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TRAC SUMMARY REPORT
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KAZAKHSTAN, KYRGYZSTAN AND TAJIKISTAN (2012): HIV AND TB TRAC STUDY AMONG MEN WHO HAVE SEX WITH MEN IN ALMATY, BISHKEK, AND DUSHANBE.

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The PSI/Central Asia research team designed the study and analyzed the findings, as well as conducted all training, supervision, and oversight of the data collection process. Key findings and program recommendations described in this report have been identified in consultation with multiple partner organizations including Countries' Ministries of Health, Republican AIDS Centers, USAID, AFEW, ICAP, IOM, UNDP, UNAIDS, KNCV, and Project HOPE.

We would like to acknowledge the support provided by local NGOs in facilitating the data collection in all three countries. In addition, we would like to express our gratitude to the outreach workers who participated in this study for their willingness to share their experiences and inform efforts to increase results generated through effective evidence-based HIV prevention interventions.

Finally, we acknowledge the USAID financial support that made the study and this final report possible.

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LIST OF ABBREVIATIONS:

MARPs	Most At Risk Populations
MSM	Men who have Sex with Men
NGO	Non-Governmental Organization
OAM	Opportunity, Ability and Motivation
PSI/CAR	Population Services International/Central Asian Republics
RDS	Respondent-Driven Sampling
SS	Sentinel Surveillance
TRaC	Tracking Results Continuously
VCT	Voluntary Counseling and Testing
USAID	United States Agency for International Development

SUMMARY

I. Executive Summary

Under the USAID Dialogue on HIV and TB Project in Central Asia, the following TRaC study on men who have sex with men (MSM) focuses on 1) monitoring key behaviors of interest among MSM (condom use and utilization of voluntary counseling and HIV testing), 2) understanding how differences in behavioral factors contribute to these behaviors of interest, and 3) determining how program exposure has affected those behaviors of interest. This endline study measures the same indicators that were measured in the baseline study in 2010.

While regionally condom use and VCT utilization did improve since 2010, the practice of these behaviors is still relatively low. Continuing to focus on promoting social support and the development of leadership within programs should give MSM the confidence to practice these behaviors, and it should also help change their negative beliefs or attitudes towards condom use and VCT utilization. Programs should also specifically center more efforts on conveying the message that everyone should be practicing these behaviors, not just those who are at-risk or practice risky behaviors. Related to this concept is a need within programs to promote increased condom use with regular and casual partners. The results also show that, for the most part, exposure to these programs does have a positive effect on these behaviors, so it is also necessary to continue thinking of creative and effective ways of expanding activities and efforts.

II. Background & Research Objectives:

The HIV & AIDS epidemic in Eastern Europe and Central Asia is described as one of the fastest growing HIV & AIDS epidemics in the world. Annual numbers of newly reported HIV diagnoses are rising in the Central Asia Republics (CAR), where the number of people living with HIV in Eastern Europe and CAR has almost tripled since 2000, and reached an estimated total of 1.4 million in 2009.[1] The exception of this is Turkmenistan, which reports zero HIV cases.

Men who have sex with men (MSM) comprise a relatively small proportion of the total HIV cases in the region. HIV prevalence among this population is about 1% in both Kyrgyzstan (SS, 2008), Kazakhstan (SS, 2010) and Tajikistan (SS, 2011). However, it is believed that the epidemic is persisting among this group, but is being kept hidden and underreported, most likely due to the reluctance of MSM to reveal the cause of their infection for fear of stigmatization.[2] MSM in Central Asia are highly stigmatized, although homosexual sex is only officially illegal in Turkmenistan. Therefore, the MSM population in the CAR region is very hard to

[1] UNAIDS, 2010
[2] WHO, 2010

reach, creating challenges in accurately estimating their population size in each country.[3]

Global reports show that MSM remain seriously underserved with respect to HIV prevention services. The marginalized status of this risk group makes data difficult to access and requires targeted outreach. Very few NGOs in the region have been successful in reaching MSM with HIV prevention services. In Kazakhstan, only 10.5% of MSM have reportedly been reached with prevention services[4], while in Tajikistan an estimated 11.8% of MSM were reached by HIV prevention services.[5] In Kyrgyzstan, four regions out of seven have implemented preventive programs targeting MSM. Table 1 provides an overview of the estimated number of MSM in each Central Asian country and the population's HIV prevalence.

Table 1: HIV & AIDS in Central Asia among MSM

	Kazakhstan	**Kyrgyzstan**	**Tajikistan**
Total Population	16,600,000	5,550,239	7,616,000
Estimated Population of MSM	3,000 (Almaty)*	3,700 (Bishkek)***	5,000 (Dushanbe)****
HIV Prevalence among MSM	0.7% (all regions)**	1.2% (Bishkek)***	1.5% (Dushanbe)*****

Notes:
* Kazakhstan rapid assistance 2008
** Kazakhstan sentinel surveillance survey 2009
***Kyrgyzstan sentinel surveillance survey 2008
**** NGO Legal Support estimation 2011
*****Tajikistan sentinel surveillance survey 2011

This TRaC study aims to answer fundamental questions related to monitoring and evaluation of MSM populations in the CAR region. These questions focus on monitoring, segmentation, and evaluation data of MSM behaviors as well as MSM exposure to the USAID Dialogue on HIV and TB Project intervention. First, this study seeks to monitor key behaviors of interest among MSM, including consistent condom use and the utilization of voluntary counseling and HIV testing (VCT). Second, this study focuses on understanding how differences in opportunity, ability, and motivation (OAM) factors contribute to behaviors of interest among MSM in Central Asia. Third, exposure to PSI/CAR activities will be examined to determine whether changes in behavior or OAM factors are significantly related with exposure to the USAID Dialogue on HIV and TB Project intervention.

[3] WHO, 2010
[4] SS, 2009
[5] Global Fund, 2012

This end-line survey measures the same indicators to see if there were any substantial changes in the two years since the baseline survey was conducted. It also attempted to capture the coverage of HIV prevention programs among MSM in Kazakhstan, Kyrgyzstan and Tajikistan.

The baseline TRaC survey, conducted in 2010, provided estimates of HIV risk behaviors of MSM in the USAID Dialogue on HIV and TB Project sites. The key findings of the 2010 study included the relatively low level of condom use at last anal sex (57% in Kazakhstan, 48% in Kyrgyzstan, and 25% in Tajikistan). Condom use also varied according to the type of sexual partner. For example, consistent condom use was highest with commercial partners (82%) across the region and lowest with regular partners (21%). However, condom use with commercial partners was particularly low in Tajikistan, even though the country registers some of the highest percentages of MSM who have ever had commercial sex (83% in Tajikistan in comparison to only 24% in both Kazakhstan and Kyrgyzstan).

The baseline survey also looked at the social norms surrounding condom use in the region. Social norms were measured using a construct of items and a four point Likert scale ranging from strongly disagree (one) to strongly agree (four). The social norms concerning condoms were the most positive in Tajikistan (most people agreeing) while slightly lower in Kazakhstan and Kyrgyzstan respectively. In Tajikistan, respondents also reported low availability of condoms after pharmacies close and, in general, respondents felt uncomfortable buying or getting condoms in a public place, from a free health facility, or close to home. Only 49% of respondents in Tajikistan had reported ever buying condoms, in contrast to 90% in Kazakhstan and 76% in Kyrgyzstan.

Other variables of interest included the low level of injecting drug use in the region at only 2.1% in Kazakhstan, 1% in Kyrgyzstan, and 4.5% in Tajikistan. Regarding HIV testing, small proportions of respondents in Kyrgyzstan and Tajikistan reported having been tested in the last 12 months (24% and 13% respectively). The proportion of respondents in Kazakhstan who had been tested in the last 12 months was higher at 41%. Importantly, the low level of HIV testing in Tajikistan may be related to the low level of positive beliefs about the need to get tested.

III. Program Description:

1. Background

With one of the fastest growing HIV & AIDS epidemics in the world, the USAID Dialogue on HIV and TB Project targets MARPS most likely to contract or transmit HIV: PWIDs (people who inject drugs), SWs (sex workers), migrants, MSM (men who have sex with men), prisoners, and PLWH (people living with HIV). Risk for TB infection is higher among PWIDs, prisoners and migrants, but is particularly dangerous for PLWHs.

2. PSI/CAR activities according to the objectives/deliverables of the USAID Dialogue on HIV and TB Project

Addressing these health issues, PSI/CAR is implementing a 5-year USAID Dialogue on HIV and TB Project targeting populations most-at-risk for contracting HIV and TB in Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan. The program began in September 30, 2009. The purpose of the project is to reduce risk behaviors associated with HIV transmission and to increase the utilization of HIV and TB testing and treatment services among MARPs. The USAID Dialogue on HIV and TB Project is working towards this goal through a combination of evidence-based activities: inter-personal communications (outreach, mini sessions, long-format sessions and "edutainment" events); informational-educational communications (informational booklets and leaflets); distribution of condoms and needles/syringes; referrals for HIV testing, TB testing and drug treatment; social escorts for testing; and case management for TB treatment. These activities are part of a high coverage social marketing (SM) strategy to increase access to and availability of condoms as well as TB treatment.

Activities: The USAID Dialogue on HIV and TB Project in Central Asia provides technical assistance, training, and direct outreach services in order to increase access to quality HIV prevention and TB treatment services for those most at risk of contracting HIV and TB. The Project is implemented in the Central Asian republics of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan. The Project employs outreach prevention models, proven effective under previous regional projects and deemed best practices, and adapts them to current program needs for each target population. Each model is composed of Targeted Outreach Package of Services (TOPS). Outreach activities range from peer education and client management to social escorts who take clients to HIV and TB services, complementing rather than duplicating existing services.

METHODOLOGY

I. Study Population and Inclusion Criteria:

A total of 933 MSM participants (N=933) were recruited from three cities in the Central Asian Republics. These cities are Almaty (in Kazakhstan), Bishkek (in Kyrgyzstan), and Dushanbe (in Tajikistan). Participants were recruited on the following criteria:

- 18 years of age or older
- Able to answer questions on the size of his social network of MSM
- Had at least one male sexual partner in the last 3 months
- A resident of one of the project cities in the last 3 months
- Voluntarily consented to participate in the survey

The distribution of MSM respondents according to nationality is shown in **Table 2.** Data collection occurred from March to June 2012. The study design was reviewed and approved by the PSI Research Ethical Board and the National Ethical Commission in Kazakhstan.

Table 2: Distribution of MSM participants by country

Country	MSM (N = 933)
Kazakhstan	330
Kyrgyzstan	270
Tajikistan	333

II. Sampling:

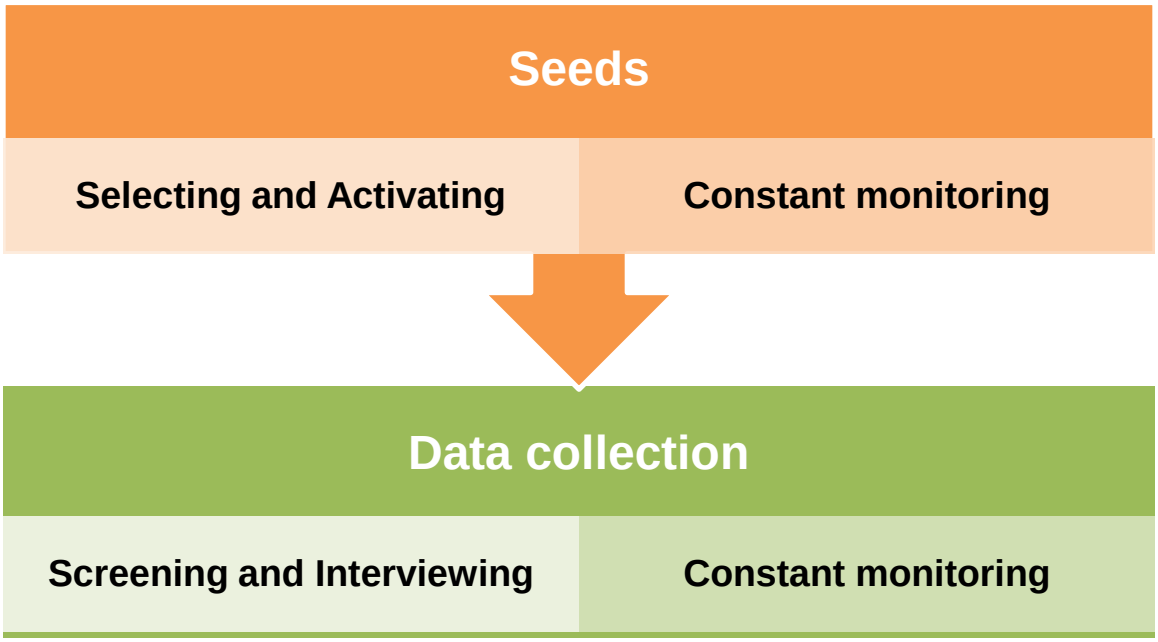
Respondents were recruited through respondent-driven sampling (RDS), which is a chain-referral procedure whereby samples are selected from social networks of MSM. This sampling strategy is used to recruit hard-to-reach populations such as MSM. The recruitment begins with seed participants (i.e. initial participants) who meet the eligibility criteria. These “seeds” are then asked to recruit 3 of their peers who are also MSM. RDS relies on the assumption that, given sufficiently long referral chains (i.e. 3-6 waves of respondents), the sample composition becomes stable or reaches “equilibrium,” resulting in a sample that has the characteristics of a probability sample.

For this study, 8 seeds were recruited in Kazakhstan and 4 seeds were each recruited in Kyrgyzstan and Tajikistan. Seeds were identified by outreach workers from partner NGOs. These partner NGOs included Adali in Kazakhstan and Legal Support in Tajikistan. The PSI office in Kyrgyzstan worked directly with the MSM population, without a partner NGO. Outreach workers were given criteria for seed recruitment and asked to approach potential participants. Seed participants were chosen based on the strength of their network connections in the MSM community, their level of support for the study, and their willingness to

recruit other participants. Ideally, seeds reflect key demographic characteristics of the target population (e.g. age, educational level, and employment or marital status).

The seeds approach potential participants and give them an overview of the study. If the individual expresses a desire to participate in the study, he is given a referral coupon to submit to the fieldwork team, which then administers the screening questionnaire and the informed consent protocol. A diagram RDS method is displayed in **Figure 1** below.

Figure 1: The RDS collection process



III. Sample Size Calculations and Achieved Samples:

Sample sizes were calculated according to indicators from the round 1 survey that took place in 2010. **Table 3** shows the assumptions behind the sample size calculations and the estimated levels of precision in samples at round 1 (for the indicator, 'condom use at last anal sex with any male partner'), and the minimum levels of precision in estimates at round 2.

Table 3: Estimated levels of precision for round 1 and 2 samples

Country	% at risk	Deff	Round 1 estimates for condom use: Used condom at last anal sex with any male partner	Achieved sample sizes at R1	Estimated minimum level of precision for R1 indicator estimates	Sample size estimates for round 2	Estimated minimum level of precision for R 2 indicator estimates
Kazakhstan	100	2	57%	289	+/-5.8	330	+/-5.5
Kyrgyzstan	100	2	47%	205	+/-6.8	270	+/-6%
Tajikistan	100	2	25%	289	+/-5.8	330	+/-5.5%

IV. Analysis Conducted:

Analysis of data presented in this report was conducted using Respondent Driven Sampling Analysis Tool (RDSAT 6.0.1) and SPSS (Version 18). RDSAT was used to produce estimates of indicators in each of the three sample cities and aggregate by city weights. Adjusted proportions across the three sample cities were produced for each sample site. The aggregated estimates across the sample site locations were calculated with city-RDSAT estimates and city population weights. The population size of MSM in Kazakhstan and Kyrgyzstan that was used for the weighting is based on the 2008 Rapid Assistance, and the population size of MSM in Tajikistan is based on a 2008 survey from the NGO Legal Support.

Variables that significantly contribute to the explanation of variance in the major behaviors of interest (i.e. condom use and VCT utilization) were identified based on logistic regressions and ANOVAs. Odds ratios measuring the strength of association for each significant variable are reported.

As a note, values in the 2012 Monitoring table may slightly differ from 2010 baseline report due to the 3 cities in the 2010 baseline report not being weighted. In the present report, the 2010 vs. 2012 comparison is the adjusted percent; this

was done by multivariable UNIANOVA analysis, where the confounding factors have now been controlled for.

V. Study Limitations:

Limitations of the study include the difficulty in reaching MSM communities in Central Asia and social desirability bias. Global reports show that MSM remain seriously underserved with respect to HIV prevention services. The marginalized status of this risk group makes data difficult to access and requires a targeted outreach. Very few NGOs in the Central Asian region have been successful in reaching MSM with HIV prevention services. As with any survey requiring self-reporting, social desirability bias can be a limitation. In this survey, personal questions about sexual behavior, relationships, HIV, and other sensitive topics could all have been affected by this particular bias.

During the baseline study, some difficulties were encountered in accessing MSM particularly in Kazakhstan and Kyrgyzstan. Few NGOs in the region at that time had been successful in reaching MSM with HIV prevention services and there were few gatekeepers to facilitate access. The final achieved sample size in Kyrgyzstan fell someway short of the targeted number of recruits.

SURVEY FINDINGS

This section analyzes the survey results beginning with the basic demographic profile of the 2010 and 2012 MSM respondents. The remaining data is divided into three subsections: **Monitoring, Segmentation, and Evaluation Data.** In each subsection, there are key findings relating to the behaviors of interest (consistent condom use and VCT uptake). Beginning with the **Monitoring Data,** comparisons between the 2010 and 2012 surveys will be explored. The **Segmentation Data** will analyze OAM factors that are significantly associated with MSM behavioral outcomes. Finally, the **Evaluation Data** will illustrate how exposure to PSI programs changes both behaviors (condom use and VCT utilization) along with OAM factors. A summary of the findings and recommendations will be included at the end of the section.

I. Demographic Profile of MSM Respondents:

The demographic profile of MSM respondents in the 2010 and 2012 surveys is shown in **Table 4**. The sample population in 2012 was an average of 27 years old and the majority of respondents are educated (had attained some level of secondary or college/university-level education). Most respondents were single or never married. The demographic characteristics of 2012 MSM respondents by country is shown in **Table 4a.**

Table 4: Demographic characteristics of MSM respondents, 2010-2012

Characteristic	Total 2010 (N=783)	Total 2012 (N=933)
Age	27.4	27.62
Level of Education Attained (%)		
• None	4.9	0.0
• Primary complete or incomplete	6.7	3.1
• Secondary	28.4	32.4
• Above secondary	60.0	64.5
Marital Status (%)		
• Single/never married	65.3	75.0
• Not married/cohabiting	7.1	2.1
• Married/cohabiting	16.6	8.0
• Widowed/divorced/separated	11.0	14.9
Nationality (%)		
• Kazakh	10.8	13.2
• Kyrgyz	11.6	21.0
• Uzbek	11.8	8.9
• Tajik	25.1	37.6
• Russian	35.3	14.3
• Other	5.3	5.0

Table 4a: Demographic characteristics for MSM respondents in Tajikistan, Kyrgyzstan, and Kazakhstan, 2012

Characteristic	Tajikistan (N = 333)	Kyrgyzstan (N = 270)	Kazakhstan (N = 330)
Age	28.74	27.06	26.44
Number of children	0.94	0.19	0.18
Level of Education Attained (%)			
• None	0.0	0.0	0.0
• Primary incomplete	0.8	0.7	1.3
• Primary complete	2.6	0.9	3.2
• Secondary (up to 11th grade)	42.3	38.6	8.3
• Tertiary/vocational	5.5	26.0	4.3
• College/university	48.8	33.7	82.9
Marital Status (%)			
• Single/never married	65.4	77.9	87.6
• Not married/cohabiting	1.5	0.9	4.4
• Married/cohabiting	6.0	13.0	5.1
• Widowed/divorced/separated	27.1	8.1	2.9
Nationality (%)			
• Kazakh	0.8	12.8	34.4
• Kyrgyz	0.9	64.4	1.1
• Uzbek	11.7	7.0	6.5
• Tajik	81.6	1.2	9.0
• Russian	2.1	10.2	39.5
• Other	2.9	4.5	9.3

II. Monitoring Data

A. Consistent Condom Use

The first major behavior of interest for this study is consistent condom use among MSM, which has improved overall, but is still relatively low. While a high proportion of MSM respondents reported using a condom before (97% in 2010 and 93% in 2012), consistent condom use at last anal sex with another man still remains low (41% in 2010 and 62% in 2012). However, the proportion of MSM respondents who have used a condom from start to finish at last anal sex has increased significantly from 2010 to 2012 (33% in 2010 and 56% in 2012). The data is illustrated below in **Figure 2.** Please note that in the charts that follow the asterisk symbol (*) denotes significance, where ***** = *p<.05,* ****** = *p<.01*, and ******* = *p<.001.*

Figure 2: Condom use indicators across all countries, 2010-2012

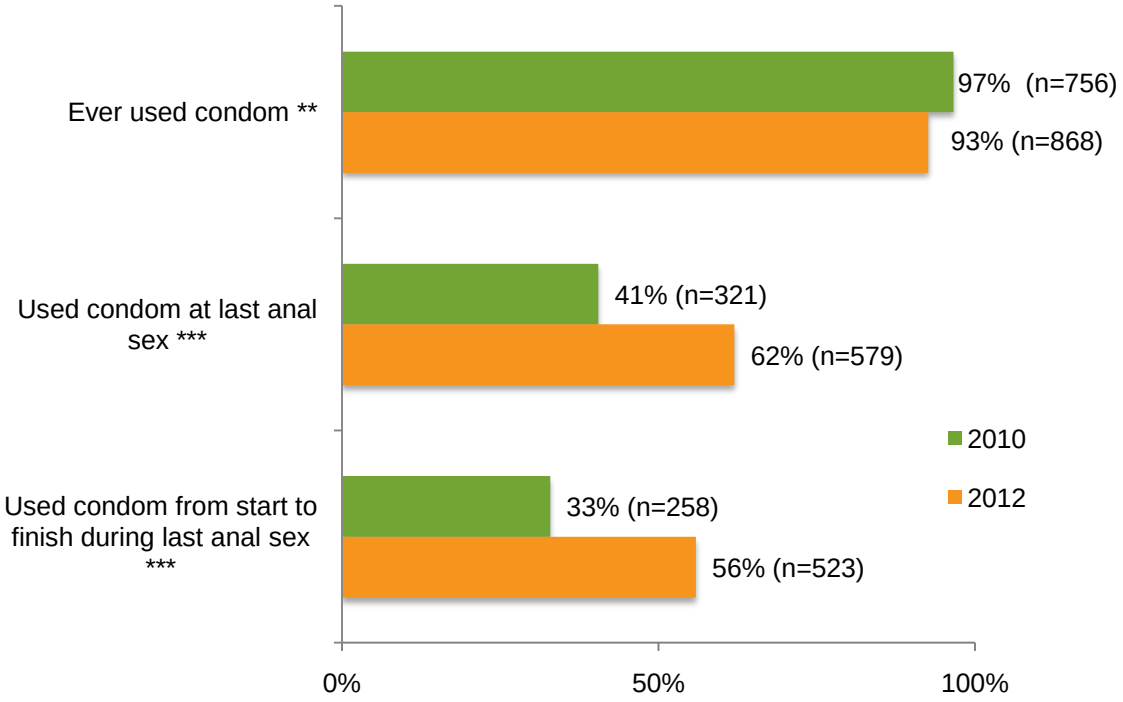


Figure 2a reveals that the percentage of MSM who have used a condom at last anal sex with another man has improved significantly across the region (from 41% in 2010 to 62% in 2012). The improvement was also significant in Kyrgyzstan and Tajikistan. In Kazakhstan, while there was a slight trend towards improvement in condom use at last anal sex, this improvement was not significant.

Figure 2a: Percent (%) of MSM who used a condom at last anal sex with another man in Kazakhstan, Kyrgyzstan, and Tajikistan, 2010-2012

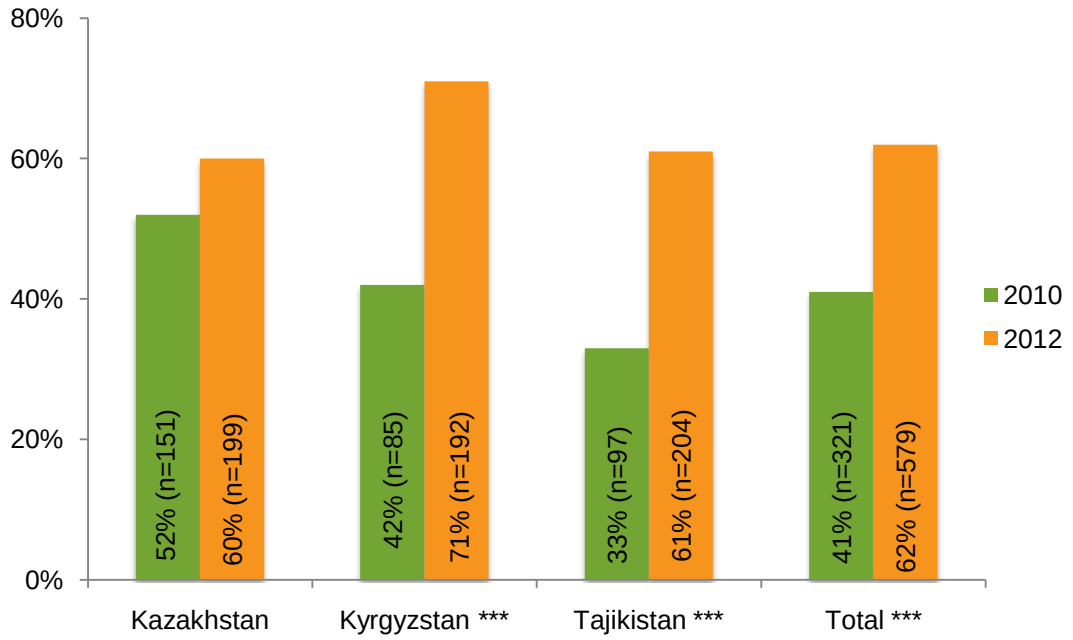


Figure 2b examines MSM condom use from start to finish during last anal sex. Similar to the data for use of a condom at last anal sex, there was a significant improvement across the region from 33% in 2010 to 56% in 2012. The improvement was also significant in Kyrgyzstan and Tajikistan, but not in Kazakhstan, though some improvement was reported.

Figure 2b: Percent (%) of MSM who used a condom from start to finish during last anal sex with another man among MSM in Kazakhstan, Kyrgyzstan, and Tajikistan, 2010-2012

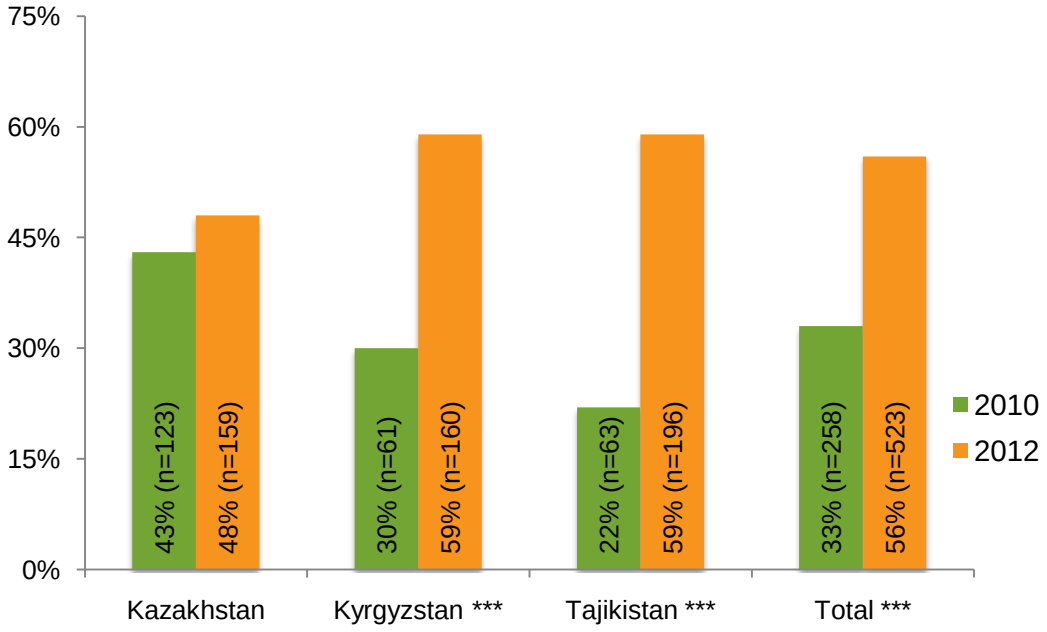
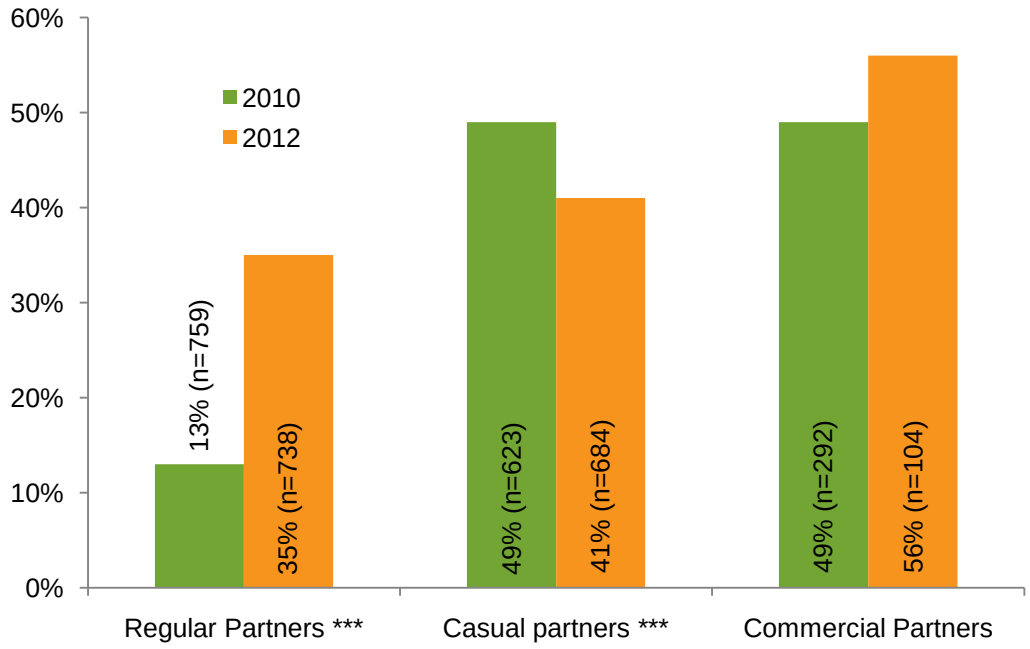


Figure 3 shows how consistent condom use varies with each type of sexual partner from 2010 to 2012. The three types of sexual partners include regular, casual, and commercial partners[6]. The majority of MSM respondents have had a regular sexual partner in the last 12 months (93% in 2010 and 88% in 2012), but not many consistently use a condom with their regular sexual partner, although this indicator has significantly increased since 2010 (13% in 2010 and 35% in 2012). Condom use for commercial partners is the highest out of all partner types (49% in 2010 and 56% in 2012), but it is important to note that this indicator did not significantly change since 2010. Furthermore, fewer respondents report having commercial partners compared to other types of partners.

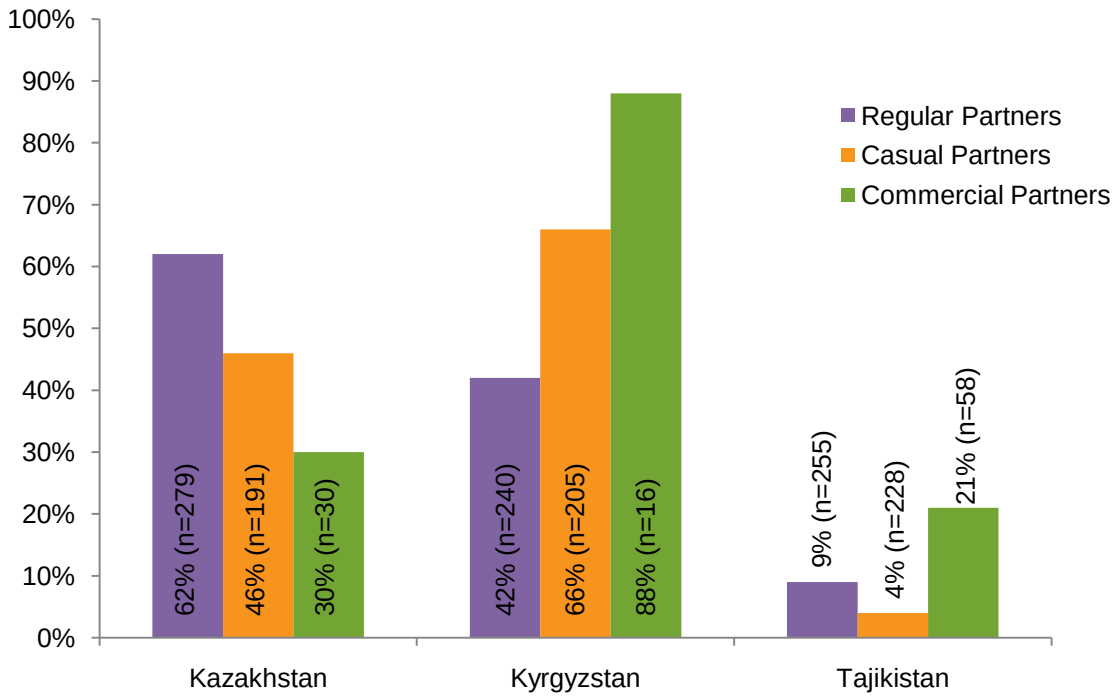
Figure 3: Consistent condom use (%) for vaginal/anal sex with regular, casual and commercial partners (both male and female) among MSM, 2010-2012



[6] Regular partners are defined as cohabiting or non-cohabiting sexual partners and someone who is considered to be a main sexual partner. A casual partner is someone with whom the individual has had sex but with whom they did not feel committed or did not know very well. They did not pay the casual partner and nor did these partners pay the individual to have sex. A commercial partner is defined as someone with whom the individual has paid money or other items for sex.

Consistent condom use according to partner type varies for each country, and is displayed in **Figure 3a**. Condom use with commercial partners is high in Kyrgyzstan (88%) but remains low in both Kazakhstan and Tajikistan (30% and 21% percent respectively). In Tajikistan, condom use with casual partners decreased immensely (33.8% in 2010 and 3.7% in 2012), but improved in Kazakhstan and remained stable in Kyrgyzstan.

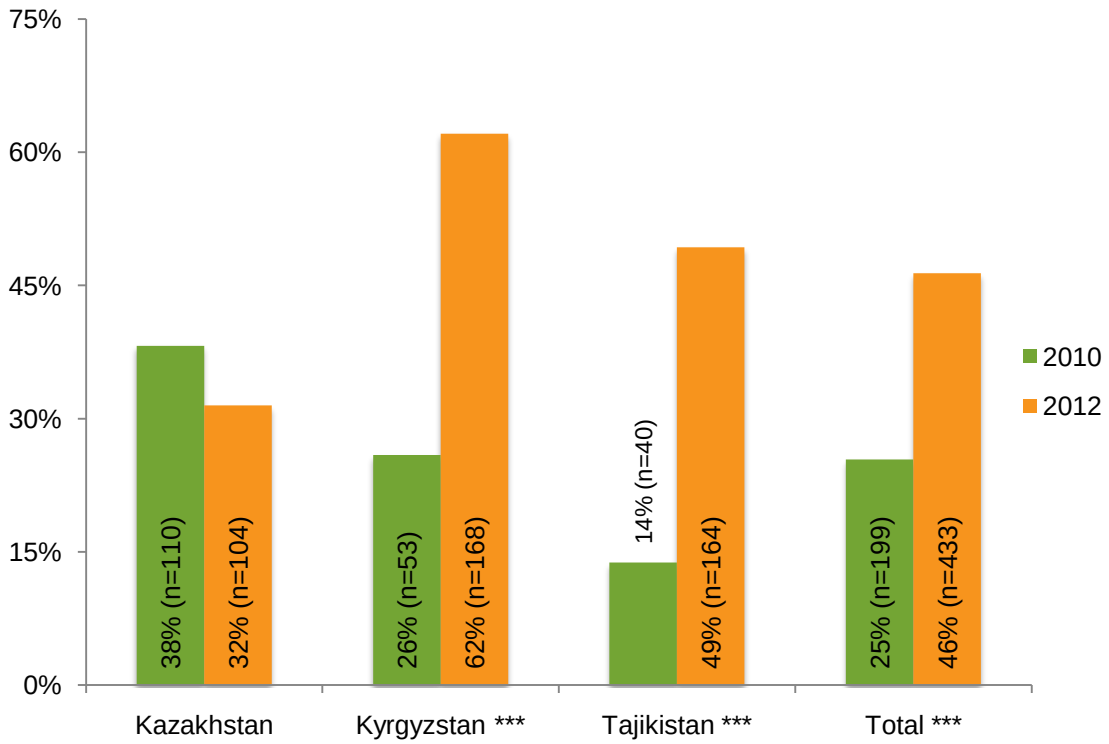
Figure 3a: Consistent condom use (%) for vaginal/anal sex with regular, casual, and commercial partners (both male and female) among MSM in Kazakhstan, Kyrgyzstan, and Tajikistan, 2012



B. VCT Service Utilization

The second behavior of interest is VCT service utilization[7] among MSM in Central Asia. The 2012 data indicates that VCT service utilization has significantly increased across the region, rising from 25% in 2010 to 46% in 2012. VCT service utilization among MSM in Kyrgyzstan and Tajikistan also significantly improved, as can be seen in **Figure 4.** In Kazakhstan, however, VCT service utilization shows a trend towards decreasing slightly, but this decrease is not significant.

Figure 4: Percent (%) MSM who have been tested for HIV and received results in the last 12 months in Kazakhstan, Kyrgyzstan, and Tajikistan, 2010-2012



[7] The indicator for VCT utilization is being tested for HIV and receiving the results in the last 12 months.

Figure 4a demonstrates how each country exhibits a different trend in regards to MSM who received counseling at the place of their HIV testing location. There was a significant increase across the region of MSM receiving counseling at their testing location (50% in 2010 to 58% in 2012). This improvement was most markedly seen in Kyrgyzstan (44% in 2010 to 67% in 2012). In Tajikistan, the results show a non significant downward trend, and in Kazakhstan there was also no improvement.

Figure 4a: Percent (%) MSM who received counseling at a testing location in Kazakhstan, Kyrgyzstan, and Tajikistan, 2010-2012

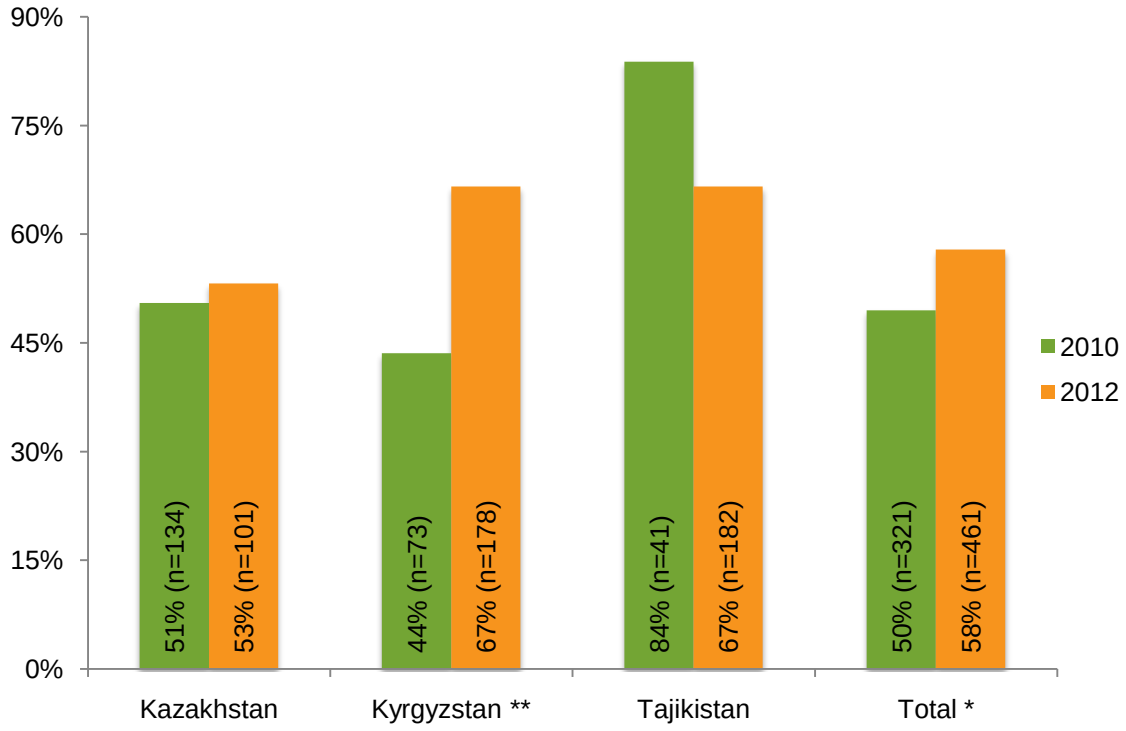
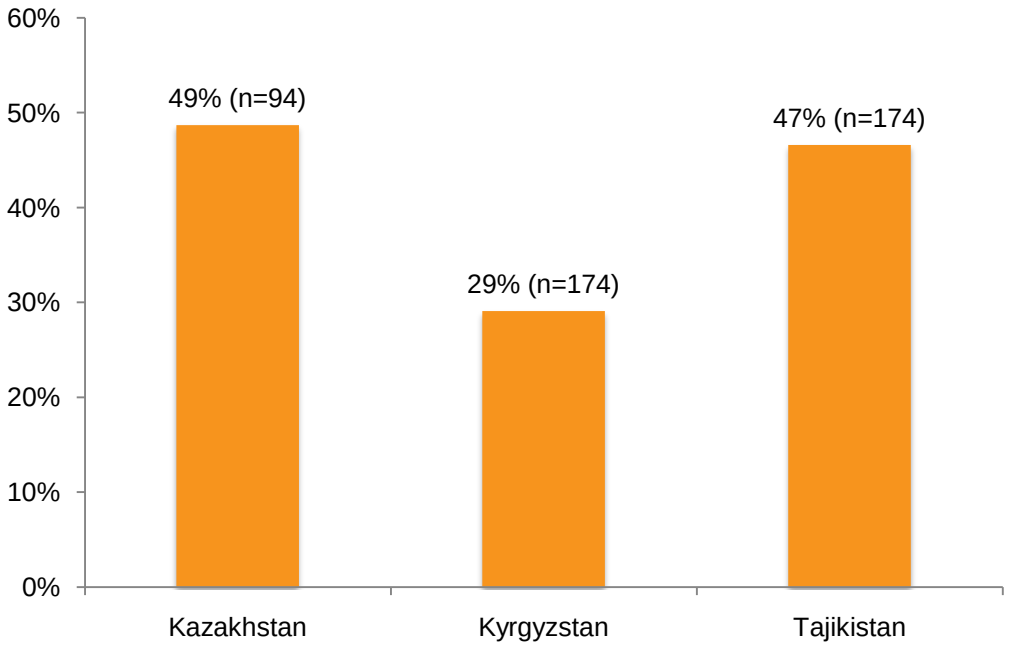


Figure 5 shows that the amount of MSM who disclosed the results of their last HIV test was low in all countries (in Kazakhstan 49% disclosed their results, in Kyrgyzstan 29%, and in Tajikistan 47%).

Figure 5: Percent (%) of MSM who disclosed HIV test results of their last test in Kazakhstan, Kyrgyzstan, and Tajikistan, 2012



The last area of interest under the Monitoring data of the 2012 survey is exposure. Exposure indicators show how many MSM have been exposed to HIV prevention programs, received information on HIV & AIDS, received a free condom, or interacted with an outreach worker. **Figures 6-6c** reveal there is a need to improve MSM exposure across the region, but particularly in Tajikistan, which registers the lowest level of exposure among the three countries. Across the region, one of the most consistently low exposure variables was MSM exposure to education-entertainment events in the last year (57% in Kazakhstan, 66% in Kyrgyzstan, and 10% in Tajikistan).

Figure 6: Exposure to HIV program intervention among MSM across CAR region, 2012

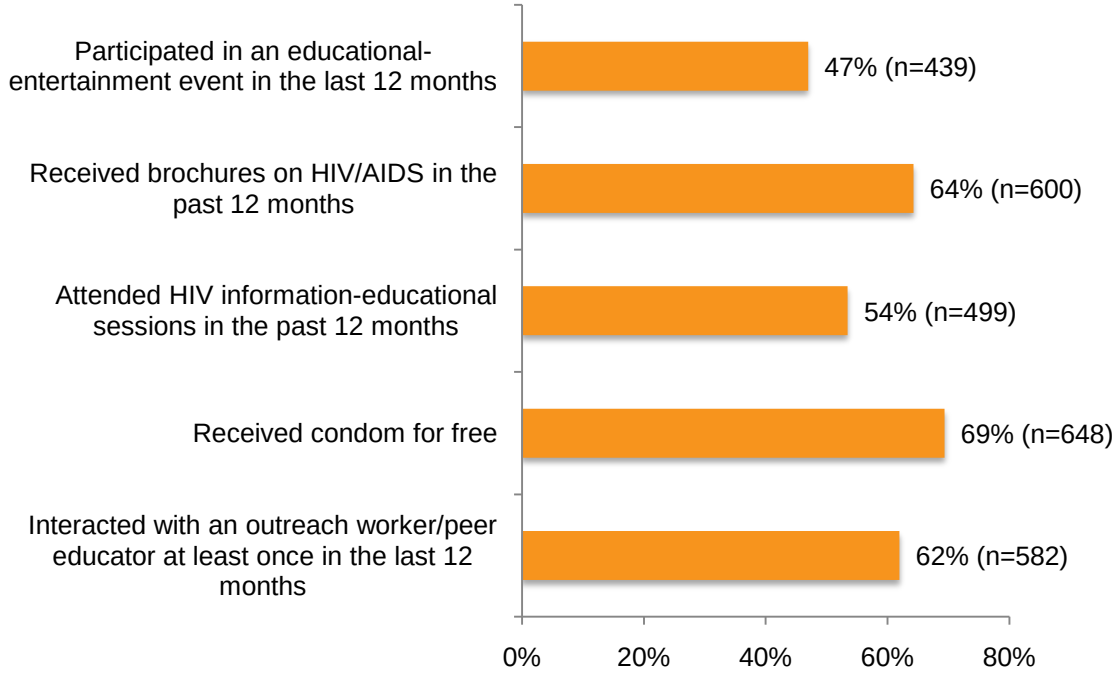


Figure 6a: Exposure to HIV programs among MSM in Kazakhstan, 2012

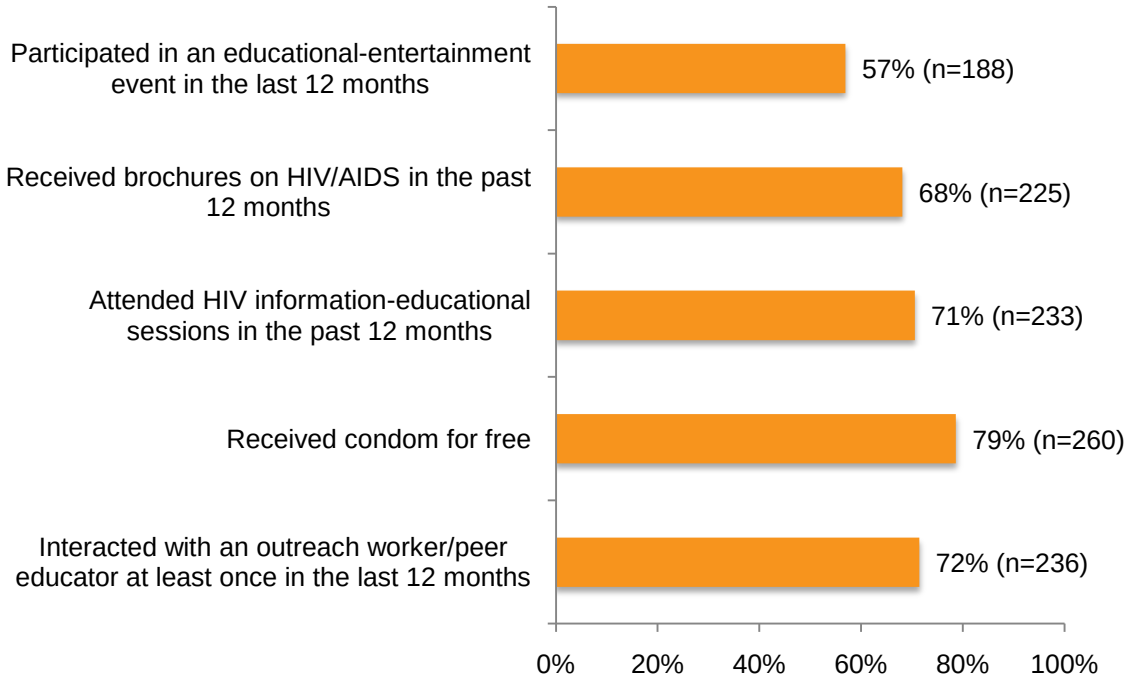


Figure 6b: Exposure to HIV programs among MSM in Kyrgyzstan, 2012

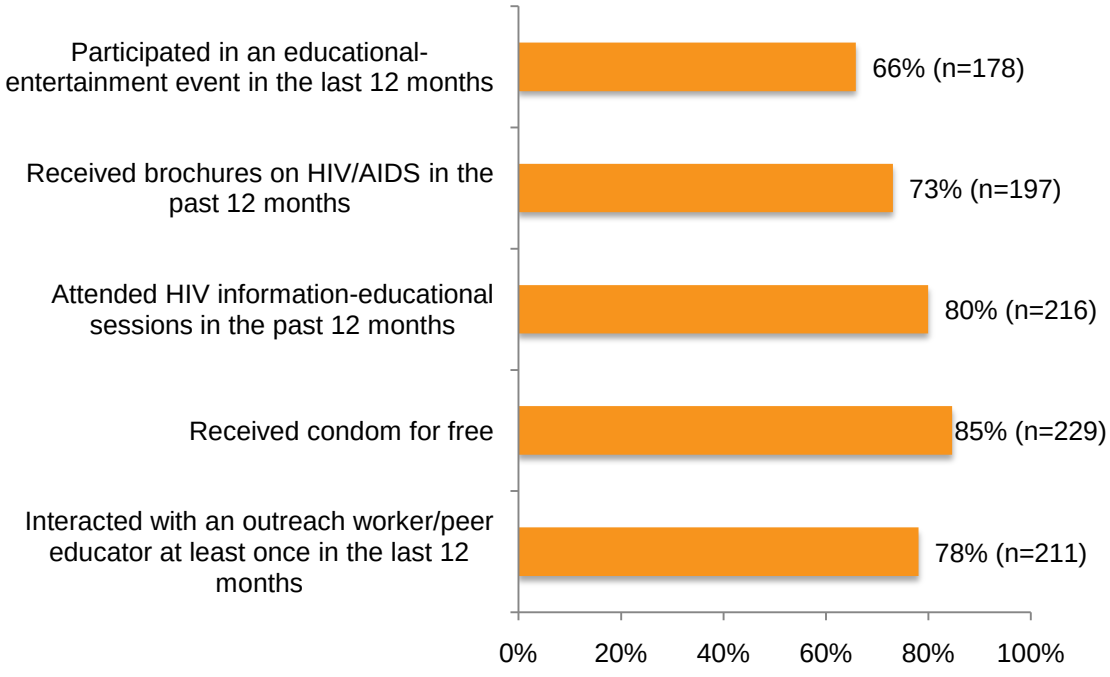
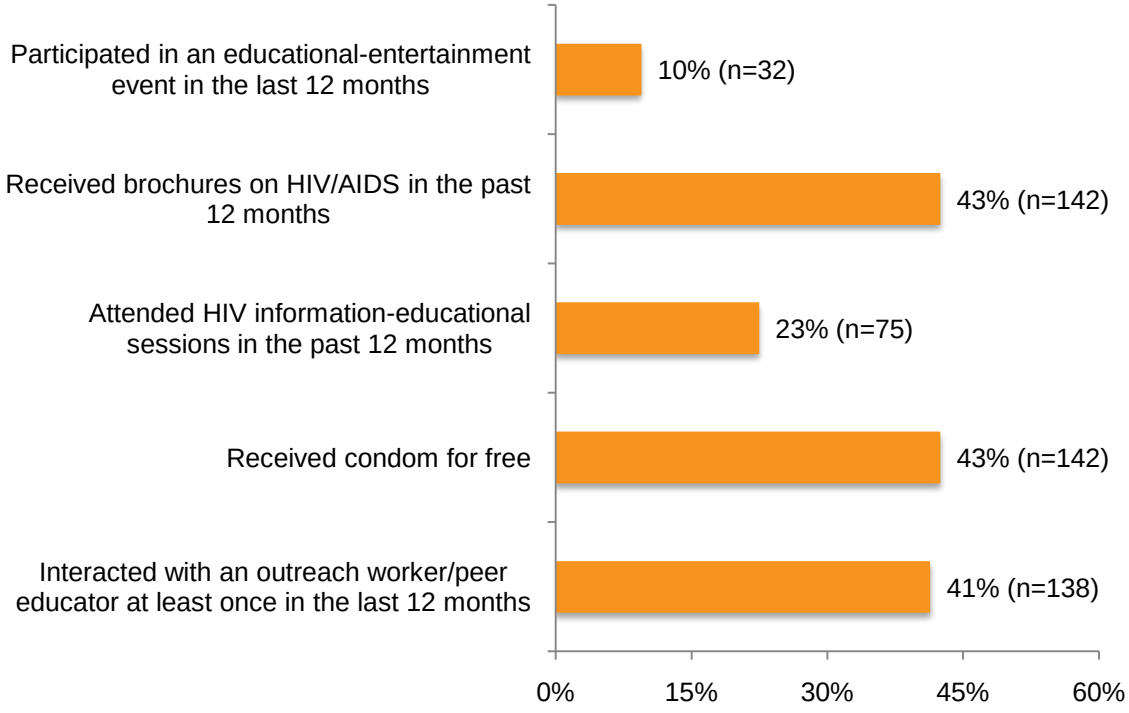


Figure 6c: Exposure to HIV programs among MSM in Tajikistan, 2012



III. Segmentation Data

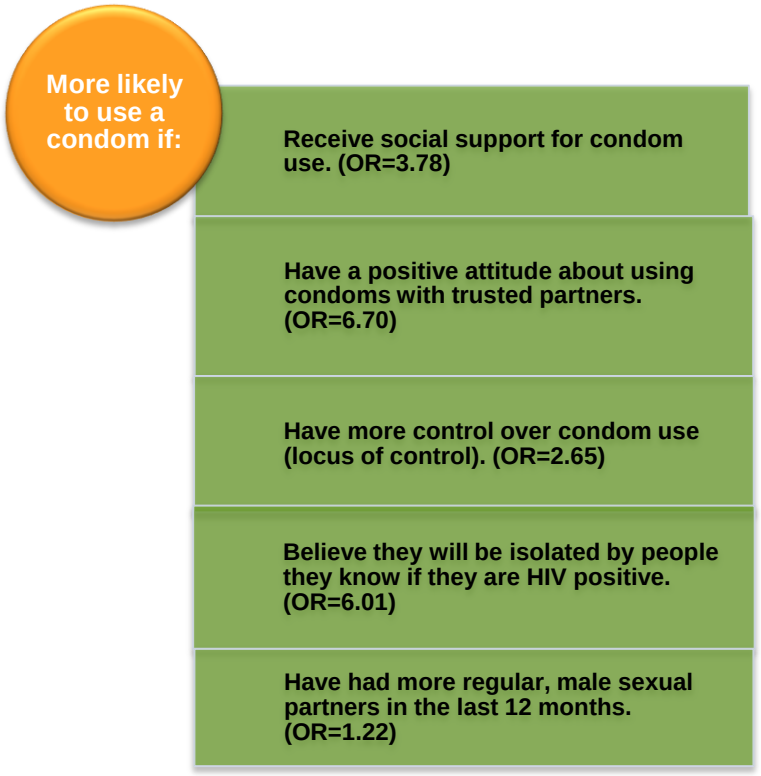
This section will examine significant OAM factors that are related to MSM behavioral outcomes. As with the Monitoring Data, this subsection will first examine significant OAM factors as they relate to consistent condom use. The second portion will examine OAM factors regarding VCT service utilization. Such an analysis involves comparing the attitudes and perceptions towards condom use and VCT between "behavers" (i.e. those who practice the behavior) with "non-behavers" (those who do not practice the behavior). This approach helps highlight those motivating factors that determine condom use and VCT service utilization.

Full segmentation tables can be found in **Annex B.**

A. Condom Use

This section examines the OAM factors that significantly impact consistent condom use in each of the survey locations.[8] The factor associated with lower condom use among MSM was having sex in exchange for money or goods, but a relationship between condom use and VCT service utilization can be observed as well. In Kazakhstan, the factors associated with consistent condom use among MSM are displayed in **Figure 7a.** These factors included receiving social support for condom use, having more control over decisions regarding condom use, and having had more regular male sexual partners, among other factors.

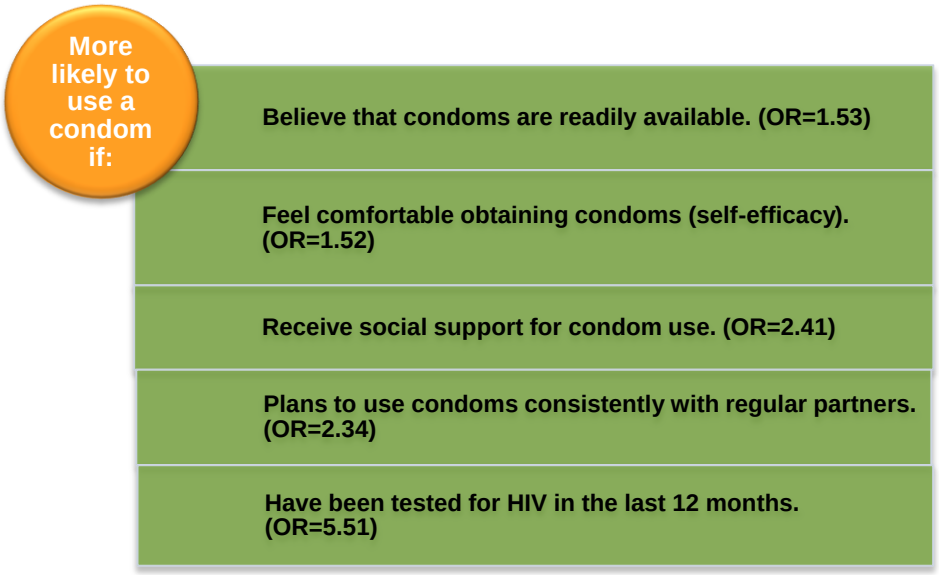
Figure 7a: Factors of consistent condom use among MSM in Kazakhstan, 2012[9]



[8] Indicator: Used condom from start to finish during last anal sex with another man
[9] The full list of items for each construct (for all OAM factors in each of the target countries) can be found in Annex D.

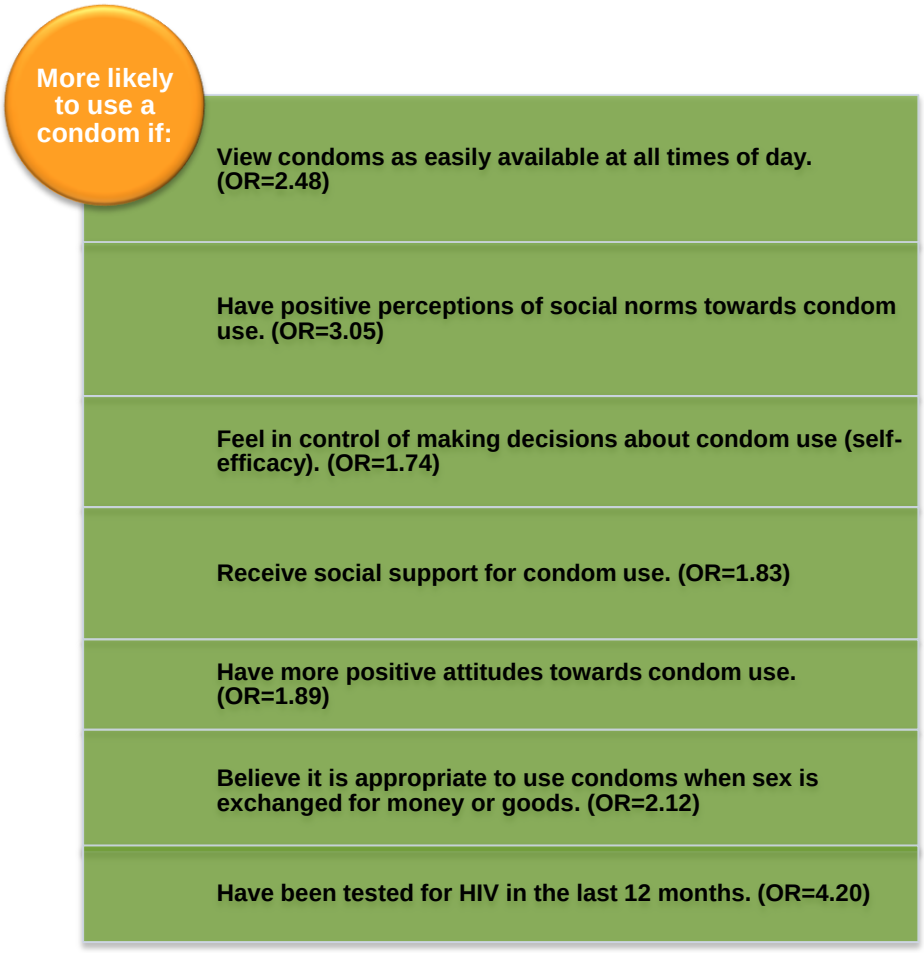
The OAM factors that significantly contributed to consistent condom use among MSM in Kyrgyzstan are shown in **Figure 7b.** These factors include believing that condoms are easily available, being comfortable in obtaining condoms, receiving social support for condom use, and having been tested for HIV in the last 12 months.

Figure 7b: Factors of consistent condom use among MSM in Kyrgyzstan, 2012



Finally, the factors that impacted condom use among MSM in Tajikistan are shown in **Figure 7c.** The relevant factors include positive perceptions of the social norms surrounding condom use, viewing condoms as easily available at all times, having positive perceptions towards condom use, receiving social support for condom use, and believing it is appropriate to use condoms when sex is exchanged for money or goods, among other factors.

Figure 7c: Factors of consistent condom use among MSM in Tajikistan, 2012



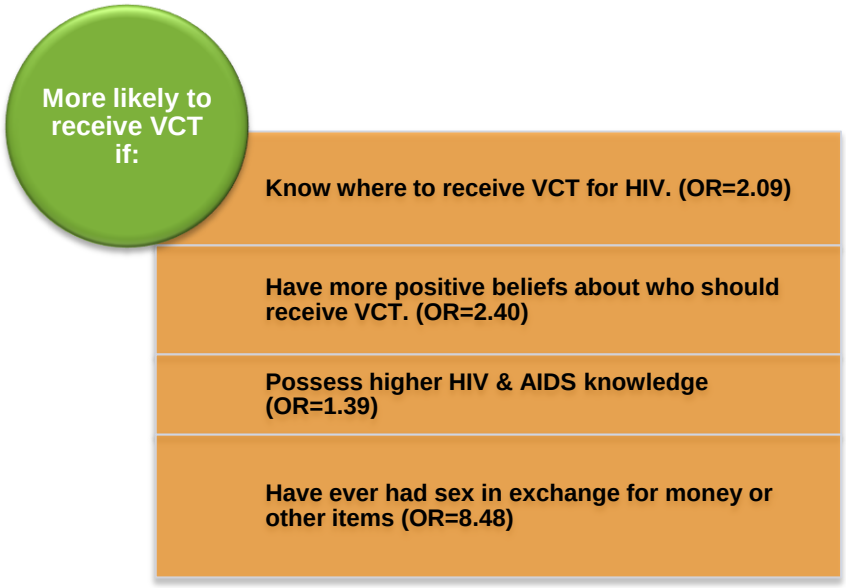
B. VCT Service Utilization

The second behavior of interest is VCT service utilization among MSM and what factors contribute to choosing to undergo VCT.[10] The relevant factors for each country surveyed can be found in **Figures 8a-c.** A relationship between VCT service utilization and condom use can again be observed. The findings also indicate a prevailing attitude or belief among MSM regarding VCT service utilization, where those who are more at-risk or practice risky sexual behaviors should test for HIV.

Full Segmentation Tables on VCT service utilization can be found in **Annex B.**

OAM factors associated with higher VCT service utilization in Kazakhstan are displayed in **Figure 8a** below. Among the key OAM factors that influence VCT service utilization are knowing where VCT services are available, having positive perceptions of who should receive VCT (that VCT is not just for sick or at-risk individuals), and having high knowledge of HIV & AIDS. MSM are also more likely to test for VCT if they have had sex in exchange for money or other items.

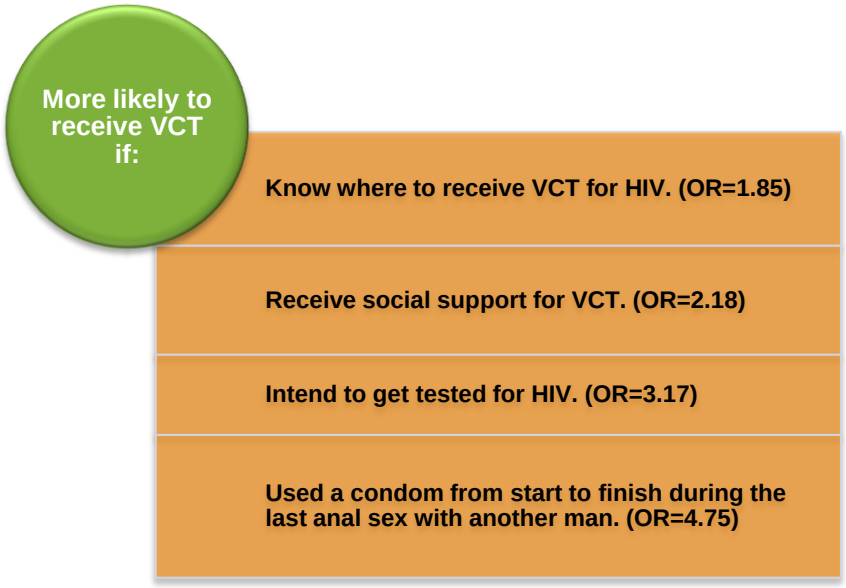
Figure 8a: Factors of VCT service utilization among MSM in Kazakhstan, 2012



[10] Indicator: Tested for HIV and received results in the last 12 months

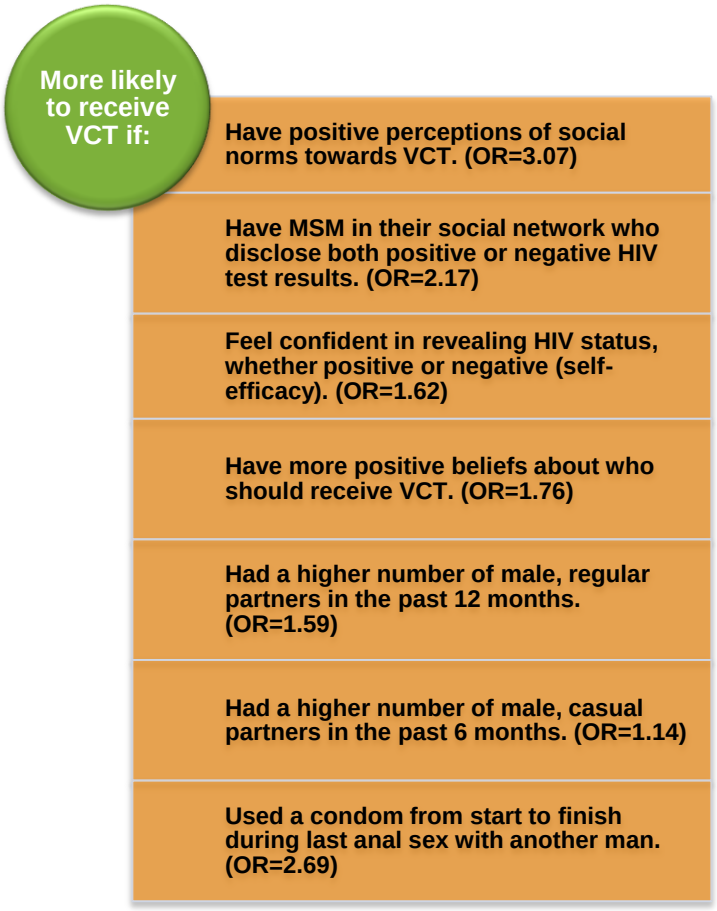
The factors associated with higher VCT service utilization in Kyrgyzstan are displayed in **Figure 8b** below. Among the key OAM factors that influence VCT service utilization are knowing where VCT services are available, receiving social support for VCT, and the intention to get HIV tested.

Figure 8b: Factors of VCT service utilization among MSM in Kyrgyzstan, 2012



OAM factors affecting VCT service utilization among MSM in Tajikistan appear to be more multifaceted. The factors that influence VCT service utilization are shown in **Figure 8c** below. Key OAM factors include positive perceptions of the social norms of receiving VCT services, having MSM who have disclosed their HIV status in your social network, confidence in revealing personal HIV status no matter the result, and having a higher number of casual male partners in the past 6 months.

Figure 8c: Factors of VCT service utilization among MSM in Tajikistan, 2012



IV. Evaluation Data

This section examines whether changes in behaviors and behavioral factors are associated with the USAID Dialogue on HIV and TB Project intervention. Particularly, this analysis focuses on how respondents with no exposure to the intervention compare to those with low and high exposure.[11]

In the figures below, respondents with no exposure are compared with respondents with low and high exposure to the intervention. The comparison will be shown by behaviors of interest (consistent condom use and VCT service utilization). As with previous sections, the Evaluation Data section will begin by looking at consistent condom use across the three countries in 2012 and then move onto VCT service utilization.

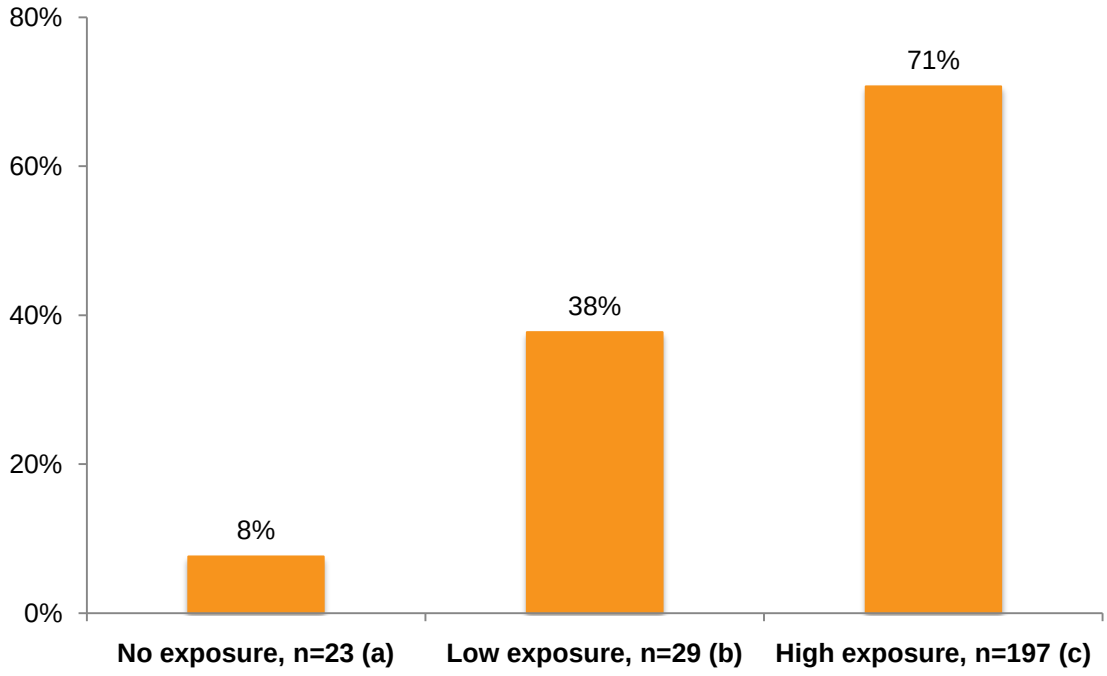
Full Evaluation Tables can be found in **Annex C**.

[11] Exposure levels are defined according to "channels of exposure" in the last 12 months. Channels of exposure are interactions with the program such as (1) attending an HIV informational-educational session, (2) receiving project brochures on HIV & AIDS, (3) participating in an educational-entertainment event (e.g. party, disco, or game), (4) and (5) seeing visual aids associated with the intervention. Those respondents who have encountered more than 4 channels of exposure are described as *high exposure* respondents. Those who have encountered between 1 and 3 channels are *low exposure* respondents. *No exposure* means that the respondent has encountered 0 channels of exposure associated with the intervention.

A. Condom Use

The charts below display respondents in each country according to their level of exposure to the intervention and their use of condoms. The specific indicator is using a condom from start to finish during last anal sex with another man.

Figure 9a: Percentage (%) of MSM respondents in Kazakhstan who used a condom from start to finish by exposure level, 2012[12]



[12] Please note that the (a), (b), and (c) labels indicate the level of significance between any two exposure levels. For example, if the letter is different between two categories (no exposure vs. low exposure), there is a significant difference between the two categories. If the letter is the same, the difference is not significant.

Figure 9b: Percentage (%) of MSM respondents in Kyrgyzstan who used a condom from start to finish by exposure level, 2012

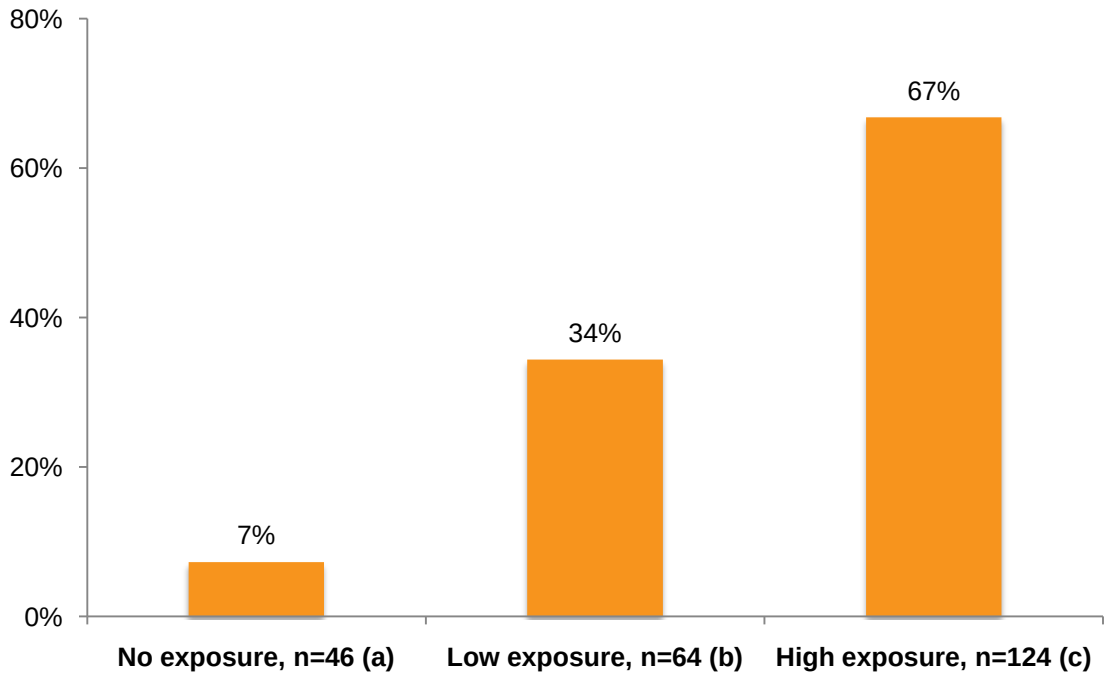
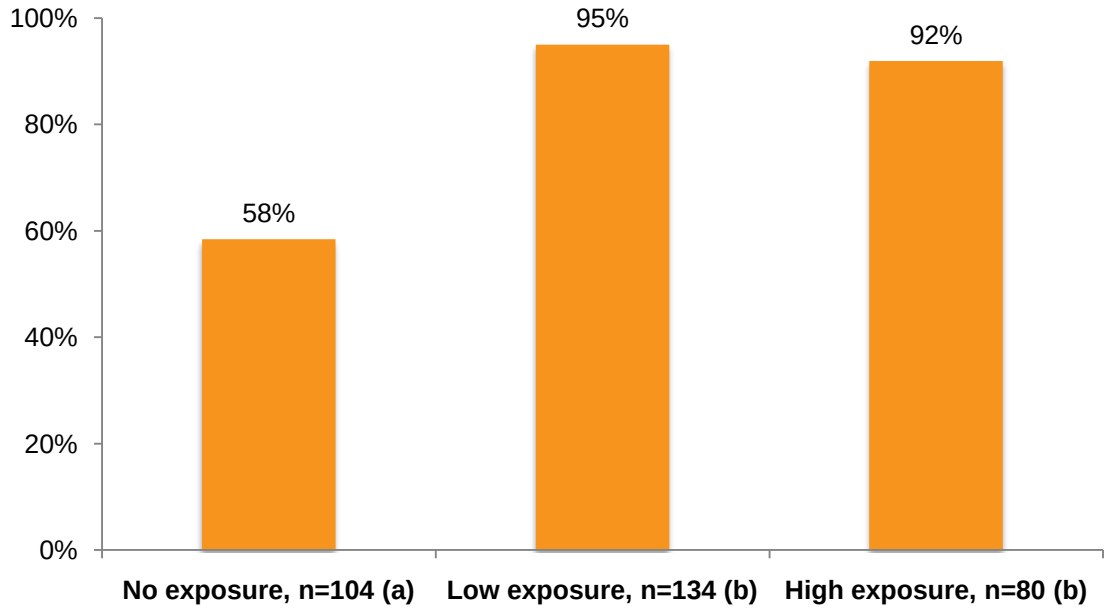
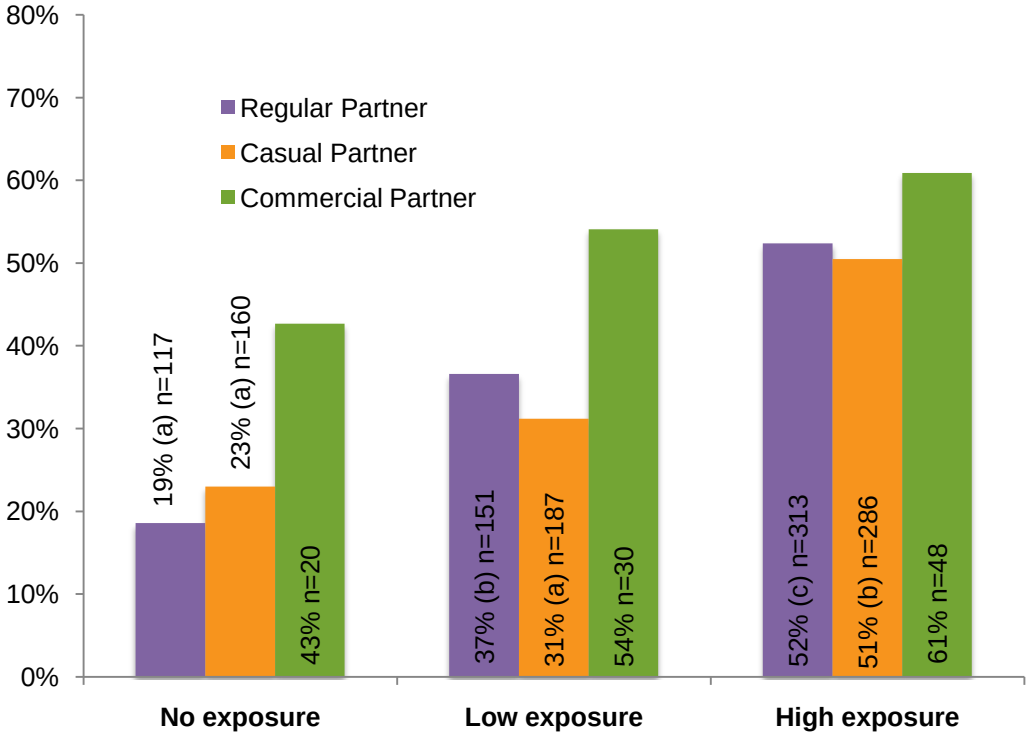


Figure 9c: Percentage (%) of MSM respondents in Tajikistan who used a condom from start to finish by exposure level, 2012



The second indicator of consistent condom use is condom use according to partner type. As previously discussed in the Monitoring Data, there are three types of sexual partners: *regular*, *casual*, and *commercial partners*. **Figure 10** displays condom use among MSM across the CAR region according to partner type and level of exposure to the project intervention.

Figure 10: Percentage (%) of MSM respondents who report always using a condom with regular, casual, and commercial male partners in the last 6 months in CAR by exposure level, 2012



The data shown in **Figure 10** suggests that when it comes to *regular partners,* there is a significant difference in consistent condom use according to exposure level. In essence, as exposure increases so does consistent condom use. The same principle holds for *casual partners*. There is a significant increase in condom use with casual partners between MSM with no and low exposure to MSM with high program exposure.

Regarding *commercial partners*, however, the picture is different. First, it should be noted that there was a very low number of MSM who reported having a male, commercial partner in the last 6 months. Across the region, the mean number of male, commercial partners was 0.19 in 2012. Thus, the n-values for commercial partners in the chart above are very low (n=20 for 'no exposure'; n=30 for 'low exposure'; n=48 for 'high exposure'). These small values should be considered when determining how program exposure

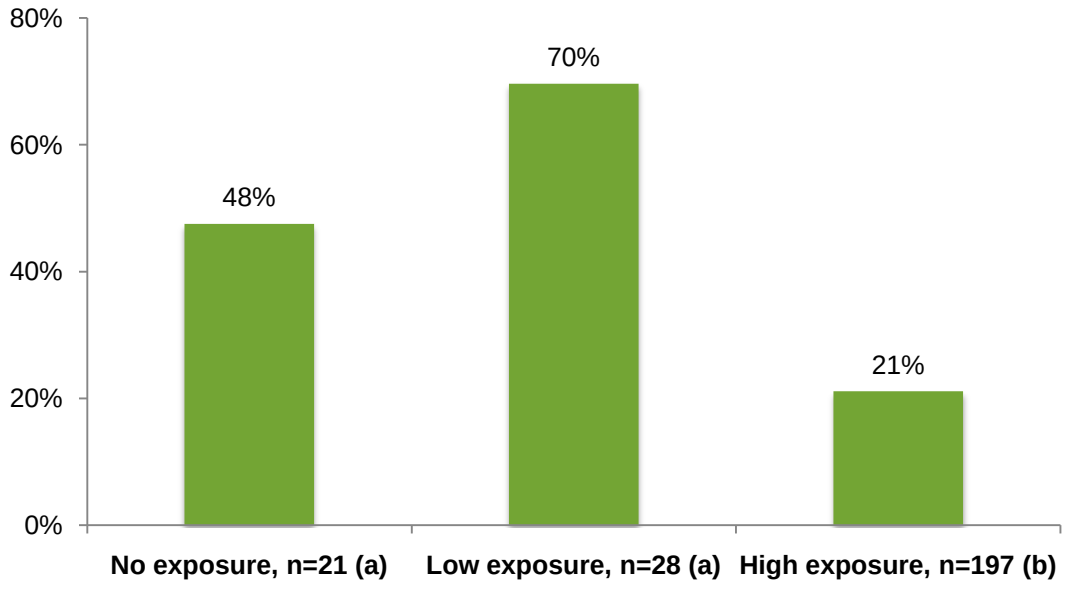
impacts condom use with commercial partners among MSM in the CAR region.

B. VCT Service Utilization

The second behavior of interest in evaluating the USAID Dialogue on HIV and TB Project intervention is VCT service utilization. The indicator for VCT utilization is being tested for HIV and receiving the results in the last 12 months. In the charts below, VCT utilization is measured by level of exposure to the project intervention.

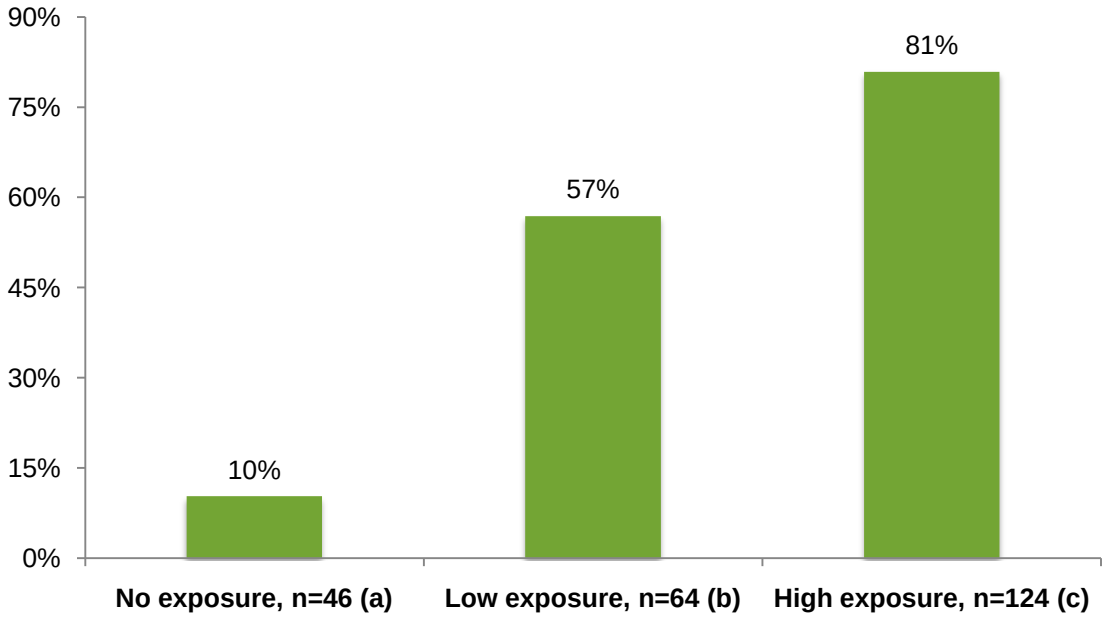
Beginning with Kazakhstan, (as shown in **Figure 11a**) VCT utilization did not increase with exposure. Respondents with no and low exposure to the intervention reported higher VCT utilization than those with high exposure to the intervention. This result counters the positive relationship of increased exposure and increased VCT utilization found in Kyrgyzstan and Tajikistan (as displayed in **Figures 11b** and **11c**)**.** The fact that the sample size of high exposure MSM in Kazakhstan is the largest of the three exposure levels may have affected the result. Ultimately, this result likely requires further study to understand why high exposure MSM respondents in Kazakhstan have the lowest percentage of VCT service utilization.

Figure 11a: Percentage (%) of MSM respondents who report having been tested for HIV and receiving results in the last 12 months in Kazakhstan by exposure level, 2012.



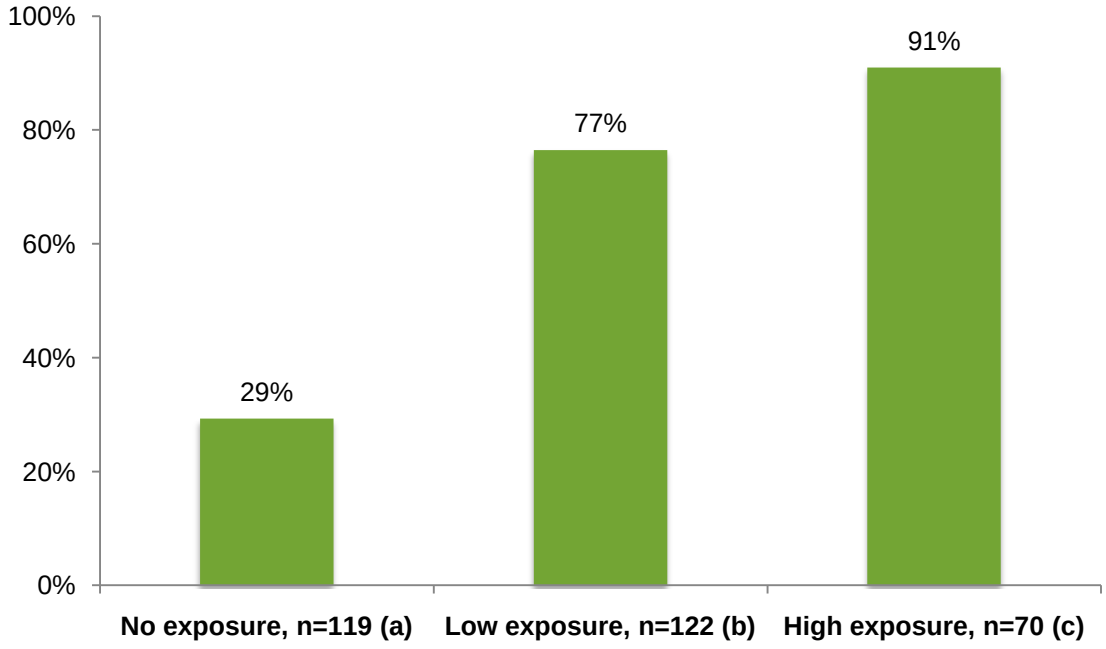
MSM respondents in Kyrgyzstan conform with the general trend, where with increased exposure comes increased VCT utilization. As shown in **Figure 11b** below, there are significant differences between all three exposure types regarding VCT utilization. Those respondents with low and high exposure have significantly utilized VCT services at a higher percentage than those with no exposure to the intervention.

Figure 11b: Percentage (%) of MSM respondents who report having been tested for HIV and receiving results in the last 12 months in Kyrgyzstan by exposure level, 2012.



In Tajikistan, MSM respondents with low and high exposure had significantly higher levels of VCT utilization than those respondents with no exposure (**Figure 11c**). It should be noted that 91% of MSM with high exposure to the intervention have utilized VCT services, which is the highest percentage of any of the three countries.

Figure 11c: Percentage (%) of MSM respondents who report having been tested for HIV and receiving results in the last 12 months in Tajikistan by exposure level, 2012.



CONCLUSION AND PROGRAM RECOMMENDATIONS

The following are programmatic recommendations – grounded on the monitoring data and segmentation analyses, and created through the collaborative efforts of the research and program staff, as well as the contribution of external stakeholders.

:: **Tailor different services to MSM with particular characteristics**.

1. According the present study, most MSM are educated (**Tables 4 & 4a**), so it is possible to create brochures/information, as well as conduct seminars, that are geared towards their level of understanding.

2. The results show that the number of MSM who receive counseling at a testing location is still relatively low and has not necessarily improved (**Figure 4a**). It is necessary to work to ensure that these testing locations that MSM frequent provide counseling as well as quality testing, and that these set of services are convenient for MSM to access. It is important to understand what happens when someone tests at these locations, particularly if they are given an opportunity to receive counseling upon receiving their results.

:: **Utilize the connection between HIV Testing and Condom Use within program decision-making.**

Condom use and HIV testing are not necessarily mutually exclusive. Namely, those who do test for HIV are also more likely to use condoms (**Figures 7b & 7c),** and vice versa (**Figures 8b & 8c**). Instead of focusing on these two behaviors separately, it is recommended to incorporate them both at once into programs, where the focus is on practicing healthy sexual behaviors.

:: **Condom use has improved, but is still relatively low, as is utilization of VCT. Address HIV testing and condom use in the following manner:**

1. Social Support. The present study shows that by increasing social support of condom use and VCT utilization, it is possible to increase these practices among MSM (**Figures 7a-c & 8b**). By continuing to support MSM through prevention programs (social escorting to medical services, organizing sessions where MSM share their VCT experience) and continuing to work with the medical society (round tables, trainings, incorporating friendly doctors into programs) programs can continue to foster MSM's sense of social support for testing and condom use.

2. Control (self-efficacy). MSM who feel they have more control over their condom use, such as feeling more comfortable obtaining condoms and negotiating condom use, are more likely to use condoms (**Figure 7a-c**).

Fostering a sense of control among MSM for negotiating condom use and refusing sex without a condom should involve the following: practicing negotiation skills for convincing sexual partners to use condoms and learning to say 'no' if, despite attempts at persuasion, the partner refuses to use a condom for sex.

Programs should not only focus on encouraging healthy sexual behaviors and practices, but should also work to foster overall leadership and confidence within the target population (public speaking, law-related classes for the purpose of knowing how to protect personal rights, etc). Focusing on developing leadership qualities of MSM will allow them to improve their sense of control in regards to their health practices, such as confidence to go test, reveal their test results, and negotiate condom use. Incorporating more MSM into programs who exemplify great confidence and leadership would contribute to adding positivity into MSM's inner circles, thus encouraging them to test for HIV and use condoms.

3. Beliefs. Perceptions of condom use and VCT utilization affect MSM's choices to use condoms or test for HIV (**Figures 7a-c & 8a-c**). It is also likely that MSM believe that HIV testing and condoms are only necessary for those who are at risk (are sick with HIV) or practice risky sexual behaviors (exchanging money for sex, having multiple sexual partners), so it is important to continue promoting the idea that everyone is at risk of contracting HIV. By changing these beliefs within the target population, MSM will be motivated to use condoms and VCT services.

:: **Prioritize program focus on promoting more condom use with regular and casual partners.**

While it is still important to promote condom use with commercial partners, few MSM have commercial partners as opposed to regular or casual partners, and condom use with regular and casual partners is still relatively low (**Figures 3 & 3a**). Consequently, there is a need is still a need to focus on improving attitudes towards using condoms with familiar and trusted partners (**Figures 7a-c**),since then they will be motivated to use condoms more consistently. Such an approach should involve conducting activities to spread the following messages: That any partner – no matter how trustworthy – could have HIV; that you can protect yourself and your partner by using condoms; and that you are personally at risk for being infected with HIV if you have had sex even once without a condom.

:: **Address stigma against MSM (and HIV-positive MSM) in the following manner:**

A small number of MSM disclose the results of their HIV test results (**Figure 5**), most likely for fear of stigmatization. Currently there are few anti-discriminatory laws against MSM in Central Asia, especially those who are HIV positive. Working with local NGOs to attract politicians and government workers to the programs (inviting them to edutainment events, sessions, or possibly developing a media campaign) will help to reduce stigma and discrimination in society.

:: **Continue to focus on promoting programs and expand them to their full capacity**.

1. The likelihood of MSM using condoms and VCT services is affected by the availability of these resources (**Figures 7b, 7c, 8a, 8b**). Meanwhile, condom use is affected positively by program exposure (**Figures 9a-c**), and so is VCT utilization (**Figures 11b & c**). It is important to work to expand services (VCT testing that is available day/night and weekends, availability of rapid diagnostic tests in all centers, mobile testing) while also working to expand the volunteer component and training of outreach workers for motivational sessions.

2. Whereas programs currently concentrate on distributing informational materials and conducting outreach work, other activities, such as informational sessions and edutainment events, should be promoted more within the target population (**Figures 6-6c**). This is especially the case in Tajikistan, where these activities were the least utilized by MSM (**Figure 6c**).

3. Use already existing models of prevention in order to avoid past mistakes made by other programs. These prevention programs should still, however, continue to develop and incorporate new methods to impact the target groups.

:: **Only communicate a few messages per session or event.**

Too many messages during one session can overwhelm the recipient and result in little of the information being remembered. For example, the results for Kazakhstan show that high program exposure is associated with less MSM utilizing VCT services (**Figure 11a**), so it is possible that these MSM were confused by too many messages. This could potentially be improved by rotating key messages each quarter for mini-sessions, long-format sessions, and edutainment events, combined with distributing IEC materials that correspond to the key message(s).

:: **Create more than one activity related to condom use and VCT service utilization for long-format sessions and mini-sessions.**

Effective behavior change comes with repeated exposure to the same message conveyed through varied means. By having a number of activities for each topic, the same persons can repeatedly hear the same message, but in a fresh manner each time. Varying activities will also help prevent burnout among the outreach workers.

:: **Communicate all messages in a clear, concise, and simple manner.**

According to the present study, most MSM respondents have a secondary education or above. However, when creating printed materials or interacting with MSM face-to-face, we should still be attentive to MSM who have received little or no education, as well as the need to communicate messages in a clear and concise manner. The material should also be interesting, so that MSM will be motivated to read it and then use it (colorful graphics, comics, etc). This should ensure better comprehension and retention of important, life-saving information.

While analyzing data and making program recommendations takes many careful considerations, it is much more challenging to implement these recommendations effectively. Difficulties include stigma (against MSM and HIV-infected MSM), quality of service (the need for MSM-friendly environments and distrust of MSM in who is helping them), as well as the difficulty to reach this population for the purpose of enacting these changes. However, it is for these reasons that it is important that future programming should focus on effective communication while maintaining intra disciplinary cohesiveness—researchers, programmers, local NGOs, and governmental organizations each have an essential role for implementing these changes.

ANNEXES:

ANNEX A: MONITORING TABLES

KAZAKHSTAN

Monitoring Table 1
Trends in consistent condom use among MSM in Kazakhstan, 2010 and 2012
Risk Group: *Men having sex with men*
Behavior: *Consistent condom use*

INDICATORS	2010 N=289	2012 N=330	Sig.
BEHAVIOR/USE			
SEXUAL BEHAVIOURS AND BEHAVIOURS RELATED TO SEXUAL HEALTH			
Ever used a condom	97.9%	98.2%	
Last anal sex			
Used condom during last anal sex with another man ✪	52.2%	60.3%	
Used condom from start to finish during last anal sex with another man	42.6%	48.1%	
Regular partners			
Had regular partner(s) in last 12 months	77.1%	80.5%	
Mean number of male regular partners in last 12 months	0.7	2.49	***
Mean number of female regular partners in last 12 months	0.26	0.21	
Always uses condom for sex (vaginal or anal) with regular partners	22% (241)	62.4% (279)	***
Always uses condom for oral sex with regular partner	6.5% (245)	27.6% (261)	***
Casual partners			
Mean number of male casual partners in last 6 months	5.39	7.56	**
Mean number of female casual partners in last 6 months	0.54	0.53	
Always uses condom for sex (vaginal or anal) with casual partners	56.7% (141)	46.4% (191)	
Always uses condom for oral sex with casual partner	11.5% (143)	13.4% (190)	
Commercial partners			
Mean number of male commercial partners in last 6 months)	0.95	0.3	
Mean number of female commercial partners in last 6 months	0.57	0.38	*
Always uses condom for sex (vaginal or anal) with commercial partners	57% (43)	29.9% (30)	*
Always uses condom for oral sex with commercial partner	36.4% (42)	48.9% (31)	
OTHER RELATED BEHAVIORS			
Uses lubricant with condom	83.4% (263)	92.7% (307)	***

Ever had sexual intercourse after drinking alcohol	88.8%	91.7%	
Ever had sexual intercourse after taking some kind of drug	56.1%	35.9%	***
Ever bought condoms	92%	97.2%	*
OPPORTUNITY	**Mean**	**Mean**	
Availability			
General availability of condoms (construct)	3.6	3.23	***
Condoms are available within 10 minutes of where I hang out			
Pharmacies near my home always have condoms for sale			
Condoms are always available in pharmacies nearby			
It is always easy to get a condom when I need one			
Condoms are easily available all times of the day	3.62	3.24	***
Availability of condoms at night and at local drinking location (construct)	2.98	2.9	
Condoms are always available at my local drinking place			
Condoms are easily available at all times of the night			
It is easy to find condoms even after pharmacies close			
Ability	%	%	
Self-Efficacy			
Self-efficacy for negotiating condom use and refusing sex without a condom (construct)	3.09	3.12	
I am able to refuse sex without condoms even if I'm aroused			
I can convince a new partner that we use a condom			
I could convince my regular partner to use a condom if I wanted to			
I am able to deny sex with a partner who refuses to wear a condom			
Social Support			
Social support received for condom use (construct)	2.95	3.16	**
Local health workers encourage me to use condoms			
My friends support my use of condoms			
My sexual partners support my use of condoms			
My friends discuss condom use with me			
MOTIVATION			
Attitudes			
Attitudes towards condom use with familiar and trusted partners (construct)	2.11	1.62	***
It is inappropriate to use condoms with a sexual partner(s) after three months ®			
Condoms are not necessary when I trust my partner ®			
If my casual partner is trustworthy I am not going to use a condom ®			
Intentions			
Intentions for condom use (construct)	3.7	3.31	***
I plan to use condoms in the future			
I plan to use a condom with someone I don't know very well			

I plan to use condoms consistently with my casual partners	
I plan to use condoms consistently with people I have sex with in exchange for money	

Note:
1. ✪ - Logframe indicator
2. ®: the statements are reversed to ensure the higher score, the more positive meaning
3. The comparison 2010 vs 2012 is the adjusted % from multivariable UNIANOVA analysis where the confounding factors have been controlled for.

Monitoring Table 2
Trends in VCT utilization among MSM in *Kazakhstan*, 2010 and 2012
Risk Group: *Men having sex with men*
Behavior: *VCT*

INDICATORS	2010 N=289	2012 N=330	Sig.
BEHAVIOR/USE			
VCT			
Tested for HIV and received results in last 12 months ✪	38.2%	31.5%	
Received counseling at the test center (of those ever tested)	50.5% (134)	53.2% (101)	
OPPORTUNITY			
Availability			
VCT availability (construct)	2.68	3.05	***
Voluntary Counseling and Testing for HIV services are easily available			
Voluntary Counseling and Testing for HIV services are available near where I live			
Voluntary Counseling and Testing services are available outside work hours			
I know where I can go for voluntary counseling and testing for HIV ✪	3.49	3.42	
ABILITY			
Knowledge			
HIV/AIDS Knowledge index (<14=Low; ≥14 = High)	94.3%	51%	***
HIV transmission routes index (<8 = Low; ≥8 = High) ✪	95.3%	52.9%	***
Social support			
I would encourage my partner(s) to get tested for HIV	2.95	3.39	***
I would encourage my friends to get tested for HIV	3.07	3.33	**
ADDITIONAL LOGICAL FRAMEWORK INDICATORS			
Suspected having STI in the past 12 months	9.2%	9.1%	
Sought medical services for STI in past 12 months	56.8% (21)	46.1% (22)	
Ever injected drugs	2.1%	10.3%	***

Note:
1. ✪ - Logframe indicator
2. ®: the statements are reversed to ensure the higher score, the more positive meaning
3. The comparison 2010 vs 2012 is the adjusted % from multivariable UNIANOVA analysis where the confounding factors have been controlled for.

Monitoring Table 3
Trends in exposure to HIV and TB programs among MSM in *Kazakhstan*, 2010 and 2012
Risk Group: *Men having sex with men*
Behavior: *Exposure*

INDICATORS	2010	2012	Sig.
EXPOSURE TO HIV AND TB PREVENTION PROGRAMS			
Interacted with an outreach worker/peer educator at least once in the last 12 months	17.5%	71.5%	***
Received condom for free	15.1%	78.7%	***
Attended HIV information-educational sessions in the past 12 months	8.7%	70.6%	***
Received brochures on HIV/AIDS in the past 12 months	6.4%	68.2%	***
Participated in an educational-entertainment event (e.g., party, disco, educational game) in the last 12 months	3.1%	57%	***

KYRGYZSTAN

Monitoring Table 1
Trends in consistent condom use among MSM in *Kyrgyzstan*, 2010 and 2012
Risk Group: *Men having sex with men*
Behavior: *Consistent condom use*

INDICATORS	2010 N=205	2012 N=270	Sig.
BEHAVIOR/USE			
SEXUAL BEHAVIOURS AND BEHAVIOURS RELATED TO SEXUAL HEALTH			
Ever used a condom	97.1%	100%	**
Last anal sex			
Used condom during last anal sex with another man ✪	41.5%	71.1%	***
Used condom from start to finish during last anal sex with another man	29.7%	59.1%	***
Regular partners			
Had regular partner(s) in last 12 months	90.5%	91.1%	

Mean number of male regular partners in last 12 months	1.76	1.47	
Mean number of female regular partners in last 12 months	0.79	0.45	*
Always uses condom for sex (vaginal or anal) with regular partners	24.3% (165)	41.6% (240)	***
Always uses condom for oral sex with regular partner	11.9% (151)	16.7% (225)	
Casual partners			
Mean number of male casual partners in last 6 months	3.97	3.85	
Mean number of female casual partners in last 6 months	1.02	0.44	***
Always uses condom for sex (vaginal or anal) with casual partners	51% (146)	66.4% (205)	**
Always uses condom for oral sex with casual partner	17.2% (112)	19.9% (187)	
Commercial partners			
Mean number of male commercial partners in last 6 months)	0.44	0.16	*
Mean number of female commercial partners in last 6 months	0.2	0.1	
Always uses condom for sex (vaginal or anal) with commercial partners	66.7% (30)	87.5% (16)	
Always uses condom for oral sex with commercial partner	47.4% (23)	63.6% (15)	
OTHER RELATED BEHAVIORS			
Uses lubricant with condom	79.1% (191)	96.3% (265)	***
Ever had sexual intercourse after drinking alcohol	80.2%	93%	***
Ever had sexual intercourse after taking some kind of drug	9.4%	16.6%	*
Ever bought condoms	77.4%	95.3%	***
OPPORTUNITY			
Availability			
General availability of condoms (construct)	3.33	3.39	
Condoms are available within 10 minutes of where I hang out			
Pharmacies near my home always have condoms for sale			
Condoms are always available in pharmacies nearby			
It is always easy to get a condom when I need one			
Condoms are easily available all times of the day	3.43	3.41	
Availability of condoms at night and at local drinking location (construct)	2.93	2.98	
Condoms are always available at my local drinking place			
Condoms are easily available at all times of the night			
It is easy to find condoms even after pharmacies close			
Ability			
Self-Efficacy			
Self-efficacy for negotiating condom use and refusing sex without a condom (construct)	3.22	3.26	
I am able to refuse sex without condoms even if I'm aroused			
I can convince a new partner that we use a condom			

I could convince my regular partner to use a condom if I wanted to			
I am able to deny sex with a partner who refuses to wear a condom			
Social Support			
Social support received for condom use (construct)	3.12	3.02	
Local health workers encourage me to use condoms			
My friends support my use of condoms			
My sexual partners support my use of condoms			
My friends discuss condom use with me			
MOTIVATION			
Attitudes			
Attitudes towards condom use with familiar and trusted partners (construct)	2.14	2.99	***
It is inappropriate to use condoms with a sexual partner(s) after three months ®			
Condoms are not necessary when I trust my partner ®			
If my casual partner is trustworthy I am not going to use a condom ®			
Intentions			
Intentions for condom use (construct)	3.64	3.72	
I plan to use condoms in the future			
I plan to use a condom with someone I don't know very well			
I plan to use condoms consistently with my casual partners			
I plan to use condoms consistently with people I have sex with in exchange for money			

Note:

1. ✪ - Logframe indicator
2. ®: the statements are reversed to ensure the higher score, the more positive meaning
3. The comparison 2010 vs 2012 is the adjusted % from multivariable UNIANOVA analysis where the confounding factors have been controlled for.

Monitoring Table 2
Trends in VCT utilization among MSM in *Kyrgyzstan*, 2010 and 2012
Risk Group: *Men having sex with men*
Behavior: *VCT*

INDICATORS	2010 N=205	2012 N=270	Sig.
BEHAVIOR/USE			
VCT			
Tested for HIV and received results in last 12 months ✪	25.9%	62.1%	***
Received counseling at the test center (of those ever tested)	43.6% (73)	66.6% (178)	**
OPPORTUNITY			
Availability			

VCT availability (construct)	2.59	3.01	***
Voluntary Counseling and Testing for HIV services are easily available			
Voluntary Counseling and Testing for HIV services are available near where I live			
Voluntary Counseling and Testing services are available outside work hours			
I know where I can go for voluntary counseling and testing for HIV ✪	3.06	3.52	***
ABILITY			
Social support			
I would encourage my partner(s) to get tested for HIV	3.39	3.36	
I would encourage my friends to get tested for HIV	3.43	3.46	
Knowledge			
HIV/AIDS Knowledge index (<14=Low; ≥14 = High)	91.8%	98.5%	**
HIV transmission routes index (<8 = Low; ≥8 = High) ✪	85.9%	95.8%	***
ADDITIONAL LOGICAL FRAMEWORK INDICATORS			
Suspected having STI in the past 12 months	14.1%	1.3%	***
Sought medical services for STI in past 12 months	96% (26)	79.8% (4)	
Ever injected drugs	0.9%	0%	

Note:
1. ✪ - Logframe indicator
2. ®: the statements are reversed to ensure the higher score, the more positive meaning
3. The comparison 2010 vs 2012 is the adjusted % from multivariable UNIANOVA analysis where the confounding factors have been controlled for.

Monitoring Table 3
Trends in exposure to HIV and TB programs among MSM in *Kyrgyzstan,* 2010 and 2012
Risk Group: *Men having sex with men*
Behavior: *Exposure*

INDICATORS	2010 N=205	2012 N=270	Sig.
EXPOSURE TO HIV AND TB PREVENTION PROGRAMS			
Interacted with an outreach worker/peer educator at least once in the last 12 months	65.3%	78.1%	**
Received condom for free	68.2%	84.7%	***
Attended HIV information-educational sessions in the past 12 months	51.3%	80%	***
Received brochures on HIV/AIDS in the past 12 months	63.9%	73.1%	*
Participated in an educational-entertainment event (e.g., party, disco, educational game) in the last 12 months	48.4%	65.9%	***

TAJIKISTAN

Monitoring Table 1
Trends in consistent condom use among MSM in *Tajikistan*, 2010 and 2012
Risk Group: *Men having sex with men*
Behavior: *Consistent condom use*

INDICATORS	2010 N=289	2012 N=330	Sig.
BEHAVIOR/USE			
SEXUAL BEHAVIOURS AND BEHAVIOURS RELATED TO SEXUAL HEALTH			
Ever used a condom	94.8%	75.7%	***
Last anal sex			
Used condom during last anal sex with another man ✪	33.4%	61.1%	***
Used condom from start to finish during last anal sex with another man	21.9%	58.8%	***
Regular partners			
Had regular partner(s) in last 12 months	99.6%	77.4%	***
Mean number of male regular partners in last 12 months	4.89	1.89	***
Mean number of female regular partners in last 12 months	1.64	0.44	***
Always uses condom for sex (vaginal or anal) with regular partners	3% (264)	9.4% (255)	**
Always uses condom for oral sex with regular partner	3% (166)	2.1% (194)	
Casual partners			
Mean number of male casual partners in last 6 months	18.41	6.66	***
Mean number of female casual partners in last 6 months	0.86	0.1	**
Always uses condom for sex (vaginal or anal) with casual partners	33.8% (190)	3.7% (228)	***
Always uses condom for oral sex with casual partner	5.3% (151)	0.5% (210)	**
Commercial partners			
Mean number of male commercial partners in last 6 months)	21.54	0.19	***
Mean number of female commercial partners in last 6 months	2.16	0.18	***
Always uses condom for sex (vaginal or anal) with commercial partners	4.1% (243)	20.7% (58)	***
Always uses condom for oral sex with commercial partner	4.7% (169)	4.8% (42)	
OTHER RELATED BEHAVIORS			
Uses lubricant with condom	64.3% (260)	85.6% (251)	***
Ever had sexual intercourse after drinking alcohol	69.5%	51.6%	***
Ever had sexual intercourse after taking some kind of drug	6.5%	5.3%	

Ever bought condoms	50.7%	73.7%	***
OPPORTUNITY			
Availability			
General availability of condoms (construct)	2.61	2.51	
Condoms are available within 10 minutes of where I hang out			
Pharmacies near my home always have condoms for sale			
Condoms are always available in pharmacies nearby			
It is always easy to get a condom when I need one			
Condoms are easily available all times of the day	3.35	3.81	***
Availability of condoms at night and at local drinking location (construct)	1.87	2	
Condoms are always available at my local drinking place			
Condoms are easily available at all times of the night			
It is easy to find condoms even after pharmacies close			
Ability			
Self-Efficacy			
Self-efficacy for negotiating condom use and refusing sex without a condom (construct)	2.58	3.01	***
I am able to refuse sex without condoms even if I'm aroused			
I can convince a new partner that we use a condom			
I could convince my regular partner to use a condom if I wanted to			
I am able to deny sex with a partner who refuses to wear a condom			
Social Support			
Social support received for condom use (construct)	3.28	2.57	***
Local health workers encourage me to use condoms			
My friends support my use of condoms			
My sexual partners support my use of condoms			
My friends discuss condom use with me			
MOTIVATION			
Attitudes			
Attitudes towards condom use with familiar and trusted partners (construct)	2.5	1.69	***
It is inappropriate to use condoms with a sexual partner(s) after three months ®			
Condoms are not necessary when I trust my partner ®			
If my casual partner is trustworthy I am not going to use a condom ®			
Intentions			
Intentions for condom use (construct)	3.53	3.63	
I plan to use condoms in the future			
I plan to use a condom with someone I don't know very well			
I plan to use condoms consistently with my casual partners			
I plan to use condoms consistently with people I have sex with in exchange for money			

Note:
1. ✪ - Logframe indicator
2. ®: the statements are reversed to ensure the higher score, the more positive meaning
3. The comparison 2010 vs 2012 is the adjusted % from multivariable UNIANOVA analysis where the confounding factors have been controlled for.

Monitoring Table 2
Trends in VCT utilization among MSMs in *Tajikistan*, 2010 and 2012
Risk Group: *Men having sex with men*
Behavior: *VCT*

INDICATORS	2010 N=289	2012 N=330	Sig.
BEHAVIOR/USE			
VCT			
Tested for HIV and received results in last 12 months ✪	13.8%	49.3%	***
Received counseling at the test center (of those ever tested)	83.8% (41)	66.6% (182)	
OPPORTUNITY			
Availability			
VCT availability (construct)	2.75	2.81	
Voluntary Counseling and Testing for HIV services are easily available			
Voluntary Counseling and Testing for HIV services are available near where I live			
Voluntary Counseling and Testing services are available outside work hours			
I know where I can go for voluntary counseling and testing for HIV ✪	3.51	3.71	*
ABILITY			
Social support			
I would encourage my partner(s) to get tested for HIV	3.3	3.21	
I would encourage my friends to get tested for HIV	3.1	2.61	***
Knowledge			
HIV/AIDS Knowledge index (<14=Low; ≥14 = High)	91.9%	75.5%	***
HIV transmission routes index (<8 = Low; ≥8 = High) ✪	87.3%	79.6%	*
ADDITIONAL LOGICAL FRAMEWORK INDICATORS			
Suspected having STI in the past 12 months	2.3%	1.8%	
Sought medical services for STI in past 12 months	60% (10)	80% (10)	
Ever injected drugs	4.5%	0.6%	**

Note:
1. ✪ - Logframe indicator
2. ®: the statements are reversed to ensure the higher score, the more positive meaning

3. The comparison 2010 vs 2012 is the adjusted % from multivariable UNIANOVA analysis where the confounding factors have been controlled for.

Monitoring Table 3
Trends in exposure to HIV and TB programs among MSM in *Tajikistan,* 2010 and 2012
Risk Group: *Men having sex with men*
Behavior: *Exposure*

INDICATORS	2010	2012	Sig.
EXPOSURE TO HIV AND TB PREVENTION PROGRAMS			
Interacted with an outreach worker/peer educator at least once in the last 12 months	17.9%	41.4%	***
Received condom for free	17.2%	42.5%	***
Attended HIV information-educational sessions in the past 12 months	17.2%	22.5%	***
Received brochures on HIV/AIDS in the past 12 months	16.4%	42.5%	***
Participated in an educational-entertainment event (e.g., party, disco, educational game) in the last 12 months	40.4%	9.5%	***

ANNEX B: SEGMENTATION TABLES

KAZAKHSTAN

Segmentation Table 1
Factors of consistent condom use among MSM in *Kazakhstan*, 2012
Risk Group: *Men having sex with men*
Behavior: *Used a condom from start to finish during last anal sex with another man*

INDICATORS	Non-Behavior N=98 29.8%	Behavior N=231 70.2%	OR	Sig. *, ** or ***
ABILITY	Mean	Mean		
Social Support given for condom use (construct)	3.14	3.58	3.78	***
MOTIVATION	Mean	Mean		
Attitudes towards condom use with familiar and trusted partners (construct)	1.35	1.92	6.7	***
Locus of Control: External (construct)	1.57	1.89	2.65	*
If I am HIV positive, I will be isolated by people I know	2.27	3.49	6.01	***
Other covariates to control for	% or Mean	% or Mean		
Number of male regular partners in the past 12 months	1.74	5.2	1.22	**
Had been tested for HIV in the last 12 months	23.9%	9.6%	0.26	*
Ever had sex in exchange for money or other items	48.5%	9.7%	0.09	***

In "Sig" column, asterisks indicate significance: no: not significant; *: p<.05; **: p<.01; ***: p<.001.
Scale values range from 1 to 4: "1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree"
®: the statements are reversed to ensure the higher score, the more positive meaning
Omnibus χ^2 (df=7): 179.827, p<.001
GOF χ^2 (df=8): 10.962, p=0.204
Cox & Snell R2=0.451, Nagelkerke R2= 0.669

Segmentation Table 2
Factors of VCT utilization among MSM in *Kazakhstan*, 2012
Risk Group: *Men having sex with men*
Behavior: *Tested for HIV and received results in the last 12 months*

INDICATORS	Non-Behavior N=248 76%	Behavior N=79 24 %	OR	Sig. *, ** or ***
OPPORTUNITY	Mean	Mean		
I know where I can go for voluntary counseling and testing for HIV	3.36	4.03	2.09	**
ABILITY	Mean	Mean		
HIV/AIDS knowledge index (construct)	11.07	12.93	1.39	***
MOTIVATION				
Beliefs about who needs to get tested for HIV (construct)	2.02	2.63	2.40	***
Other covariates to control for	% or Mean	% or Mean		
Had female partners in the past 12 months	10.2%	26.9%	2.99	*
Ever had sex in exchange for money or other items	18.2%	56.3%	8.48	***

In “Sig” column, asterisks indicate significance: no: not significant; *: p<.05; **: p<.01; ***: p<.001.
Scale values range from 1 to 4: “1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree”
®: the statements are reversed to ensure the higher score, the more positive meaning
Omnibus χ^2 (df=10): 161.433, p<.001
GOF χ^2 (df=8): 21.895, p=0.005
Cox & Snell R2=0.402, Nagelkerke R2= 0.603

KYRGYZSTAN

Segmentation Table 1
Factors of consistent condom use among MSM in *Kyrgyzstan*, 2012
Risk Group: *Men having sex with men*
Behavior: *Used condom from start to finish during last anal sex with another man*

INDICATORS	Non-Behavior N=108 40.1%	Behavior N=162 59.9%	OR	Sig. *, ** or ***
OPPORTUNITY				
Availability of condoms at night and at local drinking location (construct)	2.69	2.9	1.53	*
ABILITY	Mean	Mean		
Self-efficacy for acquiring condoms (construct)	3.05	3.26	1.52	*
Social Support given for condom use (construct)	3.09	3.37	2.41	***
MOTIVATION	Mean	Mean		
I plan to use condoms consistently with my regular partners	3.26	3.58	2.34	***
Other covariates to control for	%	%		
Had been tested for HIV in the last 12 months	35.7%	74%	5.51	***

In "Sig" column, asterisks indicate significance: no: not significant; *: p<.05; **: p<.01; ***: p<.001.
Scale values range from 1 to 4: "1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree"
®: the statements are reversed to ensure the higher score, the more positive meaning
Omnibus χ^2 (df=5): 109.572, p<.001
GOF χ^2 (df=8): 10.962, p=0.231
Cox & Snell R2=0.337, Nagelkerke R2= 0.456

Segmentation Table 2
Factors of VCT utilization among MSM in *Kyrgyzstan*, 2012
Risk Group: *Men having sex with men*
Behavior: *Tested for HIV and received results in the last 12 months*

INDICATORS	Non-Behavior N=109 40,5%	Behavior N=161 59,5%	OR	Sig. *, ** or ***
OPPORTUNITY	Mean	Mean		
I know where I can go for voluntary counseling and testing for HIV	2.94	3.47	1.85	**
ABILITY	Mean	Mean		
Social support received for HIV testing and potential treatment (construct)	2.39	2.7	2.18	*
MOTIVATION	Mean	Mean		
Intentions to get tested (construct)	3.03	3.47	3.17	***
Population characteristics				
Education				*
Other covariates to control for	% or Mean	% or Mean		
Used a condom from the beginning of intercourse until the end during the last time had ANAL sex with another man	35.3%	73.3%	4.75	***

In "Sig" column, asterisks indicate significance: no: not significant; *: p<.05; **: p<.01; ***: p<.001.
Scale values range from 1 to 4: "1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree"
®: the statements are reversed to ensure the higher score, the more positive meaning
Omnibus χ^2 (df=6): 132.147, p<.001
GOF χ^2 (df=8): 8.584, p=0.379
Cox & Snell R2=0.404, Nagelkerke R2=0.544

TAJIKISTAN

Segmentation Table 1
Factors of consistent condom use among MSM in *Tajikistan,* 2012
Risk Group: *Men having sex with men*
Behavior: *Used condom from start to finish during last anal sex with another man*

INDICATORS	Non-Behavior N=159 47.8%	Behavior N=174 52.2%	OR	Sig. *, ** or ***
OPPORTUNITY				
Condoms are easily available all times of the day	3.24	3.71	2.48	**
Social norms for condom use with familiar partners (construct)	1.44	1.85	3.05	***
ABILITY	Mean	Mean		
Self-efficacy for negotiating condom use and refusing sex without a condom (construct)	2.99	3.37	1.74	**
Social Support given for condom use (construct)	2.96	3.21	1.83	**
MOTIVATION	Mean	Mean		
Attitudes towards effect of condom use on sex (construct)	1.67	1.89	1.89	*
Other covariates to control for	%	%		
Had female partners in the past 12 months	78.4%	47%	0.22	***
Had been tested for HIV in the last 12 months	41%	66.4%	4.2	***

In "Sig" column, asterisks indicate significance: no: not significant; *: p<.05; **: p<.01; ***: p<.001.
Scale values range from 1 to 4: "1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree"
®: the statements are reversed to ensure the higher score, the more positive meaning
Omnibus χ^2 (df=8): 102.388, p<.001
GOF χ^2 (df=8): 7.267, p=0.508
Cox & Snell R2=0.334, Nagelkerke R2= 0.454

Segmentation Table 2
Factors of VCT utilization among MSM in *Tajikistan*, 2012
Risk Group: *Men having sex with men*
Behavior: *Tested for HIV and received results in the last 12 months*

INDICATORS	Non-Behavior N=168 50.6%	Behavior N=164 49.4%	OR	Sig. *, ** or ***
OPPORTUNITY	Mean	Mean		
Social norms for getting tested for HIV and disclosing HIV status (construct)	2.79	3.03	3.07	**
People in my network reveal their HIV status only if they have tested negative ®	1.69	2.06	2.17	**
My friends reveal their HIV status only if they have tested negative ®				
ABILITY	Mean	Mean		
Self efficacy for getting tested for HIV and disclosing status (construct)	2.81	3	1.62	*
MOTIVATION	Mean	Mean		
Beliefs about who needs to get tested for HIV (construct)	2.89	3.39	1.76	***
Other covariates to control for	% or Mean	% or Mean		
Number of male regular partners in the past 12 months	0.61	0.97	1.58	**
Number of male casual partners in the past 6 months	2.88	5.26	1.14	***
Used a condom from the beginning of intercourse until the end during the last time had ANAL sex with another man	51.9%	71.2%	2.69	**

In "Sig" column, asterisks indicate significance: no: not significant; *: p<.05; **: p<.01; ***: p<.001.
Scale values range from 1 to 4: "1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree"
®: the statements are reversed to ensure the higher score, the more positive meaning
Omnibus χ^2 (df=7): 92.218, p<.001
GOF χ^2 (df=8): 8.367, p=0.398
Cox & Snell R2=0.297, Nagelkerke R2=0.396

ANNEX C: EVALUATION TABLES

KAZAKHSTAN

Evaluation Table
Effectiveness of sexual behavior, utilization of VCT and TB service, and HIV and TB knowledge promotions among MSM in Kazakhstan, 2012
Risk group: *Men having sex with men*
Behavior: *Sexual behaviors, utilization of VCT services*

INDICATORS	2012			Sig.
	None N=24 8.3%	Low N=56 19.3%	High N=210 72.4%	
BEHAVIOR/USE	% or Mean	% or Mean	% or Mean	
Ever used condom	75.9%a (29)	97.1%b (35)	100%b (217)	***
Used condom at last anal sex with another man	11.5%a (22)	49.7%b (29)	84.4%c (197)	***
Used condom from start to finish during last anal sex with another man	7.6%a (23)	37.7%b (29)	70.7%c (197)	***
Mean number of male regular sexual partners in the last 12 months	0.81a (20)	1.00a (54)	3.91b (200)	***
Mean number of male casual sexual partners in the last 6 months	6.43 (20)	7.95 (54)	7.14 (200)	
Mean number of male commercial sexual partners in the last 6 months	0.18 (22)	2.06 (52)	0.49 (207)	
Mean number of female regular sexual partners in the last 12 months	0.13 (19)	0.26 (56)	0.20 (201)	
Mean number of female casual sexual partners in the last 6 months	0.55 (19)	0.64 (56)	0.43 (201)	
Mean number of female commercial sexual partners in the last 6 months	0.45 (19)	0.29 (56)	0.40 (201)	
Always uses condom for sex with male regular partners in the past 12 months	29.2%a	26.1%a	50.4%b	**
Always uses condom for sex with male casual partners in the past 6 months	12.7%a	44.6%b	91.3%c	***
Condom use OAMs				
OPPORTUNITY				
Availability				

General availability of condom (construct)	2.98a (20)	3.16a (53)	3.37b (200)	***
Condoms are available within a 10 minute walk from where I spend time				
Pharmacies near my home always have condoms for sale				
Condoms are always available in nearby pharmacies				
It is always easy to get a condom when I need one				
Condoms are easily available all times of the day	3.31 (20)	3.21 (56)	3.22 (202)	
Availability of condoms at night and at local drinking location (construct)	2.94ab (20)	2.66b (53)	3.05a (201)	*
Condoms are always available where I drink				
Condoms are easily available at all times of the night				
It is not difficult to get condoms even after pharmacies close				
ABILITY				
Knowledge				
HIV knowledge index	13.69a (20)	14.84a (55)	10.47b (202)	***
Social Support				
Social support received for condom use (construct)	2.98a (17)	2.84a (53)	3.43b (200)	***
Doctors (local health workers) encourage me to use condoms				
My friends support my use of condoms				
My sexual partners support my use of condoms				
My friends discuss condom use with me				
Self-Efficacy				
Self-efficacy of condom use and refusing sex without condom (construct)	3.04a (20)	2.83a (55)	3.36b (201)	***
I am able to refuse sex without condoms even if I'm excited				
I can convince a new partner that we use a condom				

I could convince my regular partner to use a condom if I want to				
I can refuse sex with a partner who refuses to wear a condom				
MOTIVATION				
Attitudes				
Attitudes towards condom use with familiar and trusted partners (construct)	1.59ab (20)	1.78a (56)	1.45b (202)	***
It is inappropriate to use condoms with a sexual partner(s) after three months ®				
Condoms are not necessary when I trust my partner ®				
If my casual partner is trustworthy, I am not going to use a condom ®				
Intention				
Intention for condom use (construct)	3.38ab (18)	3.10a (54)	3.43b (200)	***
I plan to use condoms in the future				
I plan to use a condom with someone I don't know very well				
I plan to use condoms consistently with my casual partners				
I plan to use condoms consistently with people I have sex with in exchange for money				
VCT USE				
Tested for HIV and received results in the last 12 months (among all)	47.5%a (21)	69.6%a (28)	21.1%b (197)	***
Received counseling at the test place (among those get tested in the past 12 months)	34.9% (7)	68.3% (15)	73.2% (28)	
VCT OAMs				
OPPORTUNITY				
Availability				
VCT Availability (construct)	2.9a (17)	2.62a (54)	3.42b (202)	***
Voluntary Counseling and Testing for HIV services are easily available				
Voluntary Counseling and Testing for HIV services are available near where I live				
Voluntary Counseling and Testing services are available outside work hours				

I know where I can go for voluntary counseling and testing for HIV	3.57 (19)	3.29 (55)	3.42 (202)	
ABILITY				
Social Support				
I would encourage my partner(s) to get tested for HIV	3.38ab (20)	3.03a (56)	3.67b (202)	***
I would encourage my friends to get tested for HIV	3.43ab (19)	3.07a (56)	3.46b (202)	***

a,b,c: Proportions and means with different superscripts are significantly different at p<0.05 or better; proportions and means with the same superscript are not significantly different.
*p<.05, **p<.01, ***p<.001
®: the statements are reversed to ensure the higher score, the more positive meaning
Note: Results of UNIANOVA analysis are shown, with controls including socio-demographic variables age, education, marital status, and nationality.

KYRGYZSTAN

Evaluation table
Effectiveness of sexual behavior, utilization of VCT and TB service, and HIV and TB knowledge promotions among MSM in *Kyrgyzstan*, 2012
Risk group: *Men having sex with men*
Behavior: *Sexual behaviors, utilization of VCT services*

INDICATORS	2012			Sig.
	None N=40 15.1%	Low N=78 29.4%	High N=147 55.5%	
BEHAVIOR/USE	% or Mean	% or Mean	% or Mean	
Ever used condom	100% (40)	100% (78)	100% (147)	
Used condom at last anal sex with another man	24.3%a (46)	56.0%b (64)	77.5%c (124)	***
Used condom from start to finish during last anal sex with another man	7.3%a (46)	34.4%b (64)	66.8%c (124)	***
Mean number of male regular sexual partners in the last 12 months	0.83 (40)	1.22 (78)	1.85 (145)	
Mean number of male casual sexual partners in the last 6 months	3.35 (40)	3.37 (78)	4.44 (145)	
Mean number of male commercial sexual partners in the last 6 months	0.05 (40)	0.10 (78)	0.25 (145)	
Mean number of female regular sexual partners in the last 12 months	0.24 (40)	0.36 (78)	0.59 (145)	
Mean number of female casual sexual partners in the last 6 months	0.54 (40)	0.42 (78)	0.43 (145)	

Mean number of female commercial sexual partners in the last 6 months	0.05 (40)	0.12 (78)	0.10 (145)	
Always uses condom for sex with male regular partners in the past 12 months	20.4%a (41)	50.4%b (52)	57.1%b (109)	***
Always uses condom for sex with male casual partners in the past 6 months	8.2%a (43)	63.7%b (48)	62.0%b (102)	***
Condom use OAMs				
OPPORTUNITY				
Availability				
General availability of condom (construct)	3.33 (40)	3.45 (78)	3.39 (144)	
Condoms are available within a 10 minute walk from where I spend time				
Pharmacies near my home always have condoms for sale				
Condoms are always available in nearby pharmacies				
It is always easy to get a condom when I need one				
Condoms are easily available all times of the day	3.25 (40)	3.5 (78)	3.43 (145)	
Availability of condoms at night and at local drinking location (construct)	2.88a (39)	2.86a (77)	3.145b (143)	*
Condoms are always available where I drink				
Condoms are easily available at all times of the night				
It is not difficult to get condoms even after pharmacies close				
ABILITY				
Knowledge				
HIV knowledge index	15.73a (40)	16.12a (78)	16.52b (145)	***
Social Support				
Social support received for condom use (construct)	2.94 (40)	3.05 (78)	3.05 (141)	
Doctors (local health workers) encourage me to use condoms				
My friends support my use of condoms				

My sexual partners support my use of condoms				
My friends discuss condom use with me				
Self-Efficacy				
Self-efficacy of condom use and refusing sex without condom (construct)	2.99a (40)	3.39b (78)	3.26b (145)	*
I am able to refuse sex without condoms even if I'm excited				
I can convince a new partner that we use a condom				
I could convince my regular partner to use a condom if I want to				
I can refuse sex with a partner who refuses to wear a condom				
MOTIVATION				
Attitudes				
Attitudes towards condom use with familiar and trusted partners (construct)	2.87 (40)	3.12 (78)	2.97 (145)	
It is inappropriate to use condoms with a sexual partner(s) after three months ®				
Condoms are not necessary when I trust my partner ®				
If my casual partner is trustworthy, I am not going to use a condom ®				
Intention				
Intention for condom use (construct)	3.50a (40)	3.73b (78)	3.79b (145)	***
I plan to use condoms in the future				
I plan to use a condom with someone I don't know very well				
I plan to use condoms consistently with my casual partners				
I plan to use condoms consistently with people I have sex with in exchange for money				
VCT USE				
Tested for HIV and received results in the last 12 months (among all)	10.3%a (46)	56.9%b (64)	80.9%c (124)	***
Received counseling at the test place (among those get tested in the past 12 months)	20.1%a (2)	39.5%a (34)	89.4%b (98)	***

VCT OAMs				
OPPORTUNITY				
Availability				
VCT Availability (construct)	3.05 (39)	2.93 (75)	3.07 (144)	
Voluntary Counseling and Testing for HIV services are easily available				
Voluntary Counseling and Testing for HIV services are available near where I live				
Voluntary Counseling and Testing services are available outside work hours				
I know where I can go for voluntary counseling and testing for HIV	3.36 (39)	3.43 (77)	3.66 (145)	
ABILITY				
Social Support				
I would encourage my partner(s) to get tested for HIV	3.02a (40)	3.44b (78)	3.41b (145)	*
I would encourage my friends to get tested for HIV	3.07a (40)	3.54b (78)	3.52b (145)	**

a,b,c: Proportions and means with different superscripts are significantly different at p<0.05 or better; proportions and means with the same superscript are not significantly different.
*p<.05, **p<.01, ***p<.001
®: the statements are reversed to ensure the higher score, the more positive meaning
Note: Results of UNIANOVA analysis are shown, with controls including socio-demographic variables age, education, marital status, and nationality.

TAJIKISTAN

Evaluation table
Effectiveness of sexual behavior, utilization of VCT and TB service, and HIV and TB knowledge promotions among MSM in *Tajikistan*, 2012
Risk group: *Men having sex with men*
Behavior: *Sexual behaviors, utilization of VCT services*

INDICATORS	2012			Sig.
	None N=134 40.7%	Low N=120 36.5%	High N=75 22.8%	
BEHAVIOR/USE	% or Mean	% or Mean	% or Mean	
Ever used condom	69%a (98)	91.6%b	96.6%b (69)	***

		(118)		
Used condom at last anal sex with another man	58.4%a (104)	95.0%b (134)	91.9%b (80)	***
Used condom from start to finish during last anal sex with another man	58.4%a (104)	95.0%b (134)	91.9%b (80)	***
Mean number of male regular sexual partners in the last 12 months	2.44a (133)	1.00b (120)	1.93ab (75)	***
Mean number of male casual sexual partners in the last 6 months	7.64 (121)	5.16 (120)	6.63 (74)	
Mean number of male commercial sexual partners in the last 6 months	0.44 (134)	0.33 (120)	0.64 (75)	
Mean number of female regular sexual partners in the last 12 months	0.33 (134)	0.31 (120)	0.80 (75)	
Mean number of female casual sexual partners in the last 6 months	0.29 (134)	0.74 (120)	0.76 (75)	
Mean number of female commercial sexual partners in the last 6 months	0.12 (134)	0.08 (120)	0.45 (75)	
Always uses condom for sex with male regular partners in the past 12 months	6.9%a (58)	16.9%ab (65)	29.3%b (58)	**
Always uses condom for sex with male casual partners in the past 6 months	9.6%a (52)	19%ab (63)	33.3%b (57)	**
Condom use OAMs				
OPPORTUNITY				
Availability				
General availability of condom (construct)	2.95a (67)	1.91b (110)	2.83c (65)	***
Condoms are available within a 10 minute walk from where I spend time				
Pharmacies near my home always have condoms for sale				
Condoms are always available in nearby pharmacies				
It is always easy to get a condom when I need one				
Condoms are easily available all times of the day	3.81 (94)	3.73 (116)	3.91 (75)	
Availability of condoms at night and at local drinking location (construct)	2.10a (62)	1.64b (115)	2.43c (60)	***
Condoms are always available where I drink				

Condoms are easily available at all times of the night				
It is not difficult to get condoms even after pharmacies close				
ABILITY				
Knowledge				
HIV knowledge index	14.10a (128)	14.76b (100)	15.73c (71)	***
Social Support				
Social support received for condom use (construct)	2.11a (126)	2.94b (117)	3.01b (75)	***
Doctors (local health workers) encourage me to use condoms				
My friends support my use of condoms				
My sexual partners support my use of condoms				
My friends discuss condom use with me				
Self-Efficacy				
Self-efficacy of condom use and refusing sex without condom (construct)	2.64a (96)	3.33b (117)	3.10b (67)	***
I am able to refuse sex without condoms even if I'm excited				
I can convince a new partner that we use a condom				
I could convince my regular partner to use a condom if I want to				
I can refuse sex with a partner who refuses to wear a condom				
MOTIVATION				
Attitudes				
Attitudes towards condom use with familiar and trusted partners (construct)	1.34a (126)	1.82b (119)	2.16c (74)	***
It is inappropriate to use condoms with a sexual partner(s) after three months ®				
Condoms are not necessary when I trust my partner ®				
If my casual partner is trustworthy, I am not going to use a condom ®				
Intention				
Intention for condom use (construct)	3.61 (95)	3.62 (118)	3.65 (72)	

I plan to use condoms in the future				
I plan to use a condom with someone I don't know very well				
I plan to use condoms consistently with my casual partners				
I plan to use condoms consistently with people I have sex with in exchange for money				
VCT USE				
Tested for HIV and received results in the last 12 months (among all)	29.3%a (119)	76.5%b (122)	91.0%c (70)	***
Received counseling at the test place (among those get tested in the past 12 months)	57.0%a (18)	50.7%a (76)	89.3%b (51)	***
VCT OAMs				
OPPORTUNITY				
Availability				
VCT Availability (construct)	2.86a (54)	2.49b (114)	3.14c (75)	***
Voluntary Counseling and Testing for HIV services are easily available				
Voluntary Counseling and Testing for HIV services are available near where I live				
Voluntary Counseling and Testing services are available outside work hours				
I know where I can go for voluntary counseling and testing for HIV	3.70ab (71)	3.58a (120)	3.86b (75)	*
ABILITY				
Social Support				
I would encourage my partner(s) to get tested for HIV	2.97a (114)	3.39b (119)	3.38b (74)	***
I would encourage my friends to get tested for HIV	2.52a (119)	2.40a (117)	3.01b (74)	***

a,b,c: Proportions and means with different superscripts are significantly different at p<0.05 or better; proportions and means with the same superscript are not significantly different.
*p<.05, **p<.01, ***p<.001
®: the statements are reversed to ensure the higher score, the more positive meaning
Note: Results of UNIANOVA analysis are shown, with controls including socio-demographic variables age, education, marital status, and nationality.

ANNEX D: RELIABILITY ANALYSIS

RELIABILITY ANALYSIS 1:

Consistent condom use among MSM in Kazakhstan, Kyrgyzstan, Tajikistan, 2012

Risk Group: *Men who have sex with men*

Behavior: *Consistent condom use*

Composite Variables	2012 Cronbach's Alpha
OPPORTUNITY	
Availability: General available of condoms 1. Condoms are available within 10 minutes of where I hang out 2. Pharmacies near my house have condoms for sale 3. It is always easy to get a condom when I need one 4. Condoms are easily available all times of the day	**0.883**
Availability: Availability of condoms at night and at local drinking location 1. Condoms are easily available at my local drinking place 2. Condoms are easily available at all times of the night 3. It is easy to find condoms even after pharmacies close	**0.773**
ABILITY	
Self-efficacy for negotiating condom use and refusing sex without a condom 1. I am able to refuse sex without condoms even it I'm excited 2. I can convince my partner that we use a condom 3. I could convince my regular partner to use a condom if I wanted to 4. I am able to deny sex with a partner who refuses to wear a condom	**0.816**
Self-efficacy for acquiring condoms 1. I would be uncomfortable to buy condoms in a public place ® 2. I would be uncomfortable to get condoms for free from a health facility ® 3. I would be uncomfortable to buy condoms close to my home ®	**0.904**
Social support: Social support given for condom use 1. I encourage my partners to use condoms 2. I encourage my peers to use condoms with their regular sexual partner(s) 3. I encourage my peers to use condoms with their casual sexual	**0.867**

partner(s)	
Social support: Social support received for condom use 1. Doctors (local health workers) encourage me to use condoms 2. My friends support my use of condoms 3. My sexual partners support my use of condoms 4. My friends discuss condom use with me	**0.860**
MOTIVATION	
Attitudes towards condom use with familiar and trusted partners 1. It is inappropriate to use condoms with a sexual partner/s after three months ® 2. Condoms are not necessary when I trust my partner ® 3. If my casual partner is trustworthy I am not going to use a condom ®	**0.849**
Attitudes towards effect of condom use on sex 1. Using a condom reduces sexual pleasure ® 2. Condoms are messy ® 3. Using a condom makes sex less adventurous ® 4. Using a condom ruins the mood during sex ®	**0.934**
Intention to use condoms 1. I plan to use condoms in the future 2. I plan to use a condom with someone I don't know very well 3. I plan to use condoms consistently with my casual partners 4. I plan to use condoms consistently with people I have sex with in exchange for money	**0.836**

RELIABILITY ANALYSIS 2:

VCT utilization among MSM in Kazakhstan, Kyrgyzstan, Tajikistan, 2012

Risk Group: *Men who have sex with men*

Behavior: *VCT utilization*

Composite Variables	2012 Cronbach's Alpha
OPPORTUNITY	
VCT Availability 1. Voluntary Counseling and Testing for HIV services are easily available 2. Voluntary Counseling and Testing for HIV services are available near where I live 3. Voluntary Counseling and Testing services are available outside work hours	**0.702**
ABILITY	
HIV/AIDS Knowledge (correctly answer 14 or more items) 1. I can get HIV from a single sex act 2. I can get HIV through kissing ® 3. I can get HIV through hugging ® 4. I can get HIV through sharing utensils or food with an infected person ® 5. HIV can be transmitted through vaginal fluid 6. HIV can be transmitted through semen 7. HIV can be transmitted through blood 8. HIV can be transmitted through breast milk 9. HIV can be transmitted by mosquitoes ® 10. HIV can be transmitted by used injection needles 11. Having an STI (e.g. gonorrhea, syphilis, etc.) can increase the likelihood of contracting HIV 12. An HIV test is the only way to tell if one has HIV 13. Using condoms regularly reduces the risk of getting HIV 14. Mutual monogamy (faithfulness to one partner) reduces the risk of HIV 15. Always using clean/sterile needles reduces the risk of getting HIV	**Index – no alpha required**

16. Unprotected sex can increase the risk of contracting HIV and STI 17. Healthy-looking person can be infected with HIV	
High Knowledge of HIV Transmission Routes (both correct and incorrect) (8/10 or better) 1. I can get HIV from a single sex act 2. I can get HIV through kissing ® 3. I can get HIV through hugging ® 4. I can get HIV through sharing utensils or food with an infected person ® 5. HIV can be transmitted through vaginal fluid 6. HIV can be transmitted through semen 7. HIV can be transmitted through blood 8. HIV can be transmitted through breast milk 9. HIV can be transmitted by mosquitoes ® 10. HIV can be transmitted by used injection needles	**Index – no alpha required**
MOTIVATION	
Intention to get tested 1. I plan to get tested for HIV with my partner(s) in the next three months 2. I plan to get tested before I have sex with a new partner 3. I plan to get tested after I have sex with a new partner	**0.786**
Beliefs about who needs to get tested for HIV 1. Voluntary counseling and testing is only for HIV positive people ® 2. Voluntary counseling and testing is only for promiscuous people ® 3. I should only go for VCT when I am sick or ill ®	**0.90**

Note:

1. Scale values range from 1 to 4: 1 = strongly disagree; 2 = disagree; 3 = agree; and 4 = strongly agree.
2. ® indicates reverse-coded items. Scores for these items have been reversed so that a high score signifies a positive/desired response. Wording of these items has not been reversed and they read as they were presented to respondents.