Nyarugusu Camp			Nyarugusu Host		
	Men	Women	Men + Women	Men	Women	Men + Women
Took a trip of 4 weeks or more away from home in the past 12 months	46.2% (36.1, 56.7)	24.7% (15.8, 36.3)	37.6% (30.2, 45.6)	19.3% (13.2, 27.2)	1.5% (0.2, 9.9)	12.4% (8.5, 17.7)
No trips of 4 weeks or more in the past 12 months	24.0% (19.7, 28.8)	13.3% (10.5, 16.8)	17.9% (15.4, 20.8)	14.3% (10.8, 18.8)	1.0% (0.4, 2.7)	7.1% (5.3, 9.5)

Table 27: Reported multiple sexual partners in the past 12 months, Nyarugusu area

Characteristics	Men		Women		Men + Women	
	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)
Nyarugusu Camp Population						
Age						
15-24	48/239	20.7 (15.7, 26.7)	40/280	13.4 (9.8, 18.1)	88/519	16.8 (13.7, 20.5)
25-49	87/246	36.4 (30.2, 43.0)	47/312	15.5 (11.7, 20.3)	134/558	24.8 (21.1, 28.8)
15-49	135/485	28.4 (24.3, 32.9)	87/592	14.5 (11.7, 17.7)	222/1077	20.8 (18.4, 23.5)
Marital status						
Married	87/246	35.2 (29.2, 41.8)	39/321	12.0 (8.7, 16.3)	126/567	22.2 (18.8, 26.1)
Divorced/separated	4/17	30.9 (12.3, 58.8)	11/72	15.7 (8.5, 27.1)	15/89	18.8 (11.3, 29.5)
Widowed	3/11	30.8 (9.5, 65.5)	3/45	6.2 (1.8, 19.4)	5/56	10.4 (4.4, 22.7)
Education						
None	2/10	16.6 (3.9, 49.6)	7/81	7.1 (3.2, 14.9)	9/91	8.0 (4.0, 15.4)
Primary Incomplete	1/5	22.3 (2.8, 73.7)	10/47	22.7 (12.2, 38.3)	11/52	22.6 (12.5, 37.4)
Primary	18/66	25.9 (16.4, 38.3)	24/186	11.8 (7.8, 17.5)	42/252	15.2 (11.2, 20.4)
Secondary	104/385	27.8 (23.3, 32.8)	46/275	16.8 (12.6, 22.1)	150/660	23.3 (20.0, 26.9)
College/university	10/19	53.3 (29.1, 76.1)	0/3	-	10/22	44.4 (23.6, 67.4)
Nyarugusu Host Population						
Age						
15-24	18/175	10.3 (6.7, 15.5)	3/199	1.5 (0.3, 6.3)	21/374	5.6 (3.5, 8.9)
25-49	52/276	18.8 (14.4, 24.3)	2/271	0.7 (0.2, 3.0)	54/547	9.9 (7.4, 13.1)
15-49	70/451	15.5 (12.1, 19.8)	5/470	1.1 (0.4, 3.0)	75/921	8.1 (6.2, 10.6)
Marital status						
Married	51/293	17.4 (13.8, 21.8)	3/360	0.8 (0.3, 2.6)	54/653	8.3 (6.4, 10.7)
Divorced/separated	1/5	20.0 (2.3, 72.5)	2/27	7.4 (1.6, 28.0)	3/32	9.4 (2.8, 26.9)
Widowed	-	-	0/9	0	0/9	0
Education						
None	3/19	15.8 (6.6, 33.4)	3/75	4.0 (1.2, 12.3)	6/94	6.4 (3.1, 12.7)
Primary Incomplete	5/52	9.6 (4.0, 21.2)	0/61	-	5/113	4.4 (1.9, 9.8)
Primary	54/324	16.7 (12.7, 21.6)	1/320	0.3 (0.04, 2.4)	55/644	8.5 (6.3, 11.4)

Characteristics	Men		Women		Men + Women	
	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)
Secondary	8/55	14.6 (7.4, 26.7)	1/13	7.7 (1.0, 39.6)	9/68	13.2 (6.3, 25.9)
College/university	0/1	0	-	-	0/1	0

Non-regular partnerships

The proportion of respondents reporting non-regular partnership was more than 50% higher in the camp compared to the host community (15.1% in the camp, 9.7% in the host community).

In both locations, those having secondary education or higher had higher proportions of non-regular partnership, compared to those with lower levels of education. Older men at the camp had the highest mean number of non-regular partners (2.1 partners). Condom use with non-regular partners was highest among men in both locations, but the difference between sexes was greatest in the host community, with just 16.0% of women with non-regular partners using condoms at last non-regular sex compared to 45.3% of men.

Table 28: Reported non-regular partnerships in the last 12 months, Nyarugusu area

Includes men and women aged 15-59 years who report having had sex with at least one non-regular (casual) partner in the last 12 months

Variables	Men						Women						Men + Women					
	15-24 years		25-49 years		15-49 years		15-24 years		25-49 years		15-49 years		15-24 years		25-49 years		15-49 years	
	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)
Nyarugusu Camp Population																		
Had a non-regular partner, past 12 mos	59/238	23.8 (18.6, 29.9)	40/245	15.7 (11.5, 21.1)	99/483	19.8 (16.4, 23.8)	44/280	14.6 (10.8, 19.4)	26/311	8.0 (5.4, 11.8)	70/591	11.2 (8.8, 14.1)	103/518	18.9 (15.6, 22.6)	66/556	11.4 (8.9, 14.5)	169/ 1074	15.1 (13.0, 17.5)
AMONG THOSE WHO REPORTED ONE NON-REGULAR PARTNER IN THE PAST 12 MONTHS																		
Mean number of non-regular partners, past 12 mos	-	1.6 (1.4, 1.9)	-	2.1 (1.5, 2.8)	-	1.8 (1.5, 2.1)	-	1.4 (1.1, 1.7)	-	1.2 (1.0, 1.4)	-	1.3 (1.1, 1.5)	-	1.5 (1.3, 1.7)	-	1.8 (1.4, 2.2)	-	1.6 (1.4, 1.8)

Variables	Men						Women						Men + Women					
	15-24 years		25-49 years		15-49 years		15-24 years		25-49 years		15-49 years		15-24 years		25-49 years		15-49 years	
	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)
Reported using condom, last non-regular sex	24/59	40.7 (28.2, 54.6)	18/40	43.6 (28.2, 60.4)	42/99	41.8 (31.9, 52.4)	17/44	39.4 (25.2, 55.5)	6/25	26.5 (11.8, 49.4)	23/69	34.8 (23.8, 47.7)	41/103	40.1 (30.5, 50.6)	24/65	37.1 (25.4, 50.5)	65/168	39.0 (31.4, 47.1)
Reported consistent condom use, all non-regular partners	19/54	35.9 (23.5, 50.6)	13/39	32.1 (18.6, 49.4)	32/93	34.4 (24.9, 45.3)	12/43	28.8 (16.5, 45.4)	6/23	30.1 (13.5, 54.2)	18/66	29.3 (18.8, 42.5)	31/97	32.9 (23.6, 43.7)	19/62	31.3 (20.2, 45.2)	50/159	32.3 (25.0, 40.6)
Nyarugusu Host Population																		
Had a non-regular partner, past 12 mos	34/175	19.4 (13.5, 27.2)	30/276	10.9 (8.0, 14.7)	64/451	14.2 (11.0, 18.1)	14/199	7.0 (4.0, 12.1)	11/271	4.1 (2.0, 8.1)	25/470	5.3 (3.4, 8.1)	48/374	12.8 (9.3, 17.4)	41/547	7.5 (5.6, 10.0)	89/921	9.7 (7.7, 12.1)
AMONG THOSE WHO REPORTED ONE NON-REGULAR PARTNER IN THE PAST 12 MONTHS																		
Mean number of non-regular partners, past 12 mos	-	1.5 (1.2, 1.8)	-	1.5 (0.9, 2.1)	-	1.5 (1.2, 1.8)	-	1.0 -	-	0.9 (0.7, 1.1)	-	1.0 (0.9, 1.0)	-	1.3 (1.1, 1.5)	-	1.3 (0.9, 1.8)	-	1.3 (1.1, 1.6)
Reported using condom, last non-regular sex	16/34	47.1 (32.0, 62.7)	13/30	43.3 (25.5, 63.1)	29/64	45.3 (33.8, 57.4)	1/14	7.1 (1.0, 37.9)	3/11	27.3 (7.4, 63.9)	4/25	16.0 (6.3, 34.9)	17/48	35.4 (22.1, 51.4)	16/41	39.0 (25.1, 55.0)	33/89	37.1 (27.6, 47.7)
Reported consistent condom use, all non-regular partners	9/34	26.5 (14.9, 42.5)	7/29	24.1 (10.4, 46.6)	16/63	25.4 (15.7, 38.5)	1/14	7.1 (1.0, 37.9)	1/11	9.1 (1.0, 48.7)	2/25	8.0 (1.9, 28.0)	10/48	20.8 (11.9, 34.0)	8/40	20.0 (9.3, 38.0)	18/88	20.5 (12.8, 31.1)

**Those that had a casual partner but did not know their age were excluded from the mean calculation*

Transactional sex

Respondents in the camp reported very high rates of transactional sex. Almost a quarter of refugee men and women reported that they had ever had transactional sex, compared to 9.3% of men and 1.4% of women in the host community. One out of ten refugee men and women reported transactional sex in the past year, compared to 3% of men in the host community and less than 1% of women in the host community.

The mean number of partners in the past year was around 1 for men and women in the host community, and women in the camp, but it was 1.8 for men in the camp.

In the camp, sex was most often exchanged for favors (76.2%), while in the host community, sex was most often exchanged for money (46.7%) or a combination of money, gifts and favors (33.3%). All host community respondents reported that last transactional sex was with another member of the host community, and more than 95% of refugee respondents reported that the last transactional sex was with another member of the refugee community.

Condom use at last transactional sex was much higher in the host community (66.7%, compared to 14.9% in the camp), but consistent condom use with transactional partners was only reported by 13.3% in the host community and 9.3% in the camp.

Table 29: Reported transactional sex in the past 12 months and in relation to displacement, Nyarugusu area

Variables	Refugees						Hosts					
	Men		Women		Men +Women		Men		Women		Men +Women	
	n/N	% CI	n/N	%CI	n/N	%CI	n/N	%CI	n/N	%CI	n/N	%CI
Ever had transactional sex	105/409	24.5 (20.4, 29.1)	122/529	23.2 (19.6, 27.3)	227/938	23.8 (21.0, 26.8)	34/364	9.3 (6.6, 13.1)	6/417	1.4 (0.6, 3.5)	40/781	5.1 (3.8, 6.9)
Had transactional sex in the past 12 months	56/485	10.3 (7.9, 13.4)	63/592	11.0 (8.6, 14.0)	119/1077	10.7 (8.9, 12.8)	14/451	3.1 (1.8, 5.2)	1/470	0.2 (0.03, 1.6)	15/921	1.6 (1.0, 2.7)
Mean number of transactional sex partners in past 12 months	-	1.8 (1.3, 2.3)	-	1.1 (1.0, 1.2)	-	1.4 (1.2, 1.6)	-	1.1 (0.8, 1.3)	-	1.0	-	
DURING THE LAST TIME HAD TRANSACTIONAL SEX IN THE PAST 12 MONTHS:												
Last sex for:												
Money	11/56	21.7 (12.0, 36.0)	7/63	8.5 (3.9, 17.6)	18/119	14.3 (8.8, 22.2)	7/14	50.0 (26.4, 73.6)	0/1	-	7/15	46.7 (24.3, 70.5)
Gift	8/56	14.9 (7.2, 28.1)	3/63	5.3 (1.6, 16.1)	11/119	9.5 (5.1, 17.0)	2/14	14.3 (3.2, 45.9)	0/1	-	2/15	13.3 (2.9, 43.8)
Favor	37/56	63.5 (48.9, 75.9)	53/63	86.2 (75.1, 92.8)	90/119	76.2 (67.1, 83.4)	1/14	7.1 (0.7, 45.4)	0/1	-	1/15	6.7 (0.7, 43.3)
More than one thing	0/56	0	0/63	0	0/119	0	4/14	28.6	1/1	100.0	5/15	33.3

Variables	Refugees						Hosts					
	Men		Women		Men +Women		Men		Women		Men +Women	
	n/N	% CI	n/N	%CI	n/N	%CI	n/N	%CI	n/N	%CI	n/N	%CI
								(10.0, 59.1)				(13.1, 62.4)
Last sex with:												
Refugee	54/56	94.6 (80.5, 98.7)	61/63	96.8 (87.0, 99.3)	115/119	95.8 (89.0, 98.5)	0/14	0	0/1	0	0/15	0
Person from local community	2/56	5.4 (1.4, 19.5)	0/63	-	2/119	2.4 (0.6, 9.2)	14/14	100	1/1	100	15/15	100
Military/police	0/56	0	0/63	0	0/63	0	0/14	0	0/1	0	0/15	0
Development worker	0/56	0	1/63	1.1 (0.1, 7.4)	1/119	0.6 (0.1, 4.2)	0/14	0	0/1	0	0/15	0
Other	0/56	0	1/63	2.1 (0.3, 14.0)	1/119	1.2 (0.2, 8.2)	0/14	0	0/1	0	0/15	0
Mean age-difference between last transactional sex partners (years) *	-	5.8 (4.7, 6.9)	-	6.0 (4.5, 7.5)	-	5.9 (5.0, 6.9)	-	4.6 (1.9, 7.3)	-	3.0 -	-	4.5 (2.0, 7.0)
Reported using a condom last sex	9/56	19.0 (9.9, 33.4)	7/63	11.7 (5.4, 23.5)	16/119	14.9 (9.1, 23.5)	9/14	64.3 (34.6, 86.0)	1/1	100.0	10/15	66.7 (37.6, 86.9)
Reported consistent condom use with all transactional sex partners	5/56	10.8 (4.4, 24.4)	5/60	7.9 (3.1, 18.8)	10/116	9.3 (4.9, 17.0)	1/14	7.1 (0.7, 45.4)	1/1	100.0	2/15	13.3 (2.6, 47.2)
AMONG THOSE WHO HAVE EVER HAD TRANSACTIONAL SEX												
Refugees only: Period in which transactional sex experienced												
Before displacement	67/105	58.7 (48.2, 68.4)	76/121	62.2 (52.6, 70.9)	143/226	60.6 (53.5, 67.2)						
During displacement	41/105	36.4 (27.4, 46.6)	36/121	33.8 (25.3, 43.5)	77/226	35.0 (28.7, 42.0)						
After displacement	61/105	56.7 (46.4, 66.5)	56/121	48.9 (39.5, 58.3)	117/226	52.5 (45.6, 59.4)						
Host only: Period in which transactional sex												

Variables	Refugees						Hosts					
	Men		Women		Men +Women		Men		Women		Men +Women	
	n/N	% CI	n/N	%CI	n/N	%CI	n/N	%CI	n/N	%CI	n/N	%CI
experienced												
Before refugees arrived							25/114	21.9 (14.4, 32.0)	11/50	22.0 (13.2, 34.3)	36/164	22.0 (15.7, 29.8)
After refugees arrived							95/120	79.2 (71.2, 85.4)	50/57	87.7 (74.8, 94.5)	145/177	81.9 (76.8, 86.1)

**Those who had a casual partners but did not know their age were excluded from the mean calculation*

Forced sex

In the camp, 6.7% (95% CI: 4.8, 9.1) of women reported that they had ever been forced to have sex, compared with 1.9% (0.9, 4.0) of women in the host community, which was a statistically significant difference. In the camp 2.5% (95% CI: 1.4, 4.6) of men reported that they had ever been forced to have sex, compared with 0.9% (95% CI: 0.3, 2.3) of men in the host community. Recent forced sex was reported by 2.6% of women and 1.4% of men in the camp, and 0.2% of women and 0.7% of men in the host community.

Among men and women in the camp who had reported having forced sex, more than half reported it was with a non-family member, while 29.4% reported it was with a regular partner and 13.3% reported it was with another family member. In the host community, just under half of respondents reported it was with a regular partner (46.2%), while 38.5% reported it was with a non-family member and 7.7% reported it was with another family member.

Questions were asked about the time of forced sex, in relation to refugee movement. For refugees, the questions was whether they experience forced sex before, during or after displacement; for members of the host community, the question was whether they experienced forced sex before or after the arrival of the refugees. This information is difficult to interpret given that the mean number of years since leaving the home country was around 12. Approximately 15% of respondents reported “always” living in the camp, which could mean that they spend their whole lives in the camp or had lived there since they could remember. Similarly, young respondents in the host community would not have a clear memory of the time before refugees arrived. With that in mind, approximately half of those refugee men or women reported forced sex ever reported forced sex before displacement, about a quarter reported forced sex during displacement and almost half reported forced sex after displacement. About a quarter of host community respondent reported forced sex before the refugees arrived compared with 92% who reported forced sex after the refugees arrived.

Table 30: Reported forced sex in the last 12 months and in relation to displacement, Nyarugusu area

Variable	NYARUGUSU REFUGEES						NYARUGUSU HOST					
	Men		Women		Men + Women		Men		Women		Men + Women	
	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)
Ever had forced sex	11/485	2.5 (1.4, 4.6)	39/592	6.7 (4.8, 9.1)	50/1077	4.8 (3.6, 6.3)	4/450	0.9 (0.3, 2.3)	9/469	1.9 (0.9, 4.0)	13/919	1.4 (0.7, 2.8)
Forced sex in the past 12 months	5/485	1.4 (0.6, 3.3)	15/592	2.6 (1.5, 4.3)	20/1077	2.0 (1.3, 3.2)	3/451	0.7 (0.2, 2.0)	1/469	0.2 (0.3, 1.6)	4/921	0.4 (0.1, 1.5)
AMONG THOSE WHO HAVE EVER HAD FORCED SEX												
Who was it with: Regular partner	2/11	16.6 (3.6, 51.5)	11/39	29.9 (16.6, 47.7)	14/50	29.4 (17.5, 44.9)	1/4	25.0 (1.9, 84.9)	5/9	55.6 (20.1, 86.1)	6/13	46.2 (15.9, 79.5)
Other family member	4/11	33.3 (11.6, 65.5)	3/39	7.0 (2.0, 21.6)	7/50	13.3 (6.0, 27.0)	1/4	25.0 (1.9, 84.9)	0/9	0	1/13	7.7 (0.6, 53.5)
Non-family member	5/11	50.1 (21.9, 78.2)	23/39	57.9 (40.6, 73.4)	27/50	53.3 (38.4, 67.7)	2/4	50.0 (8.0, 92.0)	3/9	33.3 (8.9, 71.9)	5/13	38.5 (13.6, 71.3)
Refugees only: Period of forced sex Before displacement	6/11	44.3 (18.3, 73.8)	25/39	60.3 (42.7, 75.6)	31/50	56.5 (41.2, 70.7)	-	-	-	-	-	-
During displacement	2/11	22.3 (5.5, 58.8	8/38	25.1 (12.6, 43.6)	10/49	24.4 (13.3, 40.4)	-	-	-	-	-	-
After displacement	6/11	66.8 (36.2, 87.8)	16/38	42.9 (27.0, 60.3)	22/49	48.7 (34.0, 63.7)	-	-	-	-	-	-
Host only: Period in which forced sex experienced Before refugees	-	-	-	-	-	-	0/3	0	3/8	37.5 (11.3, 73.8)	3/11	27.3 (7.3, 64.1)
After refugees	-	-	-	-	-	-	4/4	100	8/9	88.9 (35.8, 99.1)	12/13	92.3 (46.5, 99.4)
Forced sex in the past 12 months	5/11	55.7 (26.2, 81.7)	15/39	38.6 (23.7, 56.0)	20/50	42.7 (28.7, 58.0)	3/4	75.0 (15.1, 98.1)	1/9	11.1 (0.9, 64.2)	4/13	30.8 (8.3, 68.6)
AMONG THOSE WHO HAVE EVER HAD FORCED SEX IN THE PAST 12 MONTHS												

Variable	NYARUGUSU REFUGEES						NYARUGUSU HOST					
	Men		Women		Men + Women		Men		Women		Men + Women	
	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)
Mean number of forced sexual acts in last 12 months	-	1.6 (1.1, 2.1)	-	1.9 (1.1, 2.6)	-	1.8 (1.2, 2.3)	-	5.5*	-	2*	-	4.3*

**Too few respondents to calculate a meaningful confidence interval*

Anal sex

Anal sex was only reported by 3 refugee men, 3 refugee women, and 2 host community women. Further information on condom use and whether sex was with a man or woman was not available among men in the camp. Only 1 of 3 women in the camp reported condom use at last anal sex, and neither woman in the host community reported condom use.

Table 31: Anal sex experience and condom use, Nyarugusu area

Variable	NYARUGUSU REFUGEES		NYARUGUSU HOST	
	n/N	% (CI)	n/N	% (CI)
	AMONG MEN + WOMEN WHO HAVE EVER HAD SEX			
Know that people can get infected with HIV by having anal sex with a male partner and not using a condom*	777/926	84.0 (81.4, 86.4)	709/781	90.8 (87.1, 93.5)
Had anal sex with a man or a woman in the past 12 months	6/936	0.6 (0.3, 1.4)	2/781	0.3 (0.06, 1.1)
	AMONG MEN WHO HAD ANAL SEX IN THE PAST 12 MONTHS			
Had anal sex with a man in the past 12 months	0/1	0	-	-
Reported condom use last anal sexual intercourse with a man	-	-	-	-
Had anal sex with a woman in the past 12 months	0/1	0	-	-
Reported condom use last anal sexual intercourse with a woman	-	-	-	-
	AMONG WOMEN WHO HAD ANAL SEX IN THE PAST 12 MONTHS			
Reported condom use last anal sexual intercourse with a man	1/3	33.3**	0/2	0

**Knowledge questions about HIV were only asked of respondents who indicated that they had heard of HIV*

***Too few respondents in the denominator to calculate a meaningful confidence interval*

Discussion

In general, all categories of high risk sex, including non-regular, transactional, and sex with multiple partners, were more common in the camp as compared to the host community, across age and sex categories. While the findings in the camp are alarming, results from the Lugufu camp baseline to follow up comparison are useful as a reference. Refugees at both Nyarugusu and the former Lugufu Camp were predominantly from DRC, and the camps are within a few hours' drive. Currently, about 38% of refugees at Nyarugusu Camp were transferred from Lugufu at the end of 2009; thus, results from the Ex Lugufu group of refugees are given a weight of 0.38 in the results presented in this chapter, while results from the Old Nyarugusu refugees are given a weight of 0.62. The 2010 findings for the Ex Lugufu refugees are comparable to the findings for Old Nyarugusu refugees. Furthermore, we know from the analysis in Chapter 3 that while the estimates of sexual behaviour among Ex Lugufu refugees in 2010 were high, they represent a marked and sometimes dramatic decrease from the alarmingly high estimates found in 2005, in areas except sexual debut. Given that programming throughout camps is similar, it seems reasonable to assume that estimates for Nyarugusu Camp may also represent an improvement from the past situation.

The proportion of Nyarugusu Camp youth reporting sexual debut under age 15 was 18.1%, which is possibly the most concerning finding of the report, if not shocking, giving slightly higher proportions recorded among Lugufu camp refugees at baseline and follow up. Only 41% of never married youth in Nyarugusu Camp reported never having had sex. Efforts of awareness, behaviour change, and interventions must keep youth, and particularly male youth, in mind. It may be helpful to conduct a review of the programs targeting youth in the camps over the past few years, to capture lessons learned and document approaches that have proved less effective. The issue of early sexual debut represents a serious protection risk, as well as a serious health risk. Pilot programs may need to be used to find innovative approaches to target this problem.

Table 32: Sex before 15 and multiple partnerships, 2010 Tanzania BSS compared to 2007-8 Tanzania Malaria and HIV/AIDS Indicator Survey

		2007-8 TMHIS – Kigoma Region	2010 BSS – Nyarugusu Host	2010 BSS – Nyarugusu Camp
Sex before age 15	Young Women aged 15-24	6.6%	2.0% (0.8, 5.2)	14.1% (10.5, 18.8)
	Young Men aged 15-24	7.9%	6.9% (4.0, 11.4)	22.6% (17.5, 28.7)
Multiple partners in the last 12 months	Women aged 25-49	0.7%	1.1% (0.4, 3.0)	14.5% (11.7, 17.7)
	Men aged 25-49	12.7%	15.5% (12.1, 19.8)	28.4% (24.3, 32.9)

Regional data was available for comparison for the indicators of sex before age 15 and multiple partners in the last 12 months. The BSS findings in the Nyarugusu host community were comparable with the regional figures, while, as expected, the findings for the camp were much higher. Confidence intervals were not available for the regional data, so the statistical significance cannot be determined.

Never married young men at both sites had very high levels of non-regular sex (more than 23%), and given the larger number of never married men in Nyarugusu Camp, that translated into overall higher numbers of non-regular sex. While this section may necessarily focus on the high risk behaviours in the camp, it is important not to overlook the levels of non-regular sex found among never married young men in the host community. For men at the camp, it appears that marriage is not associated with lower levels of high risk sex, even though more than 97% reported to know that faithfulness is a way to protect themselves against HIV. Interestingly, of 48 young men in the camp reporting either transactional sex or multiple partners in the past 12 months, just 20% believed they had a high personal risk of getting HIV, while 41.3% expressed that they had no personal chance of getting HIV. This suggests that there is a gap between knowledge and internalization of risk, and it further suggests that simply more information will not solve the problem. A more nuanced message about risk may be needed, developed with the advice of people knowledgeable about behaviour change.

For both age categories, the proportion of respondents who reported multiple partners was more than 50% higher in the camp than in the host population. Higher education was associated with higher levels of non-regular sex, with "higher education" relatively defined as completing secondary or above in the camp, and completing primary or above in the host community (due to few respondents in the host community with secondary or greater education). In the camp, among those with "higher education" 12.2% had a casual partner in the past 12 months, compared to just 2.9% of those completing primary or lower. In the host community, 8.1% of those having "higher education" had a casual partner in the past 12 months, compared to just 1.5% of those with less than a primary education. Education may be a proxy for higher income. Only 10% of all respondents in either location reported having a "regular wage or salary," so while the tabulation of education and casual partnership did not suggest a relationship, it could not be ruled out. Because of the demonstrated association between risk behaviour and education, communities may want to plan special outreach for youth, particularly when the education takes them far from home, as is commonly reported in the host community. Condom use at last non-regular sex was highest among men in both sites, slightly lower among women at the camp, and lowest among women in the host community, which follows logically from the lower levels of knowledge about condoms among that group.

Transactional sex was exceptionally high in the camp, with about 10% of refugee men and 10% of refugee women reporting transactional sex in the past 12 months, while a history of ever having had transactional sex was reported by more than 20% of men and women, suggesting a different pattern of transactional sex than common (fewer female sex workers and larger numbers of male clients). The mean number of partners in the past 12 months was actually higher for men than for women (1.8 versus 1.1). Sex was most commonly exchanged for favors in the camp (76%), which suggests difficult situations which may lead women to sex work. The mean numbers of partners and type of exchange suggests that many women may have "regular transactional" partners with whom they may have an ongoing relationship. This pattern should be taken into account when adjusting programming (as programs designed

for sex workers already exist in the camp). Transactional sex was not commonly reported between refugees and host community members, dispelling a common misconception.

Forced sex in the last year was reported by less than 0.5% of respondents in the host community, and by 2.0% of respondents in the camp. Reports of forced sex among men and women were not statistically significantly different, with 2.6% of women in the camp and 1.4% of men in the camp reporting recent forced sex, compared to 0.7% of men and 0.2% of women in the host community. The regular partner was often named as the perpetrator, suggesting that forced sex in a marital or cohabitating relationship is understood by at least some to be included in the definition. SGBV programs may be aware of these patterns, but may also be reminded that men are also victims of forced sex.

Anal sex was reported by very few respondents. Of the 3 refugee men reporting anal sex, reliable data was not available about the sex of their partner of condom use. Of the 5 women across both sites reporting anal sex, just one reported last time use of a condom.

Section 7: Related factors

Sexually transmitted infections

Care-seeking among those who had symptoms consistent with STI was similar among respondents in the camp and in the host community (61.7% and 63.3% respectively). For those in the camp who sought treatment, 87.5% went to the public health centre (presumably the camp facility), while in the community, treatment was sought in either the public facility (70.0%) or a private health centre (25.0%). Treatment seeking from a traditional healer was recorded for just 2.1% of respondents in the camp and 5.0% of respondents in the host community.

More refugee respondents with STI symptoms informed all their sexual partners (68.6%) compared to the host community (26.7%), but they were also more likely to have sex while they had symptoms (54.7% compared to 34.5% in the camp, with less than half at any location using condoms while having sex with symptoms of STI.

Table 33: STI episodes, treatment and prevention of onward transmission, Nyarugusu area

Includes men and women aged 15-59 years who have ever heard of STIs and have ever had sex

Variables	Nyarugusu Refugee Population						Nyarugusu Host Population					
	Men		Women		Men + Women		Men		Women		Men + Women	
	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)
AMONG THOSE WHO HAD AN STI EPISODE OR GENITAL ULCER OR GENITAL DISCHARGE IN THE PAST 12 MONTHS*												
Had an STI and sought treatment at a health facility the last time genital discharge/ ulcer/ sores/ STI were experienced	11/16	66.6 (38.6, 86.4)	19/30	59.0 (39.0, 76.4)	30/46	61.7 (45.4, 75.8)	4/5	80.0**	15/25	60.0 (39.1, 77.8)	19/30	63.3 (44.0, 79.2)
DURING THE LAST STI EPISODE:												
First place to get treatment: Public health centre	11/13	84.2 (49.9, 96.6)	19/21	89.6 (63.1, 97.8)	30/34	87.5 (68.6, 95.7)	2/4	50.0**	12/16	75.0 (47.3, 90.9)	14/20	70.0 (46.7, 86.1)
Private health centre	0/13	0	0/21	0	0/34	0	2/4	50.0**	3/16	18.8 (5.2, 49.3)	5/20	25.0 (9.9, 50.3)
Traditional healer/doctor/ practitioner	1/13	5.2 (0.6, 32.3)	0/21	0	1/34	2.1 (0.3, 14.7)	0/4	0	1/16	6.3 (0.8, 35.7)	1/20	5.0 0.6, 30.9)
Pharmacy	1/13	10.6 (1.3, 50.6)	0/21	0	1/34	4.2 (0.5, 26.3)	0/4	-	0/16	-	0/20	-
Friend or relative	0/13	0	2/21	10.4 (2.2, 36.9)	2/34	6.3 (1.3, 24.7)	0/4	-	0/16	-	0/20	-
Informed sexual partner(s) All of them	8/16	45.8 (22.4, 71.2)	24/29	81.4 (60.4, 92.6)	32/45	68.6 (52.0, 81.6)	1/5	20.0**	7/25	28.0 (13.1, 50.0)	8/30	26.7 (12.6, 47.9)
Some of them, not all	1/16	8.4 (1.1, 43.0)	1/29	2.3 (0.3, 15.9)	2/45	4.5 (1.0, 18.2)	3/5	60.0**	10/25	40.0 (21.7, 61.6)	13/30	43.3 (26.3, 62.1)
No, none of them	1/16	8.4 (1.1, 43.0)	0/29	0	1/45	3.0 (0.4, 19.6)	1/5	20.0**	7/25	28.0 (14.1, 48.0)	8/30	26.7 (13.8, 45.3)
Had sex with any one of the sexual partner(s)	8/14	62.0 (33.7, 83.9)	15/29	51.2 (32.0, 70.0)	23/43	54.7 (38.4, 70.0)	1/5	20.0**	9/24	37.5 (18.5, 61.4)	10/29	34.5 (18.5, 55.0)

Variables	Nyarugusu Refugee Population						Nyarugusu Host Population					
	Men		Women		Men + Women		Men		Women		Men + Women	
	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)
Had sex with any of the sexual partner(s) AND used condoms until the symptoms resolved	4/8	53.9 (19.7, 84.8)	5/15	36.4 (14.4, 66.0)	9/23	42.9 (22.5, 66.0)	1/1	100	1/9	11.1 (0.8, 66.3)	2/10	20.0 (3.0, 67.0)

** Experiencing genital discharge or ulcer or sores or an STI*

***Too few respondents in the denominator to calculate a meaningful confidence interval*

Alcohol and drugs

Alcohol use was more common in the host community than in the camp. In the host community, 15.3% of all respondents reported alcohol use at least once a week, compared to 8.8% in the camp.

The overwhelming majority in both locations knew that sharing needles was a transmission mode for HIV (97.6% in the camp, 98.6% in the host community). Very few respondents reported injection of drugs not prescribed by a health professional (0.6% in the camp, 1.7% in the host community). Four respondents in the camp and 1 in the host community reported sharing a needle in the past 12 months. All five respondents reporting shared needle use also reported knowing that sharing a needle was a way to transmit the HIV virus.

Table 34: Alcohol and drug use, Nyarugusu area

Variables	Men						Women						Men and Women					
	YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs	
	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)
Nyarugusu Camp Population																		
Frequency of alcohol use in last four weeks: Everyday	0/239	-	3/246	1.1 (0.3, 3.7)	3/485	0.6 (0.2, 1.8)	1/280	0.5 (0.1, 3.4)	2/312	0.7 (0.2, 2.9)	3/592	0.6 (0.2, 1.9)	1/519	0.3 (<0.001, 1.8)	5/558	0.9 (0.3, 2.2)	6/ 1077	0.6 (0.2, 1.3)

Variables	Men						Women						Men and Women					
	YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs	
	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)
At least once/week	18/239	8.6 (5.4, 13.4)	35/246	15.4 (11.1, 20.9)	53/485	11.9 (9.1, 15.4)	22/280	6.9 (4.5, 10.6)	10/312	3.2 (1.7, 6.1)	32/592	5.0 (3.5, 7.2)	40/519	7.7 (5.6, 10.5)	45/558	8.6 (6.4, 11.5)	85/ 1077	8.2 (6.6, 10.1)
At least once/ month	14/239	6.3 (3.7, 10.7)	25/246	11.4 (7.7, 16.6)	39/485	8.8 (6.4, 12.0)	2/280	1.0 (0.2, 3.8)	3/312	1.1 (0.4, 3.6)	5/592	1.1 (0.4, 2.6)	16/519	3.5 (2.1, 5.7)	28/558	5.7 (3.9, 8.3)	44/ 1077	4.6 (3.4, 6.2)
Never	207/239	85.1 (79.5, 89.4)	183/246	72.1 (65.7, 77.8)	390/485	78.7 (74.5, 82.4)	255/280	91.6 (87.6, 94.4)	297/312	95.0 (91.6, 97.1)	552/592	93.3 (90.9, 95.2)	462/519	88.6 (85.3, 91.2)	480/558	84.8 (81.3, 87.8)	942/ 1077	86.7 (84.3, 88.7)
Person can get infected with HIV by using a needle that was already used by someone else	223/228	97.4 (93.8, 99.0)	238/245	97.7 (95.1, 99.0)	461/473	97.6 (95.6, 98.7)	267/276	97.3 (94.7, 98.7)	299/306	97.9 (95.5, 99.1)	566/582	97.6 (96.-, 98.6)	490/504	97.4 (95.5, 98.5)	537/551	97.8 (96.3, 98.8)	1027/ 1055	97.6 (96.5, 98.4)
Injection of drugs not prescribed by a health professional (past 12 months)	1/239	0.6 (0.1, 3.8)	2/245	0.6 (0.1, 2.3)	3/484	0.6 (0.2, 1.9)	1/278	0.5 (0.1, 3.4)	2/311	0.9 (0.2, 3.6)	3/589	0.7 (0.2, 2.2)	2/517	0.5 (0.1, 2.1)	4/556	0.8 (0.3, 2.1)	6/1073	0.6 (0.3, 1.5)
Used needle/syringe to inject drugs that had already been used (past 12 months)	1/235	0.3 (<0.001, 2.0)	2/244	0.6 (0.1, 2.3)	3/479	0.4 (0.1, 1.3)	1/276	0.2 (<0.001, 2.0)	0/310	-	1/586	0.1 (<0.001, 0.8)	2/511	0.3 (0.1, 1.0)	2/554	0.3 (0.1, 1.0)	4/1065	0.3 (0.1, 0.7)
Nyarugusu Host Population																		
Frequency of alcohol use in last four weeks: Everyday	2/175	1.1 (0.3, 4.5)	16/276	5.8 (3.5, 9.5)	18/451	4.0 (2.4, 6.5)	2/198	1.0 (0.2, 4.0)	5/271	1.8 (0.8, 4.3)	7/469	1.5 (0.7, 3.4)	4/373	1.1 (0.3, 3.5)	21/547	3.8 (2.4, 6.0)	25/920	2.7 (1.7, 4.3)
At least once/ week	17/175	9.7 (6.2, 15.0)	57/276	20.7 (16.1, 26.1)	74/451	16.4 (12.8, 20.8)	9/198	4.5 (2.4, 8.6)	35/271	12.9 (8.9, 18.4)	44/469	9.4 (6.6, 13.1)	26/373	7.0 (4.6, 10.5)	92/547	16.8 (13.2, 21.3)	118/920	12.8 (10.1, 16.2)

Variables	Men						Women						Men and Women					
	YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs	
	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)
At least once/ month	4/175	2.3 (0.7)	15/276	5.4 (3.3, 8.8)	19/451	4.2 (2.7, 6.5)	4/198	2.0 (0.8, 5.3)	6/271	2.2 (1.0, 4.8)	10/469	2.1 (1.1, 4.0)	8/373	2.1 (0.9, 4.9)	21/547	3.8 (2.5, 5.8)	29/920	3.2 (2.2, 4.4)
Never	152/175	86.9 (80.8, 91.2)	188/276	68.1 (61.3, 74.2)	340/451	75.4 (70.0, 80.1)	183/198	92.4 (87.2, 95.6)	225/271	83.0 (77.4, 87.5)	408/469	87.0 (83.3, 90.0)	335/373	89.8 (85.4, 93.0)	413/547	75.5 (70.7, 79.8)	748/920	81.3 (77.7, 84.4)
Person can get infected with HIV by using a needle that was already used by someone else	172/175	98.3 (94.9, 99.4)	271/276	98.2 (95.8, 99.2)	443/451	98.2 (96.3, 99.2)	193/197	98.0 (93.4, 99.4)	270/271	99.6 (97.2, 100.0)	463/468	98.9 (97.1, 99.6)	365/372	98.1 (95.8, 99.2)	541/547	98.9 (97.7, 99.5)	906/919	98.6 (97.5, 99.2)
Injection of drugs not prescribed by a health professional (past 12 months)	1/175	0.6 (0.1, 4.2)	1/276	0.4 (<0.001, 2.7)	2/451	0.4 (0.1, 1.8)	5/198	2.5 (1.1, 5.8)	9/271	3.3 (1.4, 7.9)	14/469	3.0 (1.6, 5.6)	6/373	1.6 (0.6, 3.9)	10/547	1.8 (0.8, 4.0)	16/920	1.7 (1.0, 3.1)
Used needle/syringe to inject drugs that had already been used (past 12 months)	1/175	0.6 (0.1, 4.3)	0/276	-	1/450	0.2 (0.0, 1.7)	0/198	-	0/271	-	0/469	-	1/373	0.3 (<0.001, 2.0)	0/547	-	1/919	0.1 (<0.001, 0.8)

Circumcision

The vast majority of men in the camp were circumcised (97.1%), but the proportion was much lower in the host community (61.4%). Mean age of circumcision among male host respondents was 13.8, while among male camp respondents it was 6.1. In the host community, circumcision was significantly higher in those under age 25 (73.1%, 95% CI: 63.9, 80.7 for men aged 15-24 compared to 54.0%, 95% CI: 45.6, 62.1 in the host community). In the host community, those who were not circumcised expressed interest in circumcision if it were safe and affordable, particularly among young men (93.8% of uncircumcised men aged 15-24, 76.4% of uncircumcised men aged 25-49). In the host community, male circumcision was much higher among Catholic men, compared to Protestant and Muslim men.

Circumcision among women was rare, with 1.1% of women in the camp and less than 1% of women in the host community reporting being circumcised.

Table 35: Male circumcision, Nyarugusu area

Variables	REFUGEE POPULATION MEN						HOST POPULATION MEN					
	Circumcised		Mean age at circumcision (years)		Interested in getting circumcised if affordable and safe		Circumcised		Mean age at circumcision (years)		Interested in getting circumcised if affordable and safe	
	n/N	%(CI)	Mean	%(CI)	n/N	%(CI)	n/N	%(CI)	Mean	%(CI)	n/N	%(CI)
Age												
15-24	231/239	97.0 (93.8, 98.6)	6.1	(5.6, 6.6)	4/5	85.8*	128/175	73.1 (63.9, 80.7)	14.0	(13.3, 14.7)	45/48	93.8 (82.3, 98.0)
25-49	240/246	97.2 (93.6, 98.8)	6.1	(5.7, 6.4)	3/6	54.6*	149/276	54.0 (45.6, 62.1)	13.8	(12.6, 15.0)	94/123	76.4 (67.4, 83.5)
Current Nationality												
Burundian	10/11	86.6 (44.8, 98.1)	6.1	(4.4, 7.8)	1/1	100	-	-	-	-	-	-
Congolese (DRC)	458/470	97.6 (95.6, 98.7)	6.1	(5.7, 6.4)	3/6	50.0*	-	-	-	-	-	-
Kenyan	3/3	100	9.0	(7.8, 10.2)	-	-	-	-	-	-	-	-
Rwandan	-	-	-	-	-	-	2/3	66.7*	11.5	(9.3, 13.7)	-	-
Tanzanian	-	-	-	-	-	-	275/448	61.4 (54.8, 67.6)	13.9	(13.1, 14.6)	139/170	81.8 (74.0, 87.6)
Ugandan	0/1	-	-	-	0/1	0	-	-	-	-	-	-
Religion												
Catholic	88/93	94.8 (87.4, 97.9)	5.4	(4.6, 6.3)	1/3	50.3*	150/449	67.9 (59.5, 75.2)	13.5	(12.5, 14.5)	56/70	80.0 (66.4, 89.0)
Protestant	319/328	97.2 (94.5, 98.6)	6.4	(6.0, 6.8)	3/5	50.0*	88/180	48.9 (40.0, 57.9)	15.5	(14.6, 16.4)	70/85	82.4 (72.6, 89.2)
Muslim	41/41	100	5.5	(4.5, 6.6)	-	-	11/45	24.4 (13.0, 41.2)	10.7	(9.2, 12.2)	10/11	90.9 (51.5, 99.0)
Other	23/23	100	5.1	(4.0, 6.2)	-	-	3/3	100	-	-	2/3	66.7*

Variables	REFUGEE POPULATION MEN						HOST POPULATION MEN					
	Circumcised		Mean age at circumcision (years)		Interested in getting circumcised if affordable and safe		Circumcised		Mean age at circumcision (years)		Interested in getting circumcised if affordable and safe	
	n/N	%(CI)	Mean	%(CI)	n/N	%(CI)	n/N	%(CI)	Mean	%(CI)	n/N	%(CI)
Education None	7/10	58.1. (25.6, 84.9)	7.3	(5.8, 8.7)	0/1	-	6/19	31.6 (12.4, 60.0)	11.7	(9.1, 14.2)	11/13	84.6 (56.7, 95.9)
Incomplete primary	5/5	100	7.6	(4.8, 10.4)	-	-	26/52	50.0 (35.0, 65.0)	15.0	(13.1, 17.0)	23/26	88.5 (70.4, 96.1)
Primary	62/66	95.1 (87.5, 98.2)	6.3	(5.4, 7.2)	1/2	50.0*	129/324	39.8 (33.3, 46.7)	13.6	(12.7, 14.4)	100/125	80.0 (69.7, 87.4)
Secondary	379/385	98.3 (96.1, 99.3)	6.0	(5.7, 6.4)	3/4	83.5*	6/55	10.9 (5.6, 20.3)	14.6	(13.4, 15.9)	5/6	83.3*
Tertiary	18/19	93.3 (64.8, 99.1)	6.1	(4.5, 7.7)	0/1	-	0/1	-	-	-	0/7	-

**Too few respondents in the denominator to calculate a meaningful confidence interval*

Discussion

Among those who reported symptoms consistent with a sexually transmitted infection, more than 60% at each site reported seeking care at a public or private health facility. Care-seeking with traditional healers was not a common response. More respondents at the camp (69%) than in the host community (27%) reported telling all of their partners of their illness. Particularly in the host community, providers may need to emphasize the importance of disclosing STIs, and practicing safer sex or abstinence while symptoms are present.

Among men, prevalence of circumcision varied greatly by site. In the camp, almost all men were circumcised (97.1%), versus less than two-thirds in the host community (61.4%). Among men in the host community who were not circumcised, 93.8% reported being interested in circumcision if it were safe and affordable, which suggests that such an intervention might have success in the community. Circumcision among women was not common.

Section 8. Exposure and access to interventions

Information and behaviour change communication

Respondents in the host community were significantly more likely to report having received information on HIV/AIDS in the past 12 months (95.9% in the camp, 95% CI: 94.0, 97.2; 84.6% in the camp, 95% CI: 82.2, 86.8). In the camp, respondents over age 25 were significantly more likely to have received information in the past 12 months compared to those older than 25 (80.7% compared to 88.5%, p=.002), but no difference among age categories was found in the host community (96.8% for those aged 15-24, 95.3% for those aged 15-49; p=.254). Among those who had received information, the channel of message was different depending on their location: refugees were most likely to report receiving messages through health services (86.0%), with 56.6% receiving messages through mass media. In the host community, mass media was reported by 83.5% of those receiving information, while 63.6% received messages through health services. However, health services was the most reported source for information among women in both location (97.6% of refugee women noted it, while 83.3% of host community women noted it). Men In the camp also mentioned health services most often, while 97.0% of men in the host community mentioned mass media.

Table 36: Channels for the delivery of information on HIV/AIDS

Variables	Men						Women						Men and Women					
	YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs	
	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)
Nyarugusu Camp Population																		
Had received information on HIV/AIDS in the past 12 months	184/228	81.7 (76.0, 86.4)	216/245	89.8 (85.3, 93.0)	400/473	85.8 (82.2, 88.7)	227/276	79.8 (74.1, 84.5)	271/307	87.5 (82.8, 91.0)	498/583	83.7 (80.1, 86.7)	411/504	80.7 (76.7, 84.1)	487/552	88.5 (85.4, 91.0)	898/1056	84.6 (82.2, 86.8)
Source of information																		
Mass media	102/184	51.7 (44.1, 59.2)	143/216	63.1 (56.0, 69.8)	245/400	57.7 (52.5, 62.8)	111/227	49.1 (42.2, 56.0)	170/271	61.5 (55.2, 67.5)	281/498	55.7 (51.1, 60.3)	213/411	50.3 (45.2, 55.4)	313/487	62.3 (57.5, 66.8)	526/898	56.6 (40.0, 46.9)
Health services	134/184	71.0 (63.5, 77.5)	199/216	90.5 (85.0, 94.1)	333/400	81.2 (76.6, 85.0)	192/227	81.7 (75.4, 86.6)	266/271	97.6 (94.3, 99.0)	458/498	90.2 (86.8, 92.8)	326/411	76.7 (71.9, 80.8)	465/487	94.4 (91.5, 96.3)	791/898	86.0 (83.3, 88.4)
People	59/184	30.4 (23.9,	52/216	24.1 (18.6,	111/400	27.1 (22.8,	74/227	32.3 (26.2,	57/271	20.7 (16.0,	131/498	26.1 (22.2,	133/411	31.4 (26.9,	109/487	22.3 (18.6,	242/898	26.6 (23.6,

Variables	Men						Women						Men and Women					
	YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs	
	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)
		37.7)		30.7)		31.9)		39.1)		26.3)		30.4)		36.3)		26.4)		29.7)
Other places	103/184	53.1 (45.5, 60.6)	89/216	36.4 (30.1, 43.3)	192/400	44.4 (39.3, 49.5)	98/227	44.8 (38.1, 51.8)	106/271	37.6 (31.8, 43.9)	204/498	41.0 (36.5, 45.7)	201/411	48.7 (43.6, 53.8)	195/487	37.1 (32.7, 41.7)	396/898	42.6 (39.2, 46.0)
Nyarugusu Host Population																		
Had received information on HIV/AIDS in the past 12 months	169/175	96.6 (93.0, 98.4)	264/276	95.7 (92.2, 97.6)	433/451	96.0 (93.4, 97.6)	191/197	97.0 (92.3, 98.8)	257/271	94.8 (90.4, 97.3)	448/468	95.7 (92.2, 97.7)	360/372	96.8 (94.3, 98.2)	521/547	95.3 (92.8, 96.9)	881/919	95.9 (94.0, 97.2)
Source of information																		
Mass media	163/169	96.5 (92.6, 98.3)	256/264	97.0 (92.4, 98.8)	419/433	96.8 (93.9, 98.3)	148/191	77.5 (70.5, 83.2)	169/257	65.8 (57.3, 73.3)	317/448	70.8 (64.3, 76.5)	311/360	86.4 (81.9, 89.9)	425/521	81.6 (76.6, 85.7)	736/881	83.5 (79.5, 87.0)
Health services	68/169	40.2 (32.5, 48.5)	162/264	61.4 (52.7, 69.4)	230/433	53.1 (47.4, 58.7)	116/191	60.7 (53.0, 68.0)	214/257	83.3 (75.0, 89.2)	330/448	73.7 (67.9, 78.8)	184/360	51.1 (45.0, 57.2)	376/521	72.2 (66.3, 77.4)	560/881	63.6 (59.5, 67.4)
People	106/169	62.7 (51.3, 72.9)	153/264	58.0 (51.5, 64.2)	259/433	59.8 (53.2, 66.1)	90/191	47.1 (39.9, 54.5)	113/255	44.3 (35.6, 53.4)	203/448	45.5 (38.9, 52.3)	196/360	54.4 (48.7, 60.1)	266/519	51.3 (46.7, 55.8)	462/879	52.6 (49.0, 56.1)
Other places	119/169	70.4 (60.3, 78.9)	155/264	58.7 (49.6, 67.2)	274/433	63.3 (55.2, 70.7)	76/191	39.8 (32.6, 47.5)	76/257	29.6 (22.8, 37.4)	152/448	33.9 (29.0, 39.2)	195/360	54.2 (48.1, 60.2)	231/521	44.3 (39.6, 49.2)	426/881	48.4 (44.0, 52.7)

HIV testing and counselling

In the camp, 90.3% (95% CI: 88.3, 92.1) of respondents knew a place to be tested for HIV, with the highest knowledge among men aged 25-49, and the lowest knowledge among men aged 15-24. Overall, 70.9% reported ever having had a test for HIV, with, again, the most testing found in older men (85.2%) and the least in young men (43.1%). More than 95% of those who tested did so at a public hospital. About half reported that they asked for the test, a quarter were offered the test and accepted, and a quarter reported that the test as mandatory. Almost all respondents who had tested reported having been counselled

(97.5%, 95% CI: 95.9, 98.5), and 98.4% reported receiving their results. The most common reason for not testing in the camp was that the respondent felt sure of not being positive (75.8%).

The proportion of respondents in the host community who knew a place to test for HIV was higher than in the camp, at 97.2% (95% CI: 95.7, 98.2), a statistically significant difference. Knowledge of a test site was similar by sex, but different depending on age category. About 94% of male and female youth 15-24 knew a testing site, while 97-98% of adults age 25-49 knew a testing site. Whereas the public hospital was most often cited by refugee respondents as the place they were tested, in the host community about half reported testing in a health post, and 21.9% reported being tested in a public facility. Provider-initiated testing was cited less often in the host community as the circumstance under which people tested (13.9%), and client-initiated testing was cited more often (63.1%). Mandatory testing was cited as the circumstance by 23.0%. Respondents in the community were significantly less likely to report having been counselled as part of their testing (91.1%, 95% CI: 87.4, 93.7%), but were as likely to receive results (98.4%). Similar to the findings in the camp, the biggest reason for not testing in the host community was a respondent feeling sure of not being positive (72.7%).

Table 37: HIV testing and counselling experience: Nyarugusu Camp

Variables	Men						Women						Men and Women					
	YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs	
	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)
Know a place for HIV test	190/228	84.3 (78.8, 88.6)	228/245	93.7 (89.9, 96.2)	418/473	89.0 (85.8, 91.6)	244/276	86.8 (81.8, 90.7)	295/307	95.8 (92.6, 97.7)	539/583	91.4 (88.6, 93.6)	434/504	85.7 (82.1, 88.6)	523/552	94.9 (92.6, 96.5)	957/1056	90.3 (88.3, 92.1)
Ever tested for HIV	100/228	43.1 (36.5, 50.0)	205/244	85.2 (80.0, 89.2)	305/472	64.1 (59.4, 68.6)	199/276	68.8 (62.6, 74.4)	256/307	83.8 (78.9, 87.7)	455/583	76.5 (72.5, 80.0)	299/504	57.0 (52.4, 61.5)	461/551	84.4 (81.0, 87.3)	760/1055	70.9 (67.8, 73.7)
AMONG THOSE WHO NEVER TESTED																		
HIV testing barriers Don't know where to test	2/17	7.1 (1.6, 26.7)	0/10	-	2/27	4.7 (1.1,18.0)	0/15	-	0/16	-	0/31	-	2/32	3.5 (0.8, 14.3)	0/26	-	2/58	2.2 (0.5, 8.7)
Sure of not being infected	11/17	64.3 (37.6, 84.3)	10/10	100	21/27	76.2 (54.6, 89.5)	11/15	75.0 (46.5, 91.2)	13/16	76.1 (43.9, 92.8)	24/31	75.5 (55.6, 88.4)	22/32	69.7 (50.3, 83.9)	23/26	85.7 (60.9, 95.8)	45/58	75.8 (61.8, 85.9)

Variables	Men						Women						Men and Women					
	YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs	
	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)
Afraid of the result	1/17	7.2 (0.9, 39.6)	0/10	-	1/27	4.8 (0.5, 25.0)	1/15	3.5 (0.4, 23.9)	1/16	9.6 (1.2, 48.3)	2/31	6.1 (1.4, 23.6)	2/32	5.3 (1.1, 21.8)	1/26	5.7 (0.7, 34.3)	3/58	5.5 (1.6, 16.8)
Afraid of blood taking	-	-	0/10	-	0/27	-	0/15	-	1/16	9.6 (1.2, 48.3)	1/31	4.8 (0.5, 25.0)	0/32	-	1/26	5.7 (0.7, 34.3)	1/58	2.2 (0.3, 14.8)
Afraid of catching infection	0/17	-	0/10	-	0/27	-	1/15	7.1 (0.9, 39.7)	0/16	-	1/31	4.8 (0.5, 25.0)	1/32	3.6 (0.4, 23.4)	-	-	1/58	2.2 (0.3, 14.8)
Fear of stigma	1/17	7.2 (0.9, 39.6)	0/10	-	1/27	4.8 (0.6, 28.3)	0/15	-	0/16	-	0/31	-	1/32	3.6 (0.4, 23.4)	0/26	-	1/58	2.2 (0.3, 14.8)
Testing not confidential	0/17	-	0/10	-	0/27	-	0/15	-	0/16	-	0/31	-	0/32	-	0/26	-	0/58	-
Too expensive	0/17	-	0/10	-	0/27	-	0/15	-	0/16	-	0/31	-	0/32	-	0/26	-	0/58	-
Other	2/17	14.3 (3.4, 44.5)	0/10	-	2/27	9.6 (2.3, 31.9)	0/15	-	1/16	4.7 (0.6, 30.5)	1/31	2.0 (0.3, 13.9)	2/32	7.2 (1.7, 26.0)	1/26	2.8 (0.3, 20.0)	3/58	5.5 (1.6, 16.8)
Don't know	0/17	-	0/10	-	0/27	-	2/15	14.3 (3.3, 44.7)	0/16	-	2/31	8.2 (2.0, 28.2)	2/32	7.2 (1.7, 26.0)	0/26	-	2/58	4.4 (1.1, 16.5)
AMONG THOSE WHO EVER TESTED FOR HIV, EXPERIENCE DURING THE LAST TEST:																		
Time of last test In the past 12 months	71/100	71.5 (61.4, 79.9)	139/205	68.1 (61.0, 74.5)	210/305	69.3 (63.6, 74.5)	136/199	66.0 (58.6, 72.8)	142/256	54.6 (48.0, 61.0)	278/455	59.6 (54.7, 64.3)	207/299	68.0 (62.0, 73.4)	281/461	60.7 (55.9, 65.3)	488/760	63.6 (59.9, 67.1)
>1yr - 2 yrs ago	21/100	19.9 (12.9, 29.3)	35/205	16.8 (12.0, 22.9)	56/305	17.8 (13.7, 22.8)	48/199	25.8 (19.8, 33.0)	71/256	27.4 (22.0, 33.6)	119/455	26.7 (22.6, 31.3)	69/299	23.7 (19.0, 29.3)	106/461	22.6 (18.8, 26.9)	175/760	23.1 (20.0, 26.4)
>2 yrs ago	8/100	8.6 (4.2, 16.8)	28/205	13.8 (9.5, 19.6)	36/305	12.0 (8.6, 16.5)	15/199	8.1 (4.8, 13.4)	41/256	16.9 (12.5, 22.5)	56/455	13.1 (10.1, 16.8)	23/299	8.3 (5.5, 12.4)	69/461	15.5 (12.3, 19.4)	92/760	12.6 (10.3, 15.4)
Don't know	-	-	3/205	1.3 (0.4, 4.4)	3/305	0.9 (0.3, 2.9)	-	-	2/256	1.1 (0.3, 4.4)	2/455	0.6 (0.2, 2.5)	-	-	5/461	1.2 (0.5, 3.0)	5/760	0.7 (0.3, 1.8)

Variables	Men						Women						Men and Women					
	YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs	
	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)
Place of last test Public Sector Hospital	85/100	83.4 (73.9, 90.0)	198/205	96.0 (91.6, 98.1)	41/312	13.1 (9.5, 17.9)	191/199	95.4 (90.8, 97.8)	254/256	99.5 (97.8, 99.9)	33/370	8.9 (5.6, 13.9)	276/299	91.2 (86.9, 94.2)	452/461	97.9 (95.8, 98.9)	728/760	95.2 (93.2, 96.7)
Health facility	2/100	2.0 (0.5, 8.2)	4/205	2.4 (0.9, 6.3)	74/312	23.7 (18.6, 29.7)	0/199	-	1/256	0.3 (0.0, 1.9)	75/370	20.3 (15.4, 26.3)	2/299	0.7 (0.2, 3.0)	5/461	1.2 (0.5, 3.0)	7/760	1.0 (0.5, 2.2)
Health post	0/100	-	2/205	1.0 (0.2, 4.3)	125/312	40.1 (33.4, 29.7)	2/199	1.1 (0.2, 4.5)	0/256	-	214/370	57.8 (49.8, 65.5)	2/299	0.7 (0.2, 3.0)	2/461	0.5 (0.1, 2.0)	4/760	0.5 (0.2, 1.5)
Mobile clinic	1/100	0.7 (0.1, 4.6)	0/205	-	34/312	10.9 (7.0, 16.7)	0/199	-	0/256	-	5/370	1.4 (0.6, 3.2)	1/299	0.2 (0.0, 1.6)	0/461	-	1/760	0.1 (0.01, 64.5)
Private Sector Hospital	0/100	-	0/205	-	6/312	1.9 (0.7, 5.2)	0/199	-	1/256	0.3 (0.0, 1.9)	14/370	3.8 (2.2, 6.4)	0/299	-	1/461	0.3 (0.0, 2.1)	20/682	2.9 (1.8, 4.7)
Pharmacy	0/100	-	0/205	-	0/312	-	0/199	-	0/256	-	0/370	-	0/299	-	0/461	-	0/682	-
Doctor	0/100	-	0/205	-	1/312	0.3 (<0.001, 2.0)	0/199	-	0/256	-	1/370	0.3 (<0.001, 2.0)	0/299	-	0/461	-	7/682	1.0 (0.5, 2.1)
Mobile clinic	0/100	-	0/205	-	2/312	0.5 (0.1, 2.2)	0/199	-	0/256	-	2/370	0.5 (0.1, 2.2)	0/299	-	0/461	-	3/682	0.4 (0.1, 1.4)
Traditional healer	0/100	-	0/205	-	0/312	-	0/199	-	0/256	-	0/370	-	0/299	-	0/461	-	0/682	-
VCT center	9/100	10.6 (5.5, 19.5)	1/205	0.7 (0.1, 4.7)	0/312	-	5/199	2.8 (1.1, 6.9)	0/256	-	0/370	-	14/299	5.5 (3.2, 9.3)	0/461	-	2/682	0.3 (0.1, 1.2)
Other	3/100	3.3 (1.0, 10.3)	0/205	-	26/312	7.0 (4.0, 12.3)	1/199	0.7 (0.1, 4.9)	0/256	-	26/370	7.0 (3.9, 12.3)	4/299	1.6 (0.6, 4.4)	0/461	-	49/682	7.2 (4.3, 11.6)
Type of last test Client-initiated	77/100	76.2 (66.1, 83.9)	96/205	48.0 (40.8, 55.3)	173/305	57.5 (51.5, 63.2)	98/199	51.6 (44.3, 58.9)	118/256	48.5 (42.1, 55.0)	216/455	49.9 (45.0, 54.8)	175/299	60.2 (54.2, 65.9)	214/461	48.3 (43.5, 53.2)	389/760	53.0 (49.2, 56.7)
Test offered & accepted	8/100	7.9 (3.9, 15.7)	36/205	18.8 (13.7, 25.3)	44/305	15.2 (11.3, 20.0)	47/199	23.7 (18.0, 30.5)	62/256	24.7 (19.5, 30.7)	109/455	24.2 (20.3, 28.7)	55/299	18.2 (14.0, 23.3)	98/461	22.0 (18.2, 26.4)	153/760	20.5 (17.6, 23.7)

Variables	Men						Women						Men and Women					
	YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs	
	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)
Mandatory	15/100	15.9 (9.6, 25.2)	73/205	33.2 (26.8, 40.2)	88/305	27.4 (22.5, 32.9)	54/199	24.7 (19.0, 31.4)	76/256	26.8 (21.6, 32.8)	130/455	25.9 (22.0, 30.3)	69/299	21.6 (17.2, 26.9)	149/461	29.7 (25.6, 34.2)	218/760	26.5 (23.4, 29.9)
Counseling received	93/99	93.3 (85.4, 97.1)	199/203	97.6 (93.6, 99.1)	292/302	96.2 (92.9, 98.0)	196/198	98.9 (95.5, 99.8)	249/253	98.0 (94.7, 99.3)	445/451	98.4 (96.4, 99.3)	289/297	97.0 (93.9, 98.5)	448/456	97.9 (95.7, 98.9)	737/753	97.5 (95.9, 98.5)
Received results	93/100	94.7 (88.9, 97.6)	201/204	98.3 (94.6, 99.5)	294/304	97.1 (94.5, 98.5)	197/199	99.3 (97.2, 99.8)	253/255	99.2 (96.5, 99.8)	450/454	99.2 (97.8, 99.7)	290/299	97.7 (95.5, 98.8)	454/459	98.8 (97.0, 99.5)	744/758	98.4 (97.1, 99.1)

Table 38: HIV testing and counselling experience: Host population

Variables	Men						Women						Men and Women					
	YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs	
	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)
Know a place for HIV test	165/175	94.3 (89.0, 97.1)	274/276	99.3 (97.1, 99.8)	439/451	97.3 (94.8, 98.7)	186/197	94.4 (89.5, 97.11)	268/271	98.9 (96.6, 99.7)	454/468	97.0 (94.7, 98.3)	351/372	94.4 (91.2, 96.4)	542/547	99.1 (97.9, 99.6)	893/919	97.2 (95.7, 98.2)
HIV testing barriers	1/6	16.7*	0/13	-	1/19	5.3 (0.6, 34.4)	0/7	-	0/7	-	0/14	-	1/13	7.7 (0.7, 49.5)	0/20	-	1/33	3.0 (0.4, 21.3)
Don't know where to test																		
Sure of not being infected	3/6	50.0*	11/13	84.6 (51.2, 96.6)	14/19	73.7 (37.9, 92.8)	5/7	71.4 (26.1, 94.6)	5/7	71.4 (33.5, 92.6)	10/14	71.4 (42.6, 89.4)	8/13	61.5 (25.5, 88.2)	16/20	80.0 (53.4, 93.3)	24/33	72.7 (48.8, 88.2)
Afraid of the result	0/6	-	2/13	15.4 (3.4, 48.8)	2/19	10.5 (2.9, 31.5)	1/7	14.3 (1.3, 67.5)	2/7	28.6 (7.4, 66.5)	3/14	21.4 (6.8, 50.6)	1/13	7.7 (0.7, 49.5)	4/20	80.0 (53.4, 93.3)	5/33	15.2 (6.6, 31.0)

Variables	Men						Women						Men and Women					
	YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs	
	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)
Afraid of blood taking	0/6	-	0/13	-	0/19	-	1/7	14.3 (1.3, 67.5)	0/7	-	1/14	7.1 (0.8, 42.3)	1/13	7.7 (0.7, 49.5)	0/20	-	1/33	3.0 (0.3, 22.4)
Afraid of catching infection	1/6	16.7*	0/13	-	1/19	5.3 (0.8 28.9)	0/7	-	0/7	-	0/14	-	1/13	7.7 (0.7, 49.5)	0/20	-	1/33	3.0 (0.4, 17.9)
Fear of stigma	0/6	-	0/13	-	0/19	-	0/7	-	0/7	-	0/14	-	0/13	-	0/20	-	0/33	-
Testing not confidential	0/6	-	0/13	-	0/19	-	0/7	-	0/7	-	0/14	-	0/13	-	0/20	-	0/33	-
Too expensive	0/6	-	0/13	-	0/19	-	0/7	-	0/7	-	0/14	-	0/13	-	0/20	-	0/33	-
Other	0/6	-	0/13	-	0/19	-	0/7	-	0/7	-	0/14	-	0/13	-	0/20	-	0/33	-
Don't know	1/6	16.7*	0/13	-	1/19	5.3 (0.8 28.9)	0/7	-	0/7	-	0/14	-	1/13	7.7 (0.7, 49.5)	0/20	-	1/33	3.0 (0.4, 17.8)
Time of last test In the past 12 months	54/93	58.1 (48.1, 67.4)	133/218	61.0 (52.8, 68.7)	187/311	60.1 (53.4, 66.5)	88/132	66.7 (58.4, 74.0)	151/238	63.5 (56.2, 70.2)	239/370	64.6 (58.8, 70.0)	142/225	63.1 (56.6, 69.1)	284/456	62.3 (55.6, 68.6)	426/681	62.6 (57.1, 67.7)
>1yr - 2 yrs ago	23/93	24.7 (17.4, 33.9)	51/218	23.4 (17.3, 30.9)	74/311	23.8 (18.8, 29.6)	37/132	28.0 (20.4, 37.1)	65/238	27.3 (22.4, 32.9)	102/370	27.6 (22.8, 32.9)	60/225	26.7 (21.5, 32.6)	116/456	25.4 (21.0, 30.4)	176/681	25.8 (22.0, 30.1)
>2 yrs ago	16/93	17.2 (11.4, 25.1)	34/218	15.6 (10.1, 23.2)	50/311	16.1 (11.4, 22.2)	7/132	5.3 (2.4, 11.3)	22/238	9.2 (5.7, 14.7)	29/370	7.8 (5.3, 11.5)	23/225	10.2 (7.2, 14.4)	56/456	12.3 (8.7, 17.1)	79/681	11.6 (8.8, 15.2)
Place of last test Public Sector Hospital	11/94	11.7 (6.3, 20.6)	30/218	13.8 (9.5, 19.5)	41/312	13.1 (9.5, 17.9)	15/132	11.4 (6.1, 20.2)	18/238	7.6 (4.4, 12.8)	33/370	8.9 (5.6, 13.9)	26/226	11.5 (7.3, 17.6)	48/456	10.5 (7.9, 13.9)	74/682	10.9 (8.3, 14.0)
Health facility	17/94	18.1 (12.8, 24.9)	57/218	26.2 (19.7, 33.8)	74/312	23.7 (18.6, 29.7)	18/132	13.6 (9.0, 20.1)	57/238	24.0 (17.2, 32.3)	75/370	20.3 (15.4, 26.3)	35/226	15.5 (12.3, 19.4)	114/456	25.0 (19.9, 31.0)	149/682	21.9 (17.9, 26.4)

Variables	Men						Women						Men and Women					
	YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs	
	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)
Health post	36/94	38.3 (29.5, 47.9)	89/218	40.8 (33.2, 48.9)	125/312	40.1 (33.4, 47.1)	79/132	59.9 (49.9, 69.1)	135/238	56.7 (46.8, 66.1)	214/370	57.8 (49.8, 65.5)	115/226	50.9 (42.8, 58.9)	224/456	49.1 (41.2, 56.5)	339/682	49.7 (43.5, 55.9)
Mobile clinic	13/94	13.8 (7.6, 23.8)	21/218	9.6 (5.7, 15.8)	34/312	10.9 (7.0, 16.7)	3/132	2.3 (0.7, 7.1)	2/238	0.8 (0.2, 3.4)	5/370	1.4 (0.6, 3.2)	16/226	7.1 (4.0, 12.1)	23/456	5.0 (3.0, 8.5)	39/682	5.7 (3.7, 8.8)
Private Sector Hospital	2/94	2.1 (0.6, 7.7)	4/218	1.8 (0.7, 4.8)	6/312	1.9 (0.7, 5.2)	7/132	5.3 (2.3, 11.6)	7/238	2.9 (1.5, 5.9)	14/370	3.8 (2.2, 6.4)	9/226	4.0 (1.9, 8.2)	11/456	2.4 (1.4, 4.0)	20/682	2.9 (1.8, 4.7)
Pharmacy	0/94	-	0/218	-	0/312	-	0/132	-	0/238	-	0/370	-	0/226	-	0/456	-	0/682	-
Doctor	4/94	4.3 (1.6, 10.6)	2/218	0.9 (0.2, 3.8)	6/312	1.9 (0.9, 4.2)	0/132	-	1/238	0.4 (0.1, 3.1)	1/370	0.3 (<0.001, 2.0)	4/226	1.8 (0.7, 4.5)	3/456	0.7 (0.2, 2.1)	7/682	1.0 (0.5, 2.1)
Mobile clinic	1/94	1.1 (0.1, 7.6)	0/218	-	1/312	0.3 (<0.001, 2.4)	2/132	1.5 (0.4, 6.3)	0/238	-	2/370	0.5 (0.1, 2.2)	3/226	1.3 (0.4, 4.1)	0/456	-	3/682	0.4 (0.1, 1.4)
Traditional healer	0/94	-	0/218	-	0/312	-	0/132	-	0/238	-	0/370	-	0/226	-	0/456	-	0/682	-
VCT center	1/94	1.1 (0.1, 7.4)	1/218	0.5 (0.1, 3.4)	2/312	0.6 (0.2, 2.6)	0/132	-	0/238	-	0/370	-	1/226	0.4 (0.1, 3.2)	1/456	0.2 (<0.001, 1.6)	2/682	0.3 (0.1, 1.2)
Other	9/94	9.6 (4.2, 20.6)	14/218	6.4 (3.1, 12.8)	23/312	7.4 (4.2, 12.7)	8/132	6.1 (3.1, 11.5)	18/238	7.6 (3.8, 14.4)	26/370	7.0 (3.9, 12.3)	17/226	7.5 (4.1, 13.3)	32/456	7.0 (4.0, 12.0)	49/682	7.2 (4.4, 11.6)
Type of last test Client-initiated	68/94	72.3 (61.3, 81.2)	137/219	62.6 (55.3, 69.3)	205/313	65.5 (58.8, 71.6)	81/132	61.4 (53.7, 68.5)	145/238	60.9 (52.7, 68.6)	226/370	61.1 (55.0, 66.8)	149/226	65.9 (60.1, 71.3)	282/457	61.7 (56.2, 66.9)	431/683	63.1 (59.1, 66.9)
Test offered & accepted	18/94	19.2 (12.6, 28.1)	35/219	16.0 (11.0, 22.6)	53/313	16.9 (12.3, 22.9)	18/132	13.6 (8.6, 20.9)	24/238	10.1 (6.7, 14.9)	42/370	11.4 (8.5, 15.0)	36/226	15.9 (11.3, 22.0)	59/457	12.9 (9.6, 17.1)	95/683	13.9 (10.9, 17.5)
Mandatory	8/94	8.5 (4.3, 15.9)	47/219	21.5 (16.9, 26.9)	55/313	17.6 (14.0, 21.8)	33/132	25.0 (18.5, 32.9)	69/238	29.0 (22.0, 37.2)	226/370	27.6 (22.1, 33.8)	41/226	18.1 (13.7, 23.6)	116/457	25.4 (20.9, 30.44)	157/683	23.0 (19.5, 26.9)

Variables	Men						Women						Men and Women					
	YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs	
	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)
Counseling received	91/94	96.8 (90.6, 99.0)	210/219	95.9 (92.3, 97.8)	301/313	96.2 (93.6, 97.8)	110/132	83.3 (74.1, 89.7)	210/237	88.6 (82.6, 92.7)	320/369	86.7 (81.0, 90.9)	201/226	88.9 (82.8, 93.1)	420/456	92.1 (88.5, 94.6)	621/682	91.1 (87.4, 93.7)
Received results	91/93	97.9 (91.6, 99.5)	215/217	99.1 (96.2, 99.8)	306/310	98.7 (96.7, 99.5)	131/132	99.2 (94.4, 99.9)	232/238	97.5 (94.6, 98.8)	363/370	98.1 (96.2, 99.1)	222/225	98.7 (96.1, 99.6)	447/455	98.2 (96.6, 99.1)	669/680	98.4 (97.1, 99.1)

**Too few respondents in the denominator to calculate a meaningful confidence interval*

HIV treatment

Around half of respondents in the host community said they knew a place in the community where a sick person can get treatment for HIV/AIDS, and the proportion was 58.2% in the camp. Those who knew about treatment were most likely to cite the public health facility as the place to access it (80.0% in the camp, 54.2% in the host community), followed by an NGO facility (28.5% in the camp, 34.8% in the community).

Table 39: Knowledge of HIV treatment sites and accessibility

Variables	REFUGEE POPULATION						HOST POPULATION					
	Men		Women		Men + Women		Men		Women		Men + Women	
	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)
Knows a place in camp or surrounding community where person sick with HIV/ AIDS can get treatment	265/470	54.2 (49.4, 58.9)	377/583	61.6 (57.3, 65.7)	642/1053	58.2 (55.0, 61.4)	227/451	50.3 (44.0, 56.7)	236/468	50.4 (44.8, 56.0)	463/919	50.4 (46.3, 54.5)
HIV/AIDS treatment can be obtained from: Public health facility	190/265	72.0 (65.9, 77.3)	298/377	80.0 (75.4, 83.9)	488/642	76.6 (73.0, 79.9)	113/277	49.8 (43.3, 56.3)	138/236	58.5 (47.3, 68.8)	251/463	54.2 (47.2, 61.0)
Private health facility	8/265	3.2 (1.5, 6.5)	14/377	5.0 (3.0, 8.4)	22/642	4.3 (2.8, 6.5)	3/227	1.3 (0.4, 4.1)	19/236	8.1 (5.0, 12.7)	22/463	4.8 (2.9, 7.7)
NGO health facility	89/265	32.5 (26.9, 38.7)	109/377	28.5 (23.9, 33.6)	198/642	30.2 (26.6, 34.1)	99/227	43.6 (28.6, 59.9)	62/236	26.3 (15.9, 40.1)	161/463	34.8 (22.4, 49.7)

Variables	REFUGEE POPULATION						HOST POPULATION					
	Men		Women		Men + Women		Men		Women		Men + Women	
	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)	n/N	%(CI)
Faith based organization	1/265	0.3 (0.0, 1.9)	0/377	-	1/642	0.1 (<0.001, 0.8)	0/277	-	0/236	-	0/463	-

Prevention of mother-to-child transmission

Among women who reported being pregnant in the past 4 years (58.3% in the camp, 62.8% in the host community), almost all went to the antenatal clinic for care (98.2% in the camp, 96.9% in the host community). Of those who did go for antenatal care, 99.2% (95% CI: 96.8, 99.8) of women in the camp reported being offered and HIV test, compared to 89.0% (95% CI: 83.0, 91.7) in the host community. Of those who were offered a test, 87.8% (95% CI: 96.8, 99.8) of women in the camp reported that their partners was also offered a test, compared to 77.9% (95% CI: 71.5, 83.2) in the host community. The difference in proportions of women being offered a test and partners being offered a test was statistically significant; although figures in both locations were high, they were higher in the camp.

Table 40: Exposure to PMTCT among previously pregnant women

Variable	FEMALE REFUGEE POPULATION		FEMALE HOST POPULATION	
	n/N	% (CI)	n/N	% (CI)
Woman has been pregnant in the last four years	347/579	58.3 (54.0, 62.5)	292/465	62.8 (57.8, 67.5)
During last pregnancy:				
Went to antenatal clinic	347/353	98.2 (95.8, 99.2)	283/292	96.9 (94.0, 98.4)
Among those who went to antenatal clinic in last pregnancy:				
Offered HIV test in ANC	345/347	99.2 (96.8, 99.8)	249/283	89.0 (83.0, 91.7))
Partner offered HIV test in ANC	307/345	87.8 (83.4, 91.1)	194/249	77.9 (71.5, 83.2)

Discussion

The BSS instrument asked about receipt of HIV information in the past 12 months, to which most people at both sites answered they had. The group with the lowest reported receipt of information was young people in the camp (80.7%), and the group with the highest reported receipt of information was young people in the host community (96.8%). Delivery channels for information were of differing importance in the sites: in the host community mass media was the most important source of information, particularly for men, while health services were most often reported in the camp. The difference may reflect lower access to mass media in the camp, but any popular mass media channels which are not currently used by HIV programs should be considered for information dissemination, particularly any which are popular among young men.

Recent HIV testing was reported by a high proportion of respondents at all sites. The group with the lowest reporting of a recent test was men aged 15-25 in the camp (43.0%). As risk behaviour among this group was concerning, it is recommended that testing mobilisation among men may be undertaken, for the sake of increasing their knowledge of their status, as well as a way to personalise the risk of behaviour that many in the group reported.

The TMHIS 2007-8 found much lower proportions of recent testing among Kigoma regional survey respondents, with the host community achieving 50.0% and camp achieving 44.6% testing among women, compared to 28.7% among women in the region. The THMIS found that 26.2% of men had been recently tested (and counselled), compared to 40.8% in the host community and 42.2% in the camp. This comparison is further evidence that HIV testing and counselling efforts are succeeding in both sites.

Table 41: HIV testing, 2010 Nyarugusu BSS compared to 2007-8 Tanzania Malaria & HIV/AIDS Indicator Survey

	2007-8 TMHIS – Kigoma Region	2010 BSS – Nyarugusu Host	2010 BSS – Nyarugusu Camp
Women aged 25-49	28.7%	50.0% (45.3, 54.7)	44.6% (40.4, 48.9)
Men aged 25-49	26.2%	40.8% (36.1, 45.7)	42.2% (37.7, 47.0)

Counselling was reported by the vast majority of those getting tested in the camp (97.5%), and by a high, but lesser proportion of those in the host community (91.1%). HIV counselling at time of testing represents a critical opportunity to provide information and link clients to services, so it is advised that monitoring in the host community health posts of other health facility (where most people received their test) is strengthened and training provided if necessary.

Finally, provider-initiated or client-initiated testing was reported by about three-quarters of respondents; however a quarter reported their testing as mandatory. It would be helpful to investigate the source of "mandatory" testing to ensure that health professionals comply with guidelines.

Antenatal/PMTCT services in the camp were found to be achieving excellent results, with most women going for antenatal care, and most of them being offered personal testing and testing for their partner. These indicators were also high in the host community, but not quite so high. In particular the offering of testing to the woman's partner could be improved.

Section 9: Limitations and recommendations

Limitations

The 2010 BSS was conducted with GLIA funding, and was done in areas where GLIA worked. However, the BSS was not designed to attribute changes in results to the GLIA activity. Throughout Tanzania, and in all the communities surveyed, many activities, media campaigns, and interventions have been introduced from late 2005 to late 2010, and it is not possible to separate the impact of one intervention from that of another. In addition, economic and social factors, which have an impact on knowledge, behaviour and access to interventions, cannot be held constant over time. For those reasons, the BSS was not designed to be an evaluation of GLIA, and its findings should not be directly used as evidence of the effect of GLIA, either positive or negative.

Absenteeism in Lugufu host communities was fairly high at baseline (9%), and even higher at follow up (13%), despite the team visiting the household up to three times to locate absent members. The survey was conducted in the same months as the baseline survey, which unfortunately coincided with agricultural activities in the field. One explanation for the difference between baseline and follow up could be the worsening economic condition following the closure of Lugufu camp. The team reported, and subsequent key informant interviews corroborated, the fact that many Uvinza and Kazuramimba residents either worked or studied quite a distance from home.

Both 2005 and 2010 BSS were conducted according with standardized methodology and instruments. At follow up, the need to stratify the population by former residence in Lugufu Camp required some creativity, as refugees from Lugufu were not transferred to a specific geographic location within the camp. While the investigation team was able to access the UNHCR household register and separate according to former residence criteria, it was found to be somewhat inaccurate in the field. Therefore, selection was based on addresses rather than names which still allowed the team to locate the sample. Carrying lists of addresses rather than names potentially decreased suspicion about the survey's purpose, but it also reduced the ability to report on household abandonment, absenteeism, or repatriation. This was not thought to affect the survey results, as repatriation was minimal, and there was no known pattern of households shifting from or to any particular part of the camp since the last verification exercise.

In addition to posing logistical challenges, the closure of the camp and repatriation or shifting of refugees made it difficult to gather information about interaction between refugee and host communities. Questions were asked about interaction before the camp closed, but the time period may have been difficult for people to recall, as it would have been approximately 1 year ago for Lugufu host respondents or 3 years ago for Lukole host respondents. Another effect of camp closure in the host community was elimination a health facility that was open to local residents. Thus, changes in health-service related indicators from baseline to follow up in the Lugufu and Lukole host communities could be partially reflective of closure of the camp hospital or facilities.

Finally, the standard BSS questionnaire includes questions that refer to the time of displacement (for refugees) or arrival of the refugees (for members of the host community). In this context, the recall period is often more than 13 years. These questions were included to conform to the standard model, but the data is difficult to interpret, particularly as the youngest members of each community could not be expected to remember. Many refugee respondents found it difficult to estimate how long ago they left their home country, which was partly due to the long recall period, as well as the fact that some were too young when they left their country, or may have even been born in Tanzania.

Recommendations

A summary of recommendations is provided below, listed by category.

Knowledge and attitudes

- As comprehensive knowledge among youth could be improved, messages about misconceptions of HIV transmission could be a valuable addition to messages already delivered in schools.
- The community should be engaged to consider teaching condom use to adolescents, particularly in the refugee camp, where the data shows exceptionally high levels of sexual activity among youth, and where almost 30% of the respondents thought condom use should not be taught.
- Messages designed to increase condom awareness should include the role of condoms in family planning, which can decrease stigma and increase family planning options.
- Particularly in the camp, knowledge of where condoms are available is lower than optimal and should be a target for improvement.
- Attitudes about HIV-positive people deserve further exploration, as the accepting attitudes indicators is exceptionally low, driven by a prevalent belief that HIV-positive teachers should not be allowed to continue teaching.

Sexual behaviour

- Alarming levels of early age sex reported by youth call for new and innovative approaches, perhaps introduced in the form of pilot programs, to learn how to affect change in this group, particularly among young men. HIV/AIDS programs need to be strengthen in both primary and secondary schools, but also among youth out of school

- Young men with risky behaviour have knowledge of risks but not recognition of their own risk. Strategies targeting them should not rely on information alone, but should be developed to address gaps in risk personalization.

- Because higher education levels were associated with non-regular sex, and especially as youth in the host community often go to boarding schools, targeted programs for youth preparing to enter schools may be useful.

- Programs focusing on sex work in the camp should take into account that the pattern of sex work suggests longer term client-sex worker relations, rather than a pattern where most sex workers see numerous clients per day, week or month.

Other factors related to HIV risk

- Despite more than 60% of respondents who were symptomatic of STIs seeking care in a health facility, many did not disclose their illness to their sexual partner, particularly in the host community. Therefore, health professionals might make use of refresher training in STI management and counselling.

- The vast majority of men in the camp reported being circumcised, but many men in the host community were not, and many among them, especially young men, expressed interest in circumcision. Programs offering circumcision for men are recommended as a way to reduce risk of sexual transmission of HIV, especially in the host community.

Exposure and access to interventions

- If mass media is popular in the camp, it should be used increasingly for delivering HIV messages in the camp and media sources popular with young people, particularly men, should be prioritized.

- Encouraging VCT among young men, particularly in the camp, through mobilisation, may be a useful way to get them in the habit of testing regularly, even if they do not currently perceive a need, and may help them internalise the risk from any potential risk behaviours they practice.

- Counselling should always be part of the VCT services offered. Programs may benefit from monitoring and potentially, re-training on counselling, in the host community facilities.
- Reports of mandatory testing should be investigated to learn what testing is possibly being administered incorrectly.
- The proportion of women whose partners were offered an HIV test when they visited the antenatal clinic was high in the community, but could be furthered improved.

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Annex 1 Design effect for selected indicators in the follow up surveys with cluster design (host communities)

Variable	Nyarugusu host population			Lugufu host population			Lukole host population		
	%	95% Confidence Interval (CI)	Design effect	%	95% Confidence Interval (CI)	Design effect	%	95% Confidence Interval (CI)	Design effect
Among 15-24 year olds									
Had sex before the age of 15	4.3	2.6, 7.1	1.048	6.0	4.1, 8.7	1.032	6.6	4.0, 10.8	1.371
Never had sex	65.3	27.5, 42.6	1.201	67.8	59.6, 75.0	1.975	59.6	50.1, 68.4	1.205
Among 15-49 year olds in past 12 months									
>1 sex partner	8.1	6.2, 10.6	1.423	8.5	6.8, 10.6	1.152	9.6	7.7, 12.0	1.097
>1 sex partner and used condom at last sex	21.3	14.4, 30.4	0.687	29.9	18.1, 45.1	1.882	15.1	8.1, 26.5	1.297
Sex with a non-regular partner	9.6	7.7, 12.1	1.224	7.2	5.3, 9.6	1.737	8.1	6.2, 10.5	1.368
Condom use at last sex with a non-regular partner	37.1	27.6, 47.7	0.944	38.4	26.7, 51.5	1.169	48.6	37.3, 60.0	0.908
Sex with a transactional partner	1.6	1.0, 2.7	0.898	3.1	2.1, 4.6	1.273	2.9	1.8, 4.7	1.568
Condom use at last sex with a transactional partner	66.7	37.6, 86.9	0.944	35.5	21.4, 52.6	0.775	53.9	34.2	0.908
Forced to have sex in the past 12 months	0.2	0.03, 1.6	1.017	1.0	0.5, 2.2	0.884	4.5	2.7, 7.1	1.229
Had a STI symptom and sought treatment	63.3	44.0, 79.2	0.954	42.5	27.6, 58.9	0.972	59.6	42.2, 74.8	1.304
Received an HIV test and know their results in the past 12 months	45.5	41.7, 49.3	1.302	34.6	29.1, 40.5	3.619	37.6	32.0, 43.5	3.080
Have comprehensive correct knowledge of HIV/AIDS	62.4	57.6, 67.0	2.110	45.2	40.9, 49.4	1.825	58.1	53.7, 62.4	1.702
Have accepting attitudes towards PLHIV	9.9	7.8, 12.5	1.353	11.1	9.0, 13.7	1.389	7.1	5.3, 9.6	1.468
Reached with HIV prevention	5.9	4.3, 8.0	1.344	6.4	4.8, 8.3	1.263	10.1	7.6, 13.3	1.978

Variable	Nyarugusu host population			Lugufu host population			Lukole host population		
	%	95% Confidence Interval (CI)	Design effect	%	95% Confidence Interval (CI)	Design effect	%	95% Confidence Interval (CI)	Design effect
programmes									
Residing in current community less than 12 months	4.5	2.9, 6.8	1.912	8.0	6.3, 10.2	1.300	10.3	7.8, 13.4	1.816
Away from home for four or more weeks in the past 12 months	19.3	15.3, 24.1	2.728	36.5	33.1, 40.1	1.329	18.4	14.9, 22.5	2.135
Visit the surrounding community one or more times a month	47.0	42.1, 52.0	2.214	29.3	24.1, 35.1	3.704	57.6	52.1, 63.0	2.677

Annex 1: Core indicator comparison among Lugufu refugees and hosts, by gender and age, from baseline to follow up

	LUGUFU AREA											
	Lugufu Hosts Baseline			Lugufu Hosts Follow-up			Lugufu Camp Baseline			Lugufu Camp Follow-up		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N
Young men and women aged 15-24 who have had sexual intercourse before the age of 15	6.5% (1.8 – 11.2%) 7/108	6.4% (3.1 – 9.6%) 14/219	6.4% (3.8 – 9.1%) 21/327	6.9% (4.0 – 11.4%) 12/175	2.0% (0.8 – 5.2%) 4/199	4.3% (2.6 – 7.1%) 16/374	30.2% (22.8 – 37.6%) 45/149	21.7% (15.1 - 28.3%) 33/152	25.9% (20.9 – 30.9%) 78/301	22.6% (14.9 – 30.3%) 26/115	20.3% (13.6 – 26.9%) 29/143	22.4% (16.3 – 26.3%) 55/258
15-19	2.8% (<0.01 – 6.6%) 2/72	11.1% (0.5 – 17.3%) 11/99	7.6% (3.6 – 11.6%) 13/171	8.5% (4.0 – 17.2%) 7/82	3.9% (1.2 – 12.0%) 3/78	6.3% (3.2 – 11.8%) 10/160	33.6% (24.6 – 42.7%) 36/107	23.7% (15.2 – 32.2%) 23/97	28.9% (22.7 – 35.2%) 59/204	22.7% (13.1 – 32.3%) 17/75	22.1% (12.7 – 31.5%) 17/77	22.4% (15.7 – 29.1%) 34/118

	LUGUFU AREA											
	Lugufu Hosts Baseline			Lugufu Hosts Follow-up			Lugufu Camp Baseline			Lugufu Camp Follow-up		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N
20-24	14.0% (3.5 – 24.5%) 6/43	3.0% (0.1 – 5.8%) 4/135	5.6% (2.2 – 9.0%) 10/178	5.4% (2.4 – 11.7%) 5/93	0.8% (0.1 – 6.1%) 1/121	2.8% (1.3 – 5.9%) 6/214	25.0% (14.3 – 35.7%) 16/64	16.0% (7.6 – 24.4%) 12/75	20.1% (13.4 – 26.8%) 28/139	22.5% (9.2 – 35.8%) 9/40	18.2% (8.7 – 27.7%) 12/66	19.8% (12.1 – 27.5%) 21/106
Never married young people aged 15-24 who have never had sex	65.2% (55.4 – 75.0%) 60/92	47.8% (38.4 – 57.1%) 53/111	55.7% (48.8 – 62.5%) 113/203	63.2% (27.5 – 47.2) 91/144	72.2% (61.3 – 81.0) 109/151	67.8 (59.6 – 75.0) 200/295	21.0% (14.3 – 27.7%) 30/143	51.9% (40.9 – 62.8%) 42/81	32.1% (26.0 – 38.3%) 72/224	42.6% (32.4 – 52.7%) 40/94	32.1% (19.3 – 44.9%) 17/53	38.8% (30.8 – 46.7%) 57/147
15-19	74.3% (64.0 – 84.6%) 52/70	60.6% (49.1 – 72.0%) 43/71	67.4% (59.6 – 75.2%) 95/141	73.3% (62.7 – 81.8) 66/90	82.2% (73.5 – 88.5) 97/118	78.4% (71.6 – 83.9) 163/208	28.7% (19.8 – 37.6%) 29/101	56.5% (44.7 – 68.3%) 39/69	40.0% (32.6 – 47.4%) 68/170	51.4% (39.5 – 63.3%) 36/70	36.2% (22.1 – 50.2%) 17/47	45.3% (36.1 – 54.5%) 53/117
20-24	36.% (38.0 – 80.2%) 8/22	25.0% (25.2 – 61.5%) 10/40	29.0% (17.6 – 40.5%) 18/62	46.3% (31.6 – 61.7) 25/54	36.4% (21.3 – 54.7) 12/33	42.5% 30.6 – 55.4) 37/87	2.4% (<0.01 – 7.1%) 1/42	25.0% (<0.01 – 51.0%) 3/12	7.4% (0.3 – 14.5%) 4/54	16.7% (0.8 – 32.6%) 4/24	0% - 0/6	13.3% (0.4 – 26.2%) 4/30
More than one sexual partner in the past 12 months	28.5% (24.1 – 33.2%) 109/381	18.1% (14.8 – 21.3%) 99/548	22.4% (19.7 – 25.1%) 208/929	15.5% (12.1 – 19.8%) 70/451	1.1% (0.4 – 3.0%) 5/470	8.1% (6.2 – 10.6%) 75/921	45.1% (39.9 – 50.3%) 160/355	21.7% (17.7 – 25.7%) 89/410	32.6% (29.2 – 35.9%) 249/765	26.3% (20.9 – 31.7%) 67/255	15.2% (11.3 – 19.1%) 50/328	20.1% (16.8 – 23.3%) 117/583
15-24	24.4% (16.5 – 32.2%) 28/115	18.8% (13.8 – 23.8%) 44/234	20.6% (16.4 – 24.9%) 72/349	10.3% (6.7 – 15.5%) 18/175	1.5% (0.3 – 6.3%) 3/199	5.6% (3.5 – 8.9%) 21/374	50.3% (42.8 – 57.8%) 86/171	23.3% (16.9 – 29.6%) 40/172	36.7% (31.6 – 41.9%) 126/343	18.3% (11.1 – 25.4%) 21/115	16.8% (10.6 – 23.0%) 24/143	17.4% (12.8 – 22.1%) 45/258
15-19	18.1% (9.1 – 27.0%) 13/72	13.1% (6.4 – 19.8%) 13/99	15.2% (9.8 – 20.6%) 26/171	7.3% (3.4 – 15.1%) 6/82	1.3% (0.2 – 9.1%) 1/78	4.4% (2.3 – 8.3%) 7/160	43.9% (34.5 – 53.4%) 47/107	24.7% (16.1 – 33.4%) 24/97	34.8% (28.2 – 41.4%) 71/204	13.3% (5.5 – 21.1%) 10/75	15.6% (7.4 – 23.8%) 12/77	14.5% (8.8 – 20.1%) 22/152
20-24	34.9% (20.4 – 49.3%) 15/43	23.0% (15.8 – 30.1%) 31/135	25.8% (19.4 – 32.3%) 46/178	12.9% (8.3 – 19.6%) 12/93	1.7% (0.2 – 11.2%) 2/121	6.5% (3.9 – 10.7%) 14/214	60.9% (48.9 – 73.0%) 39/64	21.3% (12.0 – 30.7%) 16/75	39.6% (31.4 – 47.7%) 55/139	27.5% (13.3 – 41.7%) 11/40	18.2% (8.7 – 27.7%) 12/66	21.7% (13.7 – 29.7%) 23/106

	LUGUFU AREA											
	Lugufu Hosts Baseline			Lugufu Hosts Follow-up			Lugufu Camp Baseline			Lugufu Camp Follow-up		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N
25-49	30.5% (24.9 – 36.0%) 81/266	17.5% (13.3 – 21.7%) 55/314	23.5% (20.0 – 26.9%) 136/580	18.8% (14.4 – 24.3%) 52/276	0.7% (0.2 – 3.0%) 2/271	9.5% (7.4 – 13.1%) 54/569	40.2% (33.1 – 47.3%) 74/184	20.6% (15.4 – 25.7%) 49/238	29.2% (24.8 – 33.5%) 123/422	32.9% (25.0 – 40.7%) 46/140	14.1% (9.0 – 19.1%) 26/185	22.2% (17.6 – 26.7%) 72/325
More than one sexual partner and reported using a condom during last sexual intercourse*				20.0% (12.9 – 29.6%) 14/70	40.0% -* 2/5	21.3% (14.4 – 30.4%) 16/75				19.4% (9.8 – 29.0%) 13/67	14.0% (4.2 – 23.8%) 7/50	17.1% (10.1 – 24.0%) 20/117
15-24				50.0% (28.4 – 71.6%) 9/18	33.3% (2.1 – 92.0%) 1/3	47.6% (31.1 – 64.7%) 10/21				38.1% (16.2 – 60.0%) 8/21	20.8% (3.8 - 37.9%) 5/24	28.9% (15.1 – 42.7) 13/45
15-19				50.0% -* 3/6	100% - 1/1	57.1% (15.1 – 90.9%) 4/7				40.0% (6.0% - 74.0%) 4/10	0% - 0/12	18.2% (6.8 – 35.7%) 4/22
20-24				50.0% (21.0 – 79.0%) 6/12	0% - 0/2	42.9% (19.6 – 69.8%) 6/14				36.4% (4.8 – 67.9%) 4/11	41.7% (10.8 – 72.5%) 5/12	39.1% (17.6 – 60.7%) 9/23
25-49				9.6% (4.1 – 21.1%) 5/52	50.0% --* 1/2	11.1% (4.7 – 24.1%) 6/54				10.9% (1.6 – 20.1%) 5/46	7.7% (0 – 18.3%) 2/26	9.7% (2.7 – 16.7%) 7/72
Sex with a non-regular partner(s) in the last 12 months	20.7% (16.7 – 24.8%) 79/381	20.1% (16.7 – 23.4%) 110/548	20.3% (17.8 – 22.9%) 189/929	14.2% (11.0 – 18.1%) 64/451	5.3% (3.4 – 8.1%) 25/470	9.7% (7.7 – 12.1%) 89/921	41.7% (36.6 – 46.8%) 148/355	25.9% (21.6 – 30.1%) 106/410	33.2% (29.9 – 36.5%) 254/765	22.4% (17.2 – 27.5%) 57/255	13.5% (9.7 – 17.2%) 44/327	17.4% (14.3 – 20.4%) 101/582
15-24	18.3% (11.2 – 25.4%) 21/115	20.5% (15.3 – 25.7%) 48/234	19.8% (15.6 – 24.0%) 69/349	19.4% (13.5 – 27.2%) 34/175	7.0% (4.0 – 12.1%) 14/199	12.8% (9.3 – 17.4%) 48/374	50.3% (42.8 – 57.8%) 86/171	27.9% (21.2 – 34.6%) 48/172	39.1% (33.9 – 44.2%) 134/343	27.8% (19.6 – 36.1%) 32/115	18.9% (12.4 – 25.3%) 27/143	22.9% (17.7 – 28.0%) 59/258

	LUGUFU AREA											
	Lugufu Hosts Baseline			Lugufu Hosts Follow-up			Lugufu Camp Baseline			Lugufu Camp Follow-up		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N
25-49	21.8% (16.8 – 26.8%) 58/266	19.8% (15.3 – 24.2%) 62/314	20.7% (17.4 – 24.0%) 120/580	10.9% (8.0 – 14.7%) 30/276	4.1% (2.0 – 8.1%) 11/271	7.5% (5.6 – 10.0%) 41/547	33.7% (26.8 – 40.5%) 62/184	24.4% (18.9 – 29.8%) 58/238	28.4% (24.1 – 32.7%) 120/422	17.9% (11.5 – 24.2%) 25/140	9.2% (5.0 – 13.5%) 17/184	13.0% (9.3- 16.6%) 42/324
Condom use at last sex with a non-regular partners in the last 12 months	31.3% (21.0 – 41.5%) 25/80	19.8% (12.4 – 27.3%) 22/111	24.6% (18.5 – 30.7%) 47/191	45.3% (32.8 – 57.8%) 29/64	16.0% (6.3 – 34.9%) 4/25	37.1% (27.6 – 47.7%) 33/89	35.3% (27.6 – 43.0%) 53/150	30.0% (21.4 – 38.6%) 33/110	33.1% (27.3 – 38.8%) 86/260	43.9% (30.7 – 57.0%) 25/57	30.2% (16.2 – 44.3%) 13/43	38.0% (28.3 – 47.7%) 38/100
15-24	38.1% (16.7 – 59.5%) 8/21	25.0% (12.6 – 37.4%) 12/48	29.0% (18.2 – 39.8%) 20/69	47.1% (32.0 – 62.7%) 16/34	7.1% (1.0 – 37.9%) 1/14	35.4% (22.1 – 51.4%) 17/48	35.2% (25.1 – 45.3%) 31/88	42.0% (28.1 – 55.9%) 21/50	37.7% (29.5 – 45.8%) 52/138	40.6 % (23.0 – 58.3%) 13/32	37.0% (18.1 – 56.0%) 10/27	39.0% (26.2 – 51.8%) 23/59
25-49	28.8% (17.1 – 40.5%) 17/59	15.9% (6.7 – 25.0%) 10/63	22.1% (14.7 – 29.6%) 27/122	43.3% (25.5 – 63.1%) 13/30	27.3% (7.4 – 63.9%) 3/11	39.0% (25.1 – 55.0%) 16/41	35.5% (23.4 – 47.5%) 22/62	20.0% (10.0 – 30.2%) 12/60	27.9% (19.8 – 35.9%) 34/122	48.0% (27.4 – 68.6%) 12/25	18.8% (<0.001 – 39.1%) 3/16	36.6% (21.2 – 52.0%) 15/41
Sex with a transactional partner(s) in the last 12 months	6.8% (4.3 – 9.4%) 26/381	2.6% (1.2 – 3.9%) 14/548	4.3% (3.0 – 5.6%) 40/929	3.1% (1.8 – 5.2%) 14/451	0.2% (0.03 – 1.6%) 1/470	1.6% (1.0 – 2.7%) 15/921	17.8% (13.8 – 21.7%) 63/355	10.7% (7.7 – 13.7%) 44/410	14.0% (11.5 – 16.4%) 107/765	14.9% (10.5 – 19.3%) 38/255	9.8% (6.5 – 13.0%) 32/328	12.0% (9.4 – 14.7%) 70/583
15-24	7.8% (2.9 – 12.8%) 9/115	1.3% (<0.001 – 2.7%) 3/234	3.4% (1.5 – 5.4%) 12/349	4.6% (2.2 – 9.1%) 8/175	0.5% (0.07 – 3.7%) 1/199	2.4% (1.3 – 4.6%) 9/374	20.5% (14.4 – 26.5%) 35/171	11.6% (6.8 – 16.4%) 20/172	16.0% (12.1 – 19.9%) 55/343	10.4% (4.8 – 16.1%) 12/115	10.5% (5.4 – 15.6%) 15/143	10.5% (6.7 – 14.2%) 27/258
25-49	6.4% (3.4 – 9.3%) 17/266	3.5% (1.5 – 5.5%) 11/314	4.8% (3.1 – 6.6%) 28/580	2.2% (1.0 – 4.5%) 6/276	0% - 0/0	1.1% (0.5 – 2.3%) 6/547	15.2% (10.0 – 20.4%) 28/184	10.1% (6.2 – 13.9%) 24/238	12.3% (9.2 – 15.5%) 52/422	18.6% (12.1 – 25.1%) 26/140	9.2% (5.0 – 13.4%) 17/185	13.2% (9.5 – 16.9%) 43/325
Condom use at last sex with transactional partners in the last 12 months	42.3% (22.8 – 61.8%) 11/26	42.9% (15.8 – 70.0%) 6/14	42.5% (26.9 – 58.1%) 17/40	64.3% (34.6 – 86.0%) 9/14	100% - 1/1	66.7% (37.6 – 86.9%) 10/15	46.8% (34.2 – 59.4%) 29/62	30.2% (16.3 – 44.2%) 13/43	40.0% (30.5 – 49.5%) 42/105	10.5% (0.5 – 20.6%) 4/38	9.4% (0.02 – 19.8%) 3/32	10.0% (2.8 – 17.2%) 7/70

	LUGUFU AREA											
	Lugufu Hosts Baseline			Lugufu Hosts Follow-up			Lugufu Camp Baseline			Lugufu Camp Follow-up		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N
15-24	22.2% (0 – 51.4%) 2/9	33.3% -* 1/3	25.0% (0.3 – 50.9%) 3/12	62.5% (18.7 – 92.4%) 5/8	100% - 1/1	66.7% (23.3 – 92.9%) 6/9	48.6% (31.6 - 65.6%) 17/35	35.0% (13.3 – 56.7%) 7/20	43.6% (30.2 – 57.0%) 24/55	8.3% (<0.01 – 25.5%) 1/12	6.7% (<0.01 – 20.4%) 1/15	7.4% (<0.01 – 18.0%) 2/27
25-49	52.9% (28.1 – 77.7%) 9/17	45.5% (14.2 – 76.7%) 5/11	50.0% (30.9 – 69.1%) 14/28	66.7% (12.5 - 100%) 4/6	0% - 0/1	66.7% (14.9 – 95.8%) 4/6	44.4% (25.1 – 63.8%) 12/27	26.1% (7.5 – 44.7%) 6/23	36.0% (22.4 – 49.6%) 18/50	11.5% (<0.01 – 24.4%) 3/26	11.8% (<0.01 – 28.0%) 2/17	11.6% (1.6 – 21.6%) 5/43
Women forced to have sex in the past 12 months		1.5% (0.5 – 2.5%) 8/548			0.2% (0.03 – 1.6%) 1/470			3.2% (0.1 – 4.9%) 13/410			2.4% (0.8 – 4.1%) 8/328	
15-24		2.1% (0.3 – 4.0%) 5/234			0% - 0/199			2.3% (0.1 – 4.6%) 4/172			2.8% (0.1 – 5.5%) 4/143	
25-49		1.0% (<0.01 – 2.0%) 3/314			0.4% (0.05 – 2.8%) 1/271			3.8% (1.4 – 6.2%) 9/238			2.2% (0.1 – 4.3%) 4/185	
Received an HIV test in the past 12 months and know the results	11.3% (8.1 – 14.5%) 43/381	11.5% (8.8 – 14.2%) 63/548	11.4% (9.4 – 13.5%) 106/929	41.0% (36.1 – 45.7%) 184/451	50.0% (45.3 – 54.7%) 235/470	45.5% (41.7 – 49.3%) 419/921	18.9% (14.8 – 23.0%) 67/355	17.3% (13.6 – 21.0%) 71/410	18.0% (15.3 – 20.8%) 138/765	41.6% (35.5 – 47/6%) 106/255	52.4% (47.0 – 57.9%) 172/328	47.7% (43.6 – 51.8%) 278/583
15-24	11.3% (5.5 – 17.1%) 13/115	11.1% (7.1 – 15.2%) 26/234	11.2% (7.9 – 14.5%) 39/349	29.1% (22.3 - 37.0%) 51/175	43.7% (36.6 – 51.1%) 87/199	36.9% (32.1 – 41.9%) 138/374	15.8% (10.3 – 21.2%) 27/171	12.8% (7.8 – 17.8%) 22/172	14.3% (10.6 – 18.0%) 49/343	27.8% (19.6 – 36.1%) 32/115	59.4% (51.3 – 67.6%) 85/143	45.4% (39.2 – 51.5%) 117/258
15-19	9.7% (2.8 – 16.6%) 7/72	10.1% (4.1 -16.1%) 10/99	10.0% (5.4 – 14.4%) 17/171	12.2% (6.9 – 20.6%) 10/82	20.5% (13.1 – 30.7%) 16/78	16.3% (11.8 – 22.0%) 26/160	13.1% (6.7 – 19.5%) 14/107	8.3% (2.7 – 13.8%) 8/97	10.8% (6.5 – 15.1%) 22/204	14.7% (6.5 – 22.8%) 11/75	53.3% (41.9 – 64.6%) 41/77	34.3% (26.6 – 41.8%) 52/152

	LUGUFU AREA											
	Lugufu Hosts Baseline			Lugufu Hosts Follow-up			Lugufu Camp Baseline			Lugufu Camp Follow-up		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N
20-24	14.0% (3.4 – 24.4%) 6/43	11.9% (6.4 – 17.3%) 16/135	12.4% (7.5 – 17.2%) 22/178	44.1% (34.1 – 54.6%) 41/93	58.7% (49.7 – 67.2%) 71/121	52.3% (46.0 – 58.7%) 112/214	20.3% (10.4 – 30.3%) 13/64	18.7% (9.8 – 27.6%) 14/75	19.4% (12.8 – 26.0%) 27/139	52.5% (36.6 – 68.4%) 21/40	66.7% (55.1 – 78.3%) 44/66	61.3% (51.9 – 70.7%) 65/106
25-49	11.3% (7.5 – 15.1%) 30/266	11.8% (8.2 – 15.4%) 37/314	11.6% (8.9 – 14.2%) 67/580	48.2% (41.4 – 55.1%) 133/276	54.6% (48.2 – 60.9%) 148/271	51.4% (45.8 – 56.9%) 281/547	21.7% (15.8 – 27.7%) 40/184	20.6% (15.4 – 25.7%) 49/238	21.1% (17.2 – 25.0%) 89/422	52.9% (44.5 – 61.2%) 74/140	47.0% (39.8 – 54.3%) 87/185	49.5% (44.1 – 55.0%) 161/325
Reached by an HIV prevention programme in the past 12 months*				9.3% (6.4 – 13.3%) 42/451	2.5% (1.2 – 5.3%) 12/470	5.9% (4.3 – 8.0%) 54/921				27.8% (22.3 – 33.4%) 71/255	11.0% (7.6 – 14.4%) 36/328	18.4% (15.2 – 21.5%) 107/583
15-24				5.1% (2.7 – 9.5%) 9/175	3.0% (1.2 – 7.3%) 6/199	4.0% (2.3 – 6.9%) 15/374				29.6% (21.1 – 38.0%) 34/115	11.2% (6.0 – 16.4%) 16/143	19.4% (14.5 – 24.2%) 50/258
25-49				12.0% (8.1 – 17.3%) 33/276	2.2% (0.9 – 5.5%) 6/271	7.1% (5.0 – 10.0%) 39/547				26.4% (19.1 – 33.8%) 37/140	10.8% (6.3 – 15.3%) 20/185	17.5% (13.4 – 21.7%) 57/325
Had an STI symptom and sought treatment in the past 12 months*				38.5% (17.6 – 64.6%) 5/13	44.4% (27.9 – 62.3%) 15/27	42.5% (27.6 – 58.9%) 17/40				75.0% -* 6/8	75.0% (51.9 – 98.1%) 12/16	75.0% (56.3 – 93.7%) 18/24
15-24				0 - 0/3	37.5% (11.3 – 73.8) 3/8	27.3% (7.3 – 64.1) 3/11				100% - 2/2	83.3% -* 5/6	87.5% -* 7/8
25-49				50.0% (25.7 – 74.3) 5/10	47.4% (25.8 – 69.9) 9/19	48.3% (31.9 – 65.1) 14/29				66.7% -* 4/6	70.0% (37.4 – 93.3%) 7/10	68.8% (43.2 – 94.3%) 11/16

	LUGUFU AREA											
	Lugufu Hosts Baseline			Lugufu Hosts Follow-up			Lugufu Camp Baseline			Lugufu Camp Follow-up		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N
Comprehensive correct knowledge of HIV/AIDS	30.5% (25.8 – 35.1%) 116/381	31.9% (28.0 – 35.8%) 175/548	31.3% (28.3- 34.3%) 291/929	63.6% (57.6 – 69.3%) 287/451	61.3% (55.1 – 67.1%) 288/470	62.4% (57.6 – 67.0%) 575/921	28.7% (24.0 – 33.4%) 102/355	25.1% (20.9 – 29.3%) 103/410	26.8% (23.7 - 29.9%) 205/765	58.0% (52.0 – 64.1%) 148/255	47.0% (41.5 – 52.4%) 154/328	51.8% (47.7 – 55.9%) 302/583
15-24	32.2% (23.6 – 40.8%) 37/115	35.0% (28.9 – 41.2%) 82/234	34.1% (29.1 – 39.1%) 119/349	62.9% (54.2 – 70.8%) 110/175	43.7% (37.0 – 50.7%) 112/199	59.4% (53.7 – 64.7%) 222/374	25.2% (18.6 – 31.7%) 43/171	26.2% (19.6 – 32.8%) 45/172	25.7% (21.0 – 30.3%) 88/343	50.4% (41.2 – 59.7%) 58/115	44.0% (35.9 – 52.3%) 63/143	46.9% (40.8 – 53.0%) 121/258
25-49	29.7% (25.8 – 35.1%) 79/266	29.6% (28.0 – 35.8%) 93/314	29.7% (28.3 – 34.3%) 172/580	64.1% (56.2 – 71.3%) 177/276	64.9% (57.4 – 71.8%) 176/271	64.5% (58.7 – 70.0%) 363/547	32.1% (24.0 – 33.4%) 59/184	24.4% (20.9 – 29.3%) 58/238	27.7% (23.7 – 30.0%) 117/422	64.3% (56.3 – 72.3%) 90/140	49.2% (41.9 – 56.4%) 91/185	55.7% (50.3 – 61.1%) 181/325
Accepting attitudes towards PLHIV	24.7% (20.3 – 29.1%) 91/369	25.4% (21.7 – 29.2%) 132/519	25.1% (22.3 – 28.0%) 223/888	12.9% (10.1 – 16.2%) 58/451	7.1% (4.5 – 10.9%) 33/468	9.9% (7.8 – 12.5%) 91/919	13.4% (9.4 – 17.4%) 38/283	10.3% (7.0 – 13.6%) 33/321	11.8% (9.2 – 14.3%) 71/604	11.0% (7.1 – 15.0%) 27/245	17.0% (12.9 – 21.1%) 55/324	14.4% (11.5 – 17.3%) 82/569
15-24	22.3% (14.6 – 30.0%) 25/112	25.2% (19.5 - 30.9%) 57/226	24.3% (19.7 – 28.8%) 82/338	11.4% (7.2 – 17.7%) 20/175	6.1% (3.2 – 11.4%) 12/197	8.6% (6.0 – 12.2%) 32/372	17.5% (11.1 – 23.9%) 24/137	11.0% (5.7 – 16.3%) 15/136	14.3% (10.1 – 18.4%) 39/273	10.4% (4.5 – 16.2%) 11/106	14.2% (8.4 – 20.0%) 20/141	12.6% (8.4 – 16.7%) 31/247
25-49	25.7% (20.3 – 31.0%) 66/257	25.6% (20.6 – 30.6%) 75/293	25.6% (22.0 – 29.3%) 141/550	13.8% (10.1 – 18.6%) 38/76	7.7% (4.8 – 12.4%) 21/271	10.8% (8.0 – 14.4%) 59/547	9.6% (4.8 – 14.4%) 14/146	9.7% (5.4 – 14.0%) 18/185	9.7% (6.5 – 12.9%) 32/331	11.5% (6.2 – 16.9%) 16/139	19.1% (13.4 – 24.9%) 35/183	15.8% (11.8 – 19.8%) 51/322
Residing in current community for 12 months or less	6.0% (3.6 – 8.4%) 23/381	7.3% (5.1 – 9.5%) 40/548	6.8% (5.2 – 8.4%) 63/929	3.8% (2.1 – 6.7%) 17/451	5.1% (3.1 – 8.3%) 24/470	4.5% (2.9 – 6.8%) 41/921	0.3% (<0.01 – 0.8%) 1/355	1.2% (0.2 – 2.3%) 5/410	0.8% (0.2 – 1.4%) 6/765	32.9% (27.1 – 38.7%) 84/255	15.0% (11.1 – 18.8%) 49/328	22.8% (19.4 – 26.2%) 133/583
15-24	7.8% (2.9 – 12.8%) 9/115	11.5% (7.4 – 15.6%) 27/234	10.3% (7.1 – 13.5%) 36/349	5.1% (2.2 – 11.7%) 9/175	9.0% (5.4 – 14.9%) 18/199	7.2% (4.5 – 11.5%) 27/374	0% - 0/171	1.7% (0.3 – 3.7%) 3/172	0.9% (0.2 – 1.9%) 3/343	33.0% (24.4 – 41.7%) 38/115	14.0% (8.3 – 19.7%) 20/143	22.5% (17.4 – 27.6%) 58/258

	LUGUFU AREA											
	Lugufu Hosts Baseline			Lugufu Hosts Follow-up			Lugufu Camp Baseline			Lugufu Camp Follow-up		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N
25-49	5.3% (2.8 – 8.0%) 14/266	4.1% (1.9 – 6.3%) 13/314	4.7% (2.9 – 6.4%) 27/580	2.9% (1.3 – 6.5%) 8/276	2.2% (1.0 – 4.7%) 6/271	2.6% (1.3 – 5.0%) 14/547	0.5% (<0.01 – 1.6%) 1/184	0.8% (0.1 – 2.0%) 2/238	0.7% (0.1 – 1.5%) 3/422	32.9% (25.0 – 40.7%) 46/140	15.7% (10.4 – 20.9%) 29/185	23.1% (18.5 – 27.7%) 75/325
Away from home 1 month or more in the past 12 months	19.5% (15.5 – 23.5%) 74/380	14.4% (11.5 – 17.4%) 79/547	16.5% (14.1 – 18.9%) 153/927	24.2% (19.1 – 30.1%) 109/451	14.7% (10.5 – 20.2%) 69/470	19.3% (15.3 – 24.1%) 178/921	33.8% (28.9 – 38.7%) 120/355	12.5% (9.3 – 15.7%) 51/409	22.4% (19.4 – 25.3%) 171/764	20.0% (15.1 – 24.9%) 51/255	10.2% (6.9 – 13.4%) 33/325	14.5% (11.6 – 17.4%) 84/580
15-24	16.7% (9.8 – 23.5%) 19/114	16.3% (11.5 – 21.1%) 38/233	16.4% (12.5 – 20.3%) 57/347	30.3% (21.9 – 40.2%) 53/175	16.6% (10.8 – 24.6%) 33/199	23.0% (17.4 – 29.8%) 86/374	32.8% (25.7 – 39.8%) 56/171	11.7% (6.9 – 16.5%) 20/171	22.2% (17.8 – 26.6%) 76/342	16.5% (9.7 – 23.4%) 19/115	10.0% (76.6 – 90.3%) 14/140	12.9% (8.8 – 17.1%) 33/255
25-49	20.7% (15.8 – 25.6%) 55/266	13.1% (9.3 – 16.8%) 41/314	16.6% (13.5 – 19.6%) 96/580	20.3% (15.2 – 26.6%) 56/276	13.3% (9.1 – 18.9%) 36/271	16.8% (12.8 – 21.7%) 92/547	34.8% (27.9 – 41.7%) 64/184	13.0% (8.7 – 17.3%) 31/238	22.5% (18.5 – 26.5%) 95/422	22.9% (15.9 – 29.9%) 32/140	10.3% (5.9 – 14.7%) 19/185	15.7% (11.7 – 19.7%) 51/325
Visiting the neighbouring community one or more times per month	27.6% (23.1 – 32.1%) 105/381	19.1% (15.9 – 22.5%) 105/548	22.6% (19.9 – 25.3%) 210/929	53.4% (47.0 – 59.7%) 241/451	40.9% (35.3 – 46.6%) 192/470	47.0% (42.1 – 52.0%) 433/921	23.7% (19.2 – 28.1%) 84/355	10.2% (7.3 – 13.2%) 42/410	16.5% (13.8 – 19.1%) 126/765	33.3% (27.5 – 18.9%) 85/255	23.5% (60.9 – 72.5%) 77/328	27.8% (24.1 – 31.4%) 162/583
15-24	20.9% (13.4 – 28.3%) 24/115	17.5% (12.6 – 22.4%) 41/234	18.6% (14.5 – 22.7%) 65/349	41.7% (32.2 – 51.9%) 73/175	34.2% (28.3 – 40.6%) 68/199	37.7% (31.6 – 44.2%) 141/374	19.9% (13.9 – 25.9%) 34/171	10.5% (5.9 – 15.1%) 18/172	15.2% (11.4 – 19.0%) 52/343	33.9% (25.2 – 42.6%) 39/115	23.1% (16.1 – 30.0%) 33/143	27.9% (22.4 – 33.4%) 72/258
25-49	30.5% (24.9 – 36.0%) 81/266	20.4% (15.9 – 24.8%) 64/314	25.0% (21.5 – 28.5%) 145/580	60.9% (54.1 – 67.3%) 168/276	45.8% (38.2 – 53.5%) 124/271	53.4% (47.9 – 58.8%) 292/547	27.2% (20.7 – 33.6%) 50/184	10.1% (6.2 – 13.9%) 24/238	17.5% (13.9 – 21.2%) 74/422	32.9% (25.0 – 40.7%) 46/140	23.8% (17.6 – 30.0%) 44/185	27.7% (22.8 – 32.6%) 90/325

**Too few respondents in the denominator to calculate a meaningful confidence interval*

Annex 3. Core indicator comparison among Lukole host respondents, by gender and age, from baseline to follow up

	Lukole Hosts Baseline			Lukole Hosts Follow-up		
	Male	**Female**	**All**	**Male**	**Female**	**All**
	% (95% CI) n/N	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**
Young men and women aged 15-24 who have had sexual intercourse before the age of 15	2.2% (0.5 – 4.7%) 3/137	4.2% (1.3 – 7.0%) 8/191	3.4% (1.4 – 5.3%) 11/328	8.7% (4.8 – 15.0%) 13/150	4.7% (2.2 – 9.9%) 8/169	6.6% (4.0 – 10.8%) 21/319
15-19	2.4% (0.3 – 5.7%) 2/84	6.6% (1.5 – 11.7%) 6/91	4.6% (1.5 – 7.7%) 8/175	17.4% (9.8 – 28.9%) 12/69	7.5% (3.2 – 16.4%) 5/67	12.5% (7.4 – 20.3%) 17/136
20-24	1.9% (0.05 – 5.6%) 1/53	2.0% (0.02 – 4.8%) 2/100	2.0% (0.4 – 4.2%) 3/153	1.2% (16.3 – 8.7%) 1/81	2.9% (0.9 – 9.5%) 3/102	2.2% (0.8 – 5.9%) 4/183
Never married young people aged 15-24 who have never had sex	79.8% (71.8 – 87.8%) 79/99	70.8% (61.7 – 80.0%) 68/96	75.4% (69.3 – 81.5%) 147/195	54.3% (43.0 – 65.1%) 51/94	70.2% (57.4 – 80.5%) 33/47	59.6% (31.6 – 49.9%) 84/141
15-19	85.7% (77.8 – 93.6%) 66/77	83.3% (74.3 – 92.4%) 55/66	84.6% (78.7 – 90.6%) 121/143	67.2% (55.0 – 77.4%) 43/64	76.9% (64.5 – 86.0%) 30/39	70.9% (62.3 – 78.2%) 73/103
20-24	59.1% (38.0 – 80.2%) 13/22	43.3% (25.2 – 61.5%) 13/30	50% (36.2 – 63.8%) 26/52	26.7% (12.4 – 48.3%) 8/30	37.5% (11.4 – 73.6%) 3/8	29.0% (15.2 – 48.2%) 11/38
More than one sexual partner in the past 12 months	24.5% (20.1 – 28.8%) 91/372	13.0% (9.9 – 16.1%) 58/446	18.2% (15.6 – 20.9%) 149/818	17.9% (14.1 – 22.3%) 75/420	2.3% (1.3 – 4.2%) 11/472	9.6% (88.1 – 92.3%) 86/892
15-24	20.4% (13.7 -27.2%) 28/137	16.8% (11.4 – 22.1%) 32/191	18.3% (14.1 – 22.5%) 60/328	10.7% (6.6 – 16.9%) 16/150	3.6% (1.4 – 8.6%) 6/169	6.9% (4.5 – 10.3%) 22/319

	Lukole Hosts Baseline			Lukole Hosts Follow-up		
	Male	**Female**	**All**	**Male**	**Female**	**All**
	% (95% CI) n/N	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**
15-19	11.9% (4.9 – 18.9%) 10/84	14.3% (7.0 – 21.5%) 13/91	13.1% (8.1 – 18.2%) 23/175	5.8% (2.2 – 14.5%) 4/69	4.5% (1.4 – 13.4%) 3/67	5.1% (2.5 – 10.2%) 7/136
20-24	34.0% (21.1 – 46.9%) 18/53	19.0% (11.3 – 26.7%) 19/100	24.2% (17.4 – 31.0%) 37/153	14.8% (7.6 – 26.8%) 12/81	2.9% (0.7 – 11.9%) 3/102	8.2% (4.5 – 14.3%) 15/183
25-49	26.8% (21.1 – 32.5%) 63/235	10.2% (6.5 – 13.9%) 26/255	18.2% (14.7 – 21.6%) 89/490	21.9% (17.0 – 27.6%) 59/270	1.7% (0.7 – 3.8%) 5/303	11.2% (8.6 – 14.3%) 64/573
More than one sexual partner and reported using a condom during last sexual intercourse*				16.0% (8.6 – 27.8%) 12/75	9.1% (1.1 – 47.3%) 1/11	15.1% (8.1 – 26.5%) 13/86
15-24				56.3% (33.4 – 7.8%) 9/16	0% - 0/6	40.9% (20.7 – 64.8%) 9/22
15-19				75.0% -* 3/4	0% - 0/3	42.9% -* 3/7
20-24				50.0% (24.5 – 75.5%) 6/12	0% - 0/3	40.0% (16.9 – 68.6%) 6/15
25-49				5.1% (1.6 – 14.8%) 3/59	20.0% -* 1/5	6.3% (2.4 – 15.5%) 4/64
Sex with a non-regular partner(s) in the last 12 months	17.7% (13.9 – 21.6%) 66/372	13.2% (10.1 – 16.4%) 59/446	15.3% (12.8 – 17.7%) 125/818	13.3% (9.8 – 17.9%) 56/420	3.4% (2.2 – 5.2%) 16/472	8.1% (6.2 – 10.5%) 72/892
15-24	19.0% (12.4 – 25.6%) 26/137	16.2% (11.0 – 21.5%) 31/191	17.4% (13.3 – 21.5%) 57/328	18.0% (12.6 – 25.0%) 27/150	4.1% (1.8 – 9.1%) 7/169	10.7% (7.6 – 14.7%) 34/319
25-49	17.0% (12.2 – 21.8%) 40/235	11.0% (7.1 – 14.8%) 28/255	13.9% (10.8 – 16.9%) 68/490	10.7% (6.9 – 16.4%) 29/270	3.0% (1.6 – 5.4%) 9/303	6.6% (4.6 – 9.5%) 38/573

	Lukole Hosts Baseline			Lukole Hosts Follow-up		
	Male	**Female**	**All**	**Male**	**Female**	**All**
	% (95% CI) n/N	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**
Condom use at last sex with a non-regular partners in the last 12 months	28.1% (17.0 – 39.3%) 18/64	18.6% (8.6 – 28.7%) 11/59	23.6% (16.0 – 31.1%) 29/123	55.4% (41.6 – 68.3%) 31/56	25.0% (8.9 – 53.2%) 4/16	48.6% (37.3 – 60.0%) 35/72
15-24	32.0% (13.3 – 50.7%) 8/25	21.9% (7.3 – 36.5%) 7/32	26.3% (14.7 – 37.9%) 15/57	63.0% (42.2 – 79.9%) 17/27	14.3% (1.6 – 63.5%) 1/7	52.9% (35.8 – 69.4%) 18/34
25-49	25.6% (11.7 – 40.0%) 10/39	14.8% (1.1 – 4.0%) 4/27	21.2% (11.2 – 31.2%) 14/66	48.3% (31.7 – 65.2%) 14/29	33.3% (10.0 – 69.3%) 3/9	44.7% (30.6 – 59.8%) 17/38
Sex with a transactional partner(s) in the last 12 months	6.2% (3.7 – 8.6%) 23/372	6.3% (4.0 – 8.5%) 28/446	6.2% (4.6 – 7.9%) 51/818	4.0% (2.1 – 7.6%) 17/420	1.9% (1.0 – 3.8%) 9/472	2.9% (1.8 – 4.7%) 26/892
15-24	6.6% (2.4 – 10.7%) 9/137	10.0% (5.7 – 14.2%) 19/191	8.5% (5.5 – 11.6%) 28/328	3.3% (1.2 – 8.9%) 5/150	3.0% (1.1 – 8.0%) 5/169	3.1% (1.4 – 6.7%) 10/319
25-49	6.0% (2.9 – 9.0%) 14/235	3.5% (1.3 – 5.8%) 9/255	4.7% (2.8 – 6.6%) 23/490	4.4% (2.1 – 9.3%) 12/270	1.3% (0.5 – 3.5%) 4/303	2.8% (1.5 – 5.1%) 16/573
Condom use at last sex with transactional partners in the last 12 months	39.1% (18.6 – 60.0%) 9/23	37.0% (18.4 – 55.7%) 10/27	38.0% (24.3 – 51.7%) 19/50	58.8% (31.8 – 81.4%) 10/17	44.4% (14.0 – 79.7%) 4/9	53.9% (34.2 – 72.4%) 14/26
15-24	33.3% -* 3/9	38.9% (15.4 – 62.4%) 7/18	37.0% (18.2 – 55.8%) 10/27	60.0% -* 3/5	40.0% -* 2/5	50.0% (21.5 – 78.5%) 5/10
25-49	42.9% (15.6 – 70.1%) 6/14	33.3% -* 3/9	39.1% (18.5 – 59.8%) 9/23	58.3% (24.3 – 86.0%) 7/12	50.0% -* 2/4	56.3% (29.0 – 80.2%) 9/16
Women forced to have sex in the past 12 months		0.7% (0.1 – 1.4%) 3/446			4.4% (2.7 – 7.1%) 21/472	
15-24		0.5% (<0.01 – 1.6%) 1/191			4.1% (1.7 – 10.0%) 7/169	

	Lukole Hosts Baseline			Lukole Hosts Follow-up		
	Male	**Female**	**All**	**Male**	**Female**	**All**
	% (95% CI) n/N	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**
25-49		0.8% (<0.01 – 1.9%) 2/255			4.6% (2.8 – 7.6%) 14/303	
Received an HIV test in the past 12 months and know the results	17.0% (13.1 – 20.8%) 63/372	15.3% (11.9 – 18.6%) 68/446	16.0% (13.5 – 18.5%) 131/818	39.1% (32.2 – 46.4%) 164/420	36.2% (30.5 – 42.4%) 171/472	37.6% (32.0 – 43.5%) 335/892
15-24	15.3% (9.3 – 21.4%) 21/137	16.2% (9.3 – 21.4%) 31/191	15.9% (11.9 – 19.8%) 52/328	28.7% (21.5 – 37.0%) 43/150	43.2% (35.3 – 51.5%) 73/169	36.4% (29.7 – 43.6%) 116/319
15-19	14.3% (6.7 – 21.8%) 12/84	13.2% (6.2 – 20.2%) 12/91	13.7% (8.6 – 18.8%) 24/175	15.9% (9.3 – 25.9%) 11/69	31.3% (21.9 – 42.7%) 21/67	23.5% (17.2 – 31.4%) 32/136
20-24	17.0% (6.7 – 27.2%) 9/53	19.0% (11.3 – 26.7%) 19/100	18.3% (12.1 – 24.5%) 28/153	39.5% (28.0 – 52.3%) 32/81	51.0% 41.0 – 60.9% 52/102	45.9% (36.8 – 55.3%) 84/183
25-49	17.9% (13.0 – 22.8%) 42/235	14.5% (10.2 – 18.8%) 37/255	16.1% (12.9 – 19.4%) 79/490	44.8% (36.9 – 53.1%) 121/270	32.3% (26.5 – 38.8%) 98/303	38.2% (32.4 – 44.4%) 219/573
Reached by an HIV prevention programme in the past 12 months*				14.1% (10.4 – 18.7%) 59/420	6.6% (4.1 – 10.4%) 31/472	10.1% (7.6 – 13.3%) 90/892
15-24				16.7% (11.7 – 23.2%) 25/150	8.3% (4.1 – 16.1%) 14/169	12.2% (8.7 – 16.9%) 39/319
25-49				12.6% (8.9 – 17.5%) 34/270	5.6% (3.3 – 9.4%) 17/303	8.9% (6.5 – 12.1%) 51/573
Had an STI symptom and sought treatment in the past 12 months*				66.7% (31.5 – 89.7%) 6/9	57.9% (39.2 – 74.6%) 22/38	59.6% (42.2 – 74.8%) 28/47
15-24				66.7% -* 2/3	53.3% (26.4 – 78.5%) 8/15	55.6% (28.6 – 79.6%) 10/18

	Lukole Hosts Baseline			Lukole Hosts Follow-up		
	Male	**Female**	**All**	**Male**	**Female**	**All**
	% (95% CI) n/N	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**
25-49				66.7% -* 4/6	60.9% (39.0 – 79.1%) 14/23	62.1% (42.9 – 78.1%) 18/29
Comprehensive correct knowledge of HIV/AIDS	47.3% (42.2 – 52.4%) 176/372	48.4% (43.8 – 53.1%) 216/446	47.9% (44.5 – 51.3%)) 392/818	62.1% (56.0 – 67.9%) 261/420	54.5% (49.3 – 59.5%) 257/472	58.1% (53.7 – 62.4%) 518 /892
15-24	43.8% (35.4 – 52.1%) 60/137	50.3% (43.1 – 57.4%) 96/191	47.6% (42.1 – 53.0%) 156/328	60.0% (49.9 – 69.4%) 90/150	61.5% (52.4 – 70.0%) 104/169	60.8% (53.6 – 67.6%) 194/319
25-49	49.4% (42.2 – 52.4%) 116/235	47.1% (43.8 – 53.1%) 120/255	48.2% (44.5 – 51.3%) 236/490	63.3% (56.8 – 69.4%) 171/270	50.5% (44.4 – 56.6%) 153/303	56.5% (51.8 – 61.2%) 324/573
Accepting attitudes towards PLHIV	30.1% (25.3 – 34.9%) 106/352	28.1% (23.7 – 32.5%) 114/406	29.0% (25.8 – 32.3%) 220/758	7.9% (4.9 – 12.3) 33/420	6.5% (4.3 – 9.6%) 30/463	7.1% (5.3 – 9.6%) 63/883
15-24	29.0% (21.0 – 37.1%) 36/124	26.2% (19.6 – 32.8%) 45/172	27.4% (22.3 – 32.5%) 81/296	7.3% (3.2 – 15.9%) 11/150	6.1% (2.7 – 12.9%) 10/165	6.7% (3.5 – 12.3%) 21/315
25-49	30.7% (24.7 – 36.7%) 70/228	29.5% (23.6 – 35.3%) 69/234	30.1% (25.9 – 34.3%) 139/462	8.1% (5.3 – 12.2%) 22/270	6.7% (4.0 – 11.2%) 20/298	7.4% (5.4 – 10.1%) 42/568
Residing in current community for 12 months or less	3.0% (1.2 – 4.7%) 11/372	5.6% (3.5 – 7.7%) 25/446	4.4% (3.0 – 5.8%) 36/818	8.1% (5.4 – 12.0% 34/420	12.3% (9.0 – 16.5%) 58/472	10.3% (7.8 – 13.4%) 92/892
15-24	3.7% (0.5 – 6.8%) 5/137	8.9% (4.8 – 13.0%) 17/191	6.7% (4.0 – 9.4%) 22/328	9.3% (4.9 – 17.1%) 14/150	26.0% (19.4 – 33.9%) 44/169	18.2% (13.4 – 24.2%) 58/319
25-49	2.6% (0.5 – 4.6%) 6/235	3.1% (1.0 – 5.3%) 8/255	2.9% (1.4 – 4.3%) 14/490	7.4% (4.8 – 11.2%) 20/270	4.6% (2.7 – 7.9%) 14/303	5.9% (4.1 – 8.5%) 34/573
Away from home 1 month or more in the past 12 months	13.9% (10.3 – 17.4%) 51/368	10.8% (7.9 – 13.7%) 48/443	12.2% (10.0 – 14.5%) 99/811	21.0% (15.9 – 27.1%) 88/420	16.1% (12.3 – 20.9%) 76/472	18.4% (14.9 – 22.5%) 164/892

	Lukole Hosts Baseline			Lukole Hosts Follow-up		
	Male	**Female**	**All**	**Male**	**Female**	**All**
	% (95% CI) n/N	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**
15-24	13.3% (7.6 – 19.1%) 18/135	12.7% (7.9 – 17.5%) 24/189	13.0% (9.3 – 16.6%) 42/324	28.0% (20.1 – 37.5%) 42/150	17.2% (11.8 – 24.3%) 29/169	22.3% (17.6 – 27.8%) 71/319
25-49	14.2% (9.7 – 18.7%) 33/233	9.5% (5.8 – 13.1%) 24/254	11.7% (8.8 – 14.6%) 57/487	17.0% (12.7 – 22.5%) 46/270	15.5% (11.1 – 21.2%) 47/303	16.2% (12.5 – 20.8%) 93/573
Visiting the neighbouring community one or more times per month	45.7% (40.6 – 50.8%) 170/372	41.0% (36.5 – 45.6%) 183/446	43.2% (39.8 – 46.6%) 353/818	64.5% (58.6 – 70.0%) 271/420	51.5% (44.3 – 58.6%) 243/472	57.6% (52.1 – 63.0%) 514/892
15-24	33.6% (25.6 – 41.5%) 46/137	38.2% (31.3 – 45.1%) 73/191	36.3% (31.1 – 41.5%) 119/328	58.7% (49.2 – 67.5%) 88/150	40.2% (31.6 – 49.5%) 68/169	48.9% (41.9 – 55.9%) 156/319
25-49	52.8% (46.4 – 59.2%) 124/235	43.1% (37.0 – 49.2%) 110/255	47.8% (43.3 – 52.2%) 234/490	67.8% (60.3 – 74.5%) 183/270	57.8% (49.7 – 65.5%) 175/303	62.5% (56.4 – 68.2%) 358/573

Annex 2: Core indicator comparison among Nyarugusu refugees and hosts, by gender and age, at follow up

	Nyarugusu Refugees Follow up			Nyarugusu Hosts Follow-up		
	Male	**Female**	**All**	**Male**	**Female**	**All**
	% (95% CI) n/N	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**
Young men and women aged 15-24 who have had sexual intercourse before the age of 15	22.6 (17.5, 28.7) 54/239	14.1 (10.5, 18.8) 44/280	18.1 (14.9, 21.8) 98/519	6.9 (4.0, 11.4) 12/175	2.0 (0.8, 5.2) 4/199	4.3 (2.6, 7.1) 16/374
15-19	26.5 (19.6, 34.9) 37/145	13.6 (9.0, 19.8) 25/160	19.6 (15.4, 24.8) 62/305	8.5 (4.0, 17.2) 7/82	3.8 (1.2, 12.0) 3/78	6.3 (3.2, 11.8) 10/160
20-24	16.9 (10.4, 26.2) 17/94	14.9 (9.4, 22.9) 19/120	15.8 (11.4, 21.6) 36/214	5.4 (2.4, 11.7) 5/93	0.8 (0.1, 6.1) 1/121	2.8 (1.3, 6.0) 6/214
Never married young people aged 15-24 who have never had sex	35.1 (28.5, 42.3) 73/198	49.8 (40.8, 58.9) 59/128	41.0 (35.5, 46.8) 132/326	59.2 (48.5, 69.2) 77/130	77.3 (67.6, 84.7) 51/66	65.3 (57.4, 72.5) 128/196
15-19	45.5 (36.9,54.5) 64/136	55.4 (45.7, 64.7) 58/113	50.2 (43.6, 56.7) 122/249	72.8 (61.9, 81.6) 59/81	86.3 (74.4, 93.2) 44/51	78.0 (71.5, 83.4) 103/132
20-24	14.0 (7.1, 25.8) 9/62	8.4 (1.1, 42.3) 1/15	12.9 (6.8, 23.2) 10/77	36.7 (23.0, 53.0) 18/49	46.7 (27.7, 66.7) 7/15	39.1 (26.7, 53.0) 25/64
More than one sexual partner in the past 12 months	28.4 (24.3, 32.9) 135/485	14.5 (11.7, 17.7) 87/592	20.8 (18.4, 23.5) 222/1077	15.5 (12.1, 19.8) 70/451	1.1 (0.4, 3.0) 5/470	8.1 (6.2, 10.6) 75/921
15-24	20.7 (15.7, 26.7) 48/239	13.4 (9.8, 18.1) 40/280	16.8 (13.7, 20.5) 88/519	10.3 (6.7, 15.5) 18/175	1.5 (0.3, 6.3) 3/199	5.6 (3.5, 8.9) 21/374
15-19	15.8 (10.4, 23.3) 22/145	13.2 (8.6, 19.7) 22/160	14.4 (10.7, 19.1) 44/305	7.3 (3.4, 15.1) 6/82	1.3 (0.2, 9.1) 1/78	4.4 (2.3, 8.3) 7/160

	Nyarugusu Refugees Follow up			Nyarugusu Hosts Follow-up		
	Male	**Female**	**All**	**Male**	**Female**	**All**
	% (95% CI) n/N	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**
20-24	27.7 (19.2, 38.2) 26/94	13.8 (8.5, 21.5) 18/120	20.2 (15.1, 26.5) 44/214	12.9 (8.3, 19.6) 12/93	1.7 (0.2, 11.2) 2/121	6.5 (3.9, 96.1) 14/214
25-49	36.4 (30.2, 43.0) 87/246	15.5 (11.7, 20.3) 47/312	24.8 (21.2, 28.8) 134/558	18.9 (14.4, 24.3) 52/276	0.7 (0.2, 3.0) 2/271	9.9 (7.4, 13.1) 54/547
More than one sexual partner and reported using a condom during last sexual intercourse*	17.2 (11.5, 25.0) 24/135	17.0 (10.0, 27.3) 14/87	17.1 (12.5, 23.1) 38/222	20.0 (12.9, 29.6) 14/70	40.0 -* 2/5	21.3 (14.4, 30.4) 16/75
15-24	26.6 (15.7, 41.5) 14/48	23.2 (11.9, 40.3) 9/40	25.2 (16.8, 36.0) 23/88	50.0 (28.4, 71.6) 9/18	33.3 -* 1/3	47.6 (31.1, 64.7) 10/21
15-19	23.5 (9.8, 46.3) 6/22	18.8 (6.1, 45.5) 3/22	21.2 (10.8, 37.5) 9/44	50.0 -* 3/6	100 - 1/1	57.1 (15.5, 90.9) 4/7
20-24	29.3 (14.2, 50.7) 8/26	29.1 (12.3, 54.6) 6/18	29.2 (17.0, 45.4) 14/44	50.0 (21.0, 79.0) 6/12	0 - 0/2	42.9 (19.6, 69.8) 6/14
25-49	11.7 (6.2, 21.2) 10/87	11.8 (4.8, 26.3) 5/47	11.7 (7.0, 19.1) 15/134	9.6 (4.1, 21.1) 5/52	50.0 -* 1/2	11.1 (4.7, 24.1) 6/54
Sex with a non-regular partner(s) in the last 12 months	19.8 (16.4, 23.8) 99/483	11.2 (8.8, 14.1) 70/591	15.1 (13.0, 17.5) 169/1074	14.2 (11.0, 18.1) 64/451	5.3 (3.4, 8.1) 25/470	9.7 (7.7, 12.1) 89/921
15-24	23.8 (18.6, 29.9) 59/238	14.6 (10.8, 19.4) 44/280	18.9 (15.6, 22.6) 103/518	19.4 (13.5, 27.2) 34/175	7.0 (4.0, 12.1) 14/199	12.8 (9.3, 17.4) 48/374
25-49	15.7 (11.5, 21.1) 40/245	8.0 (5.4, 11.8) 26/311	11.4 (8.9, 14.5) 66/556	10.9 (8.0, 14.7) 30/276	4.1 (2.0, 8.1) 11/271	7.5 (5.6, 10.0) 41/547
Condom use at last sex with a non-regular partners in the last 12 months	41.8 (31.9, 52.4) 42/99	34.8 (23.8, 47.7) 23/69	39.0 (31.4, 47.1 65/168	45.3 (33.8, 57.4) 29/64	16.0 (6.3, 34.9) 4/25	37.1 (27.6, 47.7) 33/89

	Nyarugusu Refugees Follow up			Nyarugusu Hosts Follow-up		
	Male	**Female**	**All**	**Male**	**Female**	**All**
	% (95% CI) n/N	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**
15-24	40.7 (28.2, 54.6) 24/59	39.4 (25.2, 55.5) 17/44	40.1 (30.5, 50.6) 41/103	47.1 (32.0, 62.7) 16/34	7.1 (1.0, 37.9) 1/14	35.4 (22.1, 51.4) 17/48
25-49	24.6 (28.2, 60.4) 18/40	26.5 (11.8, 49.4) 6/25	37.1 (25.4, 50.5) 24/65	43.3 (25.5, 63.1) 13/30	27.3 (7.4, 63.9) 3/11	39.0 (25.1, 55.0) 16/41
Sex with a transactional partner(s) in the last 12 months	10.3 (7.9, 13.4) 56/485	11.0 (8.6, 14.0) 63/592	10.7 (8.9, 12.8) 119/1077	3.1 (1.8, 5.2) 14/451	0.2 (0.03, 1.6) 1/470	1.6 (1.0, 2.7) 15/921
15-24	8.3 (5.3, 12.7) 21/239	9.8 (6.7, 14.2) 28/280	9.1 (6.8, 12.0) 49/519	4.6 (2.2, 9.1) 8/175	0.5 (0.07, 3.7) 1/199	2.4 (1.3, 4.6) 9/374
25-49	12.5 (8.9, 17.3) 35/246	12.1 (8.7, 16.6) 35/312	12.3 (9.7, 15.4) 70/558	2.2 (1.0, 4.5) 6/276	0 - 0/271	1.1 (0.5, 2.3) 6/547
Condom use at last sex with transactional partners in the last 12 months	19.0 (9.9, 33.4) 9/56	11.7 (5.4, 23.5) 7/63	14.9 (9.1, 23.5) 16/119	64.3 (34.6, 86.0) 9/14	100 - 1/1	66.7 (37.6, 86.9) 10/15
15-24	23.4 (8.7, 49.6) 4/21	7.3 (1.6, 27.6) 2/28	14.1 (6.1, 29.3) 6/49	62.5 (18.7, 92.4) 5/8	100 - 1/1	66.7 (23.3, 92.9) 6/9
25-49	15.9 (6.3, 34.7) 5/35	15.1 (6.0, 33.0) 5/35	15.5 (8.1, 27.5) 10/70	66.7 -* 4/6	-	66.7 -* 4/6
Women forced to have sex in the past 12 months		2.6 (1.5, 4.3) 15/592			0.2 (0.03, 1.6) 1/470	
15-24		2.4 (1.1, 5.2) 7/280			0 -	
25-49		2.7 (1.3, 5.6) 8/312			0.4 (0.05, 2.8) 1/271	

	Nyarugusu Refugees Follow up			Nyarugusu Hosts Follow-up		
	Male	**Female**	**All**	**Male**	**Female**	**All**
	% (95% CI) n/N	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**
Received an HIV test in the past 12 months and know the results	42.2 (37.7, 47.0) 204/485	44.6 (40.4, 48.9) 277/592	43.5 (40.4, 46.7) 481/1077	40.8 (36.1, 45.7) 184/451	50.0 (45.3, 54.7) 235/470	45.5 (41.7, 49.3) 419/921
15-24	28.7 (23.0, 35.1) 68/239	44.8 (38.8, 51.0) 136/280	37.3 (33.0, 41.7) 204/519	29.1 (22.3, 37.0) 51/175	43.7 (36.6, 51.1) 87/199	36.9 (32.1, 41.9) 138/374
15-19	16.3 (10.8, 23.8) 23/145	35.7 (28.4, 43.8) 64/160	26.6 (21.8, 32.1) 87/305	12.2 (6.9, 20.6) 10/82	20.5 (13.1, 30.7) 16/78	16.3 (11.8, 22.0) 26/160
20-24	46.6 (36.3, 57.3) 45/94	57.4 (47.8, 66.6) 72/120	52.5 (45.3, 49.5) 117/214	44.1 (34.1, 54.6) 41/93	58.7 (49.7, 67.2) 71/121	52.3 (46.0, 58.7) 112/214
25-49	56.3 (49.6, 62.7) 136/246	44.4 (38.7, 50.3) 141/312	49.7 (45.3, 54.1) 277/558	48.2 (41.4, 55.1) 133/276	54.6 (48.2, 60.9) 148/271	51.4 (45.8, 56.9) 281/547
Reached by an HIV prevention programme in the past 12 months*	26.4 (22.5, 30.8) 130/485	10.5 (8.2 , 13.4) 63/592	17.8 (15.5, 20.3) 193/1077	9.3 (6.4, 13.3) 42/451	2.6 (1.2, 5.3) 12/470	5.9 (4.3, 8.0) 54/921
15-24	25.9 (20.5, 32.1) 64/239	9.1 (6.2, 13.3) 27/280	16.9 (13.8, 20.6) 91/519	5.1 (2.7, 9.5) 9/175	3.0 (1.2, 7.3) 6/199	4.0 (2.3, 6.9) 15/374
25-49	27.0 (21.5, 33.3) 66/246	11.9 (8.5, 16.3) 36/312	18.6 (15.4, 22.3) 102/558	12.0 (8.1, 17.3) 33/276	2.2 (0.9, 5.5) 6/271	7.1 (5.0, 10.0) 39/547
Had an STI symptom and sought treatment in the past 12 months*	66.6 (38.6, 86.4) 11/16	59.0 (39.0, 76.4) 19/30	61.7 (45.4, 75.8) 30/46	80.0 -* 4/5	60.0 (39.1, 77.8) 15/25	63.3 (44.0, 9.2) 19/30
15-24	71.4 (30.1, 93.5) 6/8	59.0 (29.6, 83.2) 9/14	63.8 (39.3, 82.8) 15/22	0 - 0/1	50.0 (13.1, 86.9) 5/10	45.5 (11.6, 84.1) 5/11
25-49	60.0 (22.6, 88.5) 5/8	59.0 (31.2, 82.1) 10/16	59.3 (36.2, 79.0) 15/24	100 - 4/4	66.7 (34.2, 88.5) 10/15	73.7 (42.9, 91.2) 14/19

	Nyarugusu Refugees Follow up			Nyarugusu Hosts Follow-up		
	Male	Female	All	Male	Female	All
	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N	% (95% CI) n/N
Comprehensive correct knowledge of HIV/AIDS	52.0 (47.3, 56.7) 260/485	47.0 (42.7, 51.2) 278/592	49.3 (46.1, 52.4) 538/1077	63.6 (57.6, 69.3) 287/451	61.3 (55.1, 67.1) 288/470	62.4 (57.6, 67.0) 575/921
15-24	49.6 (42.9, 56.3) 119/239	47.3 (41.1, 53.5) 130/280	48.3 (43.8, 52.9) 249/519	62.9 (54.2, 70.8) 110/175	56.3 (49.3, 63.0) 112/199	59.4 (53.7, 64.7) 222/374
25-49	54.5 (47.8, 61.0) 141/246	46.7 (40.9, 52.6) 148/312	50.2 (45.8, 54.6) 289/558	64.1 (56.2, 71.3) 177/276	64.9 (57.4, 71.8) 176/271	64.5 (58.7, 69.9) 353/547
Accepting attitudes towards PLHIV	9.8 (7.4, 13.0) 48/473	10.5 (8.3, 13.3) 72/583	10.2 (8.5, 12.2) 120/1056	12.9 (10.1, 16.2) 58/451	7.1 (4.5, 10.9) 33/468	9.9 (7.8, 12.5) 91/919
15-24	12.3 (8.4, 17.6) 27/228	9.7 (6.7, 13.9) 30/276	10.9 (8.4, 14.1) 57/504	11.4 (7.2, 17.7) 20/175	6.1 (3.2, 11.4) 12/197	8.6 (6.0, 12.2) 32/372
25-49	7.4 (4.7, 11.4) 21/245	11.3 (8.3, 15.3) 42/307	9.6 (7.4, 12.3) 63/552	13.8 (10.1, 18.6) 38/276	7.7 (4.8, 12.4) 21/271	10.8 (8.0, 14.4) 59/547
Residing in current community for 12 months or less	13.6 (11.1, 16.7) 91/485	6.6 (5.0, 8.7) 53/592	9.8 (8.3, 11.5) 144/1077	3.8 (2.1, 6.7) 17/451	5.1 (3.1, 8.3) 24/470	4.5 (2.9, 6.8) 41/921
15-24	12.6 (9.2, 16.9) 42/239	6.7 (4.4, 10.0) 24/280	9.4 (7.4, 12.0) 66/519	5.1 (2.2, 11.7) 9/175	9.0 (5.4, 14.9) 18/199	7.2 (4.5, 11.4) 27/374
25-49	14.7 (11.1, 19.2) 49/246	6.6 (4.6, 9.4) 29/312	10.2 (8.1, 12.7) 78/558	2.9 (1.3, 6.5) 8/276	2.2 (1.0, 4.7) 6/271	2.6 (1.3, 5.0) 14/547
Away from home 1 month or more in the past 12 months	20.3 (16.8, 24.4) 98/484	11.5 (9.0, 14.5) 65/586	15.5 (13.3, 18.0) 163/1070	24.2 (19.1, 30.1) 109/451	14.7 (10.5, 20.2) 69/470	19.3 (15.3, 24.1) 178/921
15-24	17.9 (13.3, 23.7) 42/239	14.7 (10.7, 19.9) 37/274	16.2 (13.1, 20.0) 79/513	30.3 (21.9, 40.2) 53/175	16.6 (10.8, 24.6) 33/199	23.0 (17.4, 29.8) 86/374

	Nyarugusu Refugees Follow up			Nyarugusu Hosts Follow-up		
	Male	**Female**	**All**	**Male**	**Female**	**All**
	% (95% CI) n/N	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**	**% (95% CI) n/N**
25-49	22.9 (17.8, 28.9) 56/245	8.4 (5.7, 12.2) 28/312	14.8 (12.0, 18.2) 84/557	20.3 (15.2, 26.6) 56/276	13.3 (9.1, 18.9) 36/271	16.8 (12.8, 21.7) 92/547
Visiting the neighbouring community one or more times per month	37.4 (32.9, 42.0) 176/485	24.2 (20.7, 28.0) 142/592	30.2 (27.3, 33.2) 318/1077	53.4 (47.0, 59.7) 241/451	40.9 (35.3, 46.6) 192/470	47.0 (42.1, 52.0) 433/921
15-24	33.3 (27.3, 39.9) 80/239	26.2 (21.0, 32.0) 71/280	29.5 (25.5, 33.8) 151/519	41.7 (32.2, 51.9) 73/175	34.2 (28.3, 40.6) 68/199	37.7 (31.6, 44.2) 141/374
25-49	41.5 (35.1, 48.2) 96/246	22.3 (17.8, 27.6) 71/312	30.9 (26.9, 35.1) 167/558	60.9 (54.1, 67.3) 168/276	45.8 (38.2, 53.5) 124/271	53.4 (47.9, 58.8) 292/547

Annex 3: Main places and barriers to obtaining condoms among Nyarugusu refugee and host populations

Variable	Men who ever heard of condom						Women who ever heard of condoms						Men + Women who ever heard of condoms					
	YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs	
	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)
Nyarugusu Refugee Population																		
Usually get condoms from:																		
Pharmacy	2/77	2.5 (0.6, 10.4)	3/93	4.3 (1.4, 12.7)	5/170	3.5 (1.4, 8.3)	0/58	-	3/50	4.0 (1.3, 12.1)	3/108	1.8 (0.6, 5.6)	2/135	1.4 (0.3, 6.1)	6/ 143	4.2 (1.8, 9.6)	8/278	2.9 (1.4, 5.8)
Health facility	50/77	56.2 (44.0, 67.6)	62/93	58.1 (47.0, 68.5)	112/ 170	57.2 (49.1, 65.0)	49/58	79.5 (65.2, 88.9)	39/50	74.3 (58.8, 85.4)	88/ 108	77.1 (67.1, 84.8)	99/ 135	66.1 (56.8, 74.3)	101/ 143	63.7 (54.7, 71.9)	200/2 78	64.9 (58.5, 70.8)
At the market	0/77	-	0/93	-	0/170	-	0/58	-	0/50	-	0/ 108	-	0/ 135	-	0/143	-	0/278	-
From friends	0/77	-	2/93	1.4 (0.3, 5.7)	2/170	0.8 (0.2, 3.1)	0/58	-	0/50	-	0/ 108	-	0/ 135	-	2/143	0.9 (0.2, 3.7)	2/278	0.5 (0.1, 1.9)
At the shop	0/77	-	1/93	1.4 (0.2, 9.7)	1/170	0.8 (0.1, 5.4)	3/58	6.8 (2.2, 19.3)	0/50	-	3/ 108	3.7 (1.2, 10.9)	3/ 135	2.9 (0.9, 8.7)	1/ 143	0.9 (0.1, 6.5)	4/278	1.9 (0.7, 5.0)
Community	25/77	41.3 (30.0, 53.6)	25/93	34.7 (24.8, 46.0)	50/ 170	37.8 (30.1, 46.0)	6/58	13.7 (6.3, 27.3)	8/50	21.7 (11.4, 37.5)	14/ 108	17.4 (10.6, 27.1)	31/ 135	29.6 (21.7, 38.8)	33/ 143	30.2 (22.4, 39.2)	64/27 8	29.9 (24.2, 36.2)
Health worker	0/77	-			0/170	-	0/58	-	0/50	-	0/ 108	-	0/ 135	-	0/143	-	0/278	-
AMONG THOSE WHO CAN'T GET CONDOMS EVERY TIME THEY NEED THEM																		
Main constraint to obtaining a condom																		
Too far away	2/12	13.6 (2.5, 49.3)	1/5	22.3 -*	3/17	16.1 (4.5, 44.2)	0/2	-	0/1	-	0/3	-	2/14	11.5 (2.1, 44.0)	1/6	18.2 -*	3/20	13.5 (3.7, 38.6)

Variable	Men who ever heard of condom						Women who ever heard of condoms						Men + Women who ever heard of condoms					
	YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs	
	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)
Too expensive	0/12	-	3/5	55.5 -*	0/17	-	0/2	-	0/1	-	0/3	-	0/14	-	0/6	-	0/20	-
Places not open at convenient hours	1/12	9.1 (0.9, 51.1)	0/5	-	1/17	6.5 (0.7, 38.8)	0/2	-	0/1	-	0/3	-	1/14	7.7 (0.8, 46.2)	0/6	-	1/20	5.4 (0.6, 34.2)
Not available	3/12	27.3 (7.7, 62.9)	0/5	-	6/17	35.5 (15.3, 62.6)	1/2	50.0 -*	0/1	-	1/3	33.3 -*	4/14	30.8 (10.5, 62.9)	3/6	45.4 -*	7/20	35.1 (16.3, 60.2)
Fear of being seen	4/12	36.4 (12.5, 69.6)	0/5	-	4/17	25.8 (9.2, 54.5)	1/2	50.0 -*	1/1	100	2/3	66.7 -*	5/14	38.5 (15.0, 68.9)	1/6	18.2 -*	6/20	32.5 (14.3, 58.0)
Health worker's attitude	2/12	4.0 (2.5, 49.3)	0/5	-	2/17	9.7 (1.9, 36.9)	0/2	-	0/1	-	0/3	-	2/14	11.5 (2.1, 44.0)	0/6	-		
Other	0/12	-	1/5	22.3 -*	1/17	6.5 (0.7, 38.8)	0/2	-	0/1	-	0/3	-	0/14	-	1/6	18.2 -*	1/20	5.4 (0.6, 34.2)
Nyarugusu Host Population																		
Usually get condoms from: Pharmacy	24/39	61.5 (43.5, 76.9)	47/91	51.7 (43.6, 59.6)	71/13	54.6 (46.7, 62.3)	16/32	50.0 (33.5, 66.5)	18/42	42.9 (28.9, 58.0)	34/74	46.0 (34.4, 57.9)	40/71	56.3 (41.9, 69.8)	65/133	48.9 (41.3, 56.5)	105/204	51.5 (44.5, 58.4)
Health facility	10/39	25.6 (14.1, 42.0)	26/91	28.6 (20.7, 38.0)	36/13	27.7 (21.3, 35.2)	10/32	31.3 (17.6, 49.2)	18/42	42.9 (28.9, 58.0)	28/74	37.8 (26.3, 51.0)	20/71	28.2 (17.9, 41.3)	44/133	33.1 (24.7, 42.7)	64/204	31.4 (24.4, 39.3)
At the market	1/39	2.6 (0.3, 18.3)	2/91	2.2 (0.6, 8.3)	3/130	2.3 (0.7, 7.1)	0/32	-	2/42	4.8 (28.9, 58.0)	2/74	2.7 (0.7, 9.2)	1/71	1.4 (0.2, 10.7)	4/133	3.0 (1.0, 8.9)	5/204	2.5 (0.9, 6.4)
From friends	0/39	-	0/91	-	0/130	-	0/32	-	0/42	-	0/74	-	0/71	-	0/133	-	0/204	-
At the shop	4/39	10.3 (3.6,	16/91	17.6 (11.3,	20/13	15.4 (10.4,	6/32	18.8 (7.8,	4/42	9.5 (2.8,	10/74	13.5 (6.8,	10/71	14.1 (7.5,	20/133	15.0 (10.3,	30/204	14.7 (10.6,

Variable	Men who ever heard of condom						Women who ever heard of condoms						Men + Women who ever heard of condoms					
	YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs		YOUTH 15-24 yrs		ADULTS 25-49 yrs		ALL 15-49 yrs	
	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)	n/N	% (CI)
		25.8)		26.4)		22.2)		38.6)		27.5)		20.0)		24.9)		21.5)		20.0)
Community Health worker	0/39	-	0/91	-	0/130	-	0/32	-	0/42	-	0/74	-	0/71	-	0/133	-	0/204	-
Other	0/39	-	0/91	-	0/130	-	0/32	-	0/42	-	0/74	-	0/71	-	0/133	-	0/204	-
Among those who can't get condoms every time they need them																		
Main constraint to obtaining a condom Too far away	1/2	50.0 -*	2/5	40.0 -*	3/7	42.9 (13.4, 78.4)	0/1	-	0/3	-	0/4	-	1/3	33.3 -*	2/8	25.0 (4.9, 68.4)	3/11	27.3 (7.3, 64.1)
Too expensive	1/2	50.0 -*	2/5	40.0 -*	3/7	42.9 -*	0/1	-	1/3	33.3 -*	1/4	25.0 -*	1/3	33.3 -*	3/8	37.5 (10.1, 76.2)	4/11	36.4 (11.6, 71.4)
Places not open at convenient hours	0/2	-	1/5	20.0 -*	1/7	14.3 -*	0/1	-	1/3	33.3 -*	1/4	25.0 -*	0/3	-	2/8	25.0 (3.4, 75.9)	2/11	18.2 (3.6, 56.7)
Not available	0/2	-	0/5	-	0/7	-	1/1	100	1/3	33.3 -*	2/4	50.0 -*	1/3	33.3 -*)	1/8	12.5 (0.8, 71.7)	2/11	18.2 (3.6, 56.7)
Fear of being seen	0/2	-	0/5	-	0/7	-	0/1	-	0/3	-	0/4	-	0/3	-	0/8	-	0/11	-
Health worker's attitude	0/2	-	0/5	-	0/7	-	0/1	-	0/3	-	0/4	-	0/3	-	0/8	-	0/11	-
Other	0/2	-	0/5	-	0/7	-	0/1	-	0/3	-	0/4	-	0/3	-	0/8	-	0/11	-