Access to HIV Prevention and Treatment for Men Who Have Sex with Men

Findings from the 2012 Global Men's Health and Rights Study (GMHR)

The Global Forum
on MSM & HIV (MSMGF)

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Summary Factsheet

Findings from the 2012 Global Men's Health and Rights Study (GMHR)

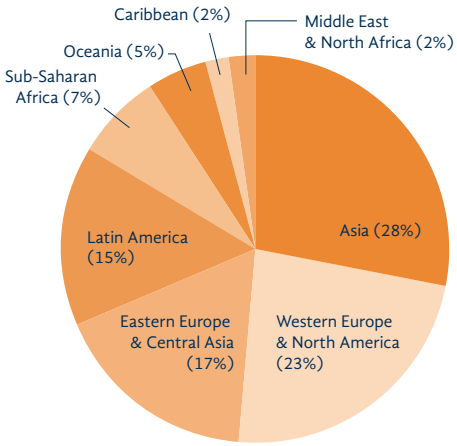
In early 2012, the Global Forum on MSM & HIV (MSMGF) conducted the second biennial Global Men's Health and Rights study (GMHR). Including both a global online survey component and focus group discussion component, the 2012 GMHR aimed to A) identify barriers and facilitators that affect access to HIV services for men who have sex with men (MSM), and B) place access to HIV services in the broader context of sexual health and lived experiences of MSM globally.

GLOBAL ONLINE SURVEY

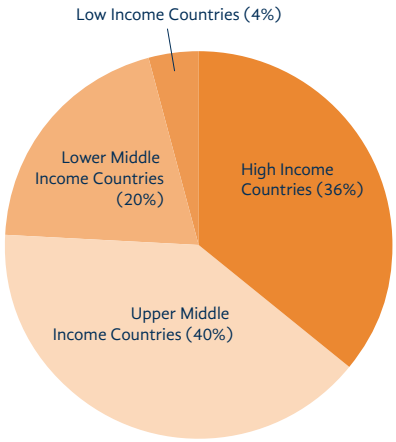
Participant Characteristics

A total of 5779 MSM from 165 countries participated in the global online survey.

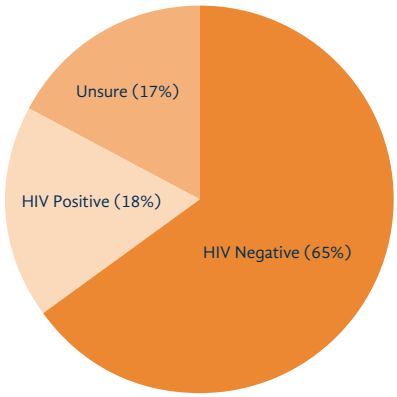
Participants by Region



Participants by Country Income Level



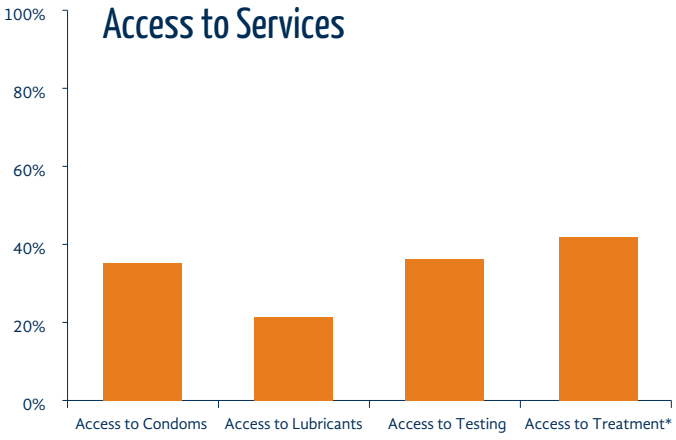
HIV Status



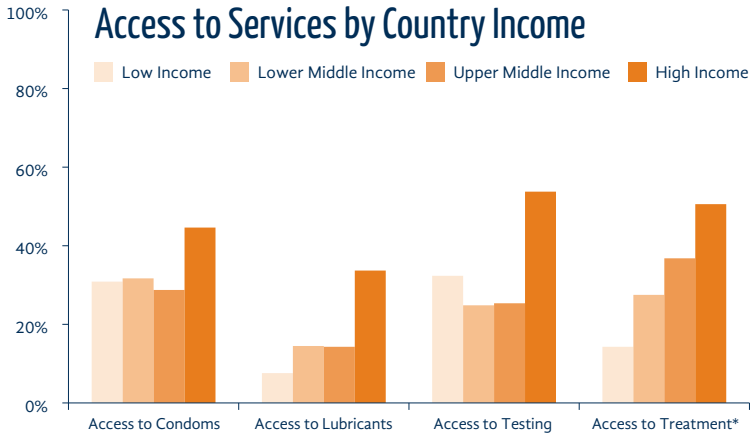
Access to Services

A low percentage of respondents reported that condoms, lubricant, and HIV services were easily accessible.

Access to Services



Access to Services by Country Income



*Access to HIV Treatment was measured only among respondents who reported living with HIV.

Barriers and Facilitators

Data from the global survey revealed several barriers (factors associated with lower access) and facilitators (factors associated with higher access) that impact the ability of MSM to obtain condoms, lubricants, HIV testing, and HIV treatment. Homophobia, provider stigma, and negative consequences for being out as MSM were significantly associated with reduced access to services. Conversely, community engagement and comfort with health service provider were each significantly associated with increased access to services.

Each statistic reported is an adjusted odds ratio significant at p<.05. The height of the arrow indicates the strength of association. Arrow height corresponds to the logarithm of the odds ratio.

FOCUS GROUP DISCUSSIONS

The MSMGF worked with the African Men for Sexual Health and Rights (AMSHeR) and local partner organizations in South Africa, Kenya, and Nigeria to conduct focus group discussions with MSM in Pretoria, Johannesburg, Nairobi, Lagos, and Abuja.

Participant Characteristics

A total of 71 MSM participated across 5 focus groups. In order to protect the confidentiality of the participants, demographic information was not collected. All participants were MSM, and each focus group included men living with HIV.

Focus Group Findings

Focus group interviews revealed common concerns among participants across regions, sexual identities, and HIV serostatus. Factors impacting access to HIV services were organized into 3 categories: structural factors, community/interpersonal factors, and individual factors.

	Barriers	Facilitators
STRUCTURAL	Structural barriers at the policy, cultural, and institutional level include criminalization of homosexuality, high levels of stigma and discrimination, homophobia in health care systems, and poverty. These barriers create an environment where blackmail, extortion, discrimination, and violence against MSM are allowed to persist. MSM are forced to hide their sexual behavior from health care providers, employers, landlords, teachers, and family in order to protect themselves and maintain a minimum livelihood. The inability of MSM to reveal their sexual behavior to health care providers was related with misdiagnosis, delayed diagnosis, and delayed treatment, leading to poor health prognosis and higher risk of transmitting HIV and other sexually transmitted infections to partners.	Negative consequences of structural barriers were moderated by the existence of safe spaces to meet other MSM, safe spaces to receive services, access to competent mental health care, and access to comprehensive health care. Participants described the community-based organizations where the focus groups took place as safe spaces where they could celebrate their true selves, receive respectful and knowledgeable health care, and in some cases receive mental health services.
COMMUNITY / INTERPERSONAL	Structural barriers undermine the ability of MSM to develop close personal relationships. These structural factors have contributed to reduced trust, reduced communication, reduced learning opportunities, and reduced social support between men and their familial, social, and health networks. The injury to social and interpersonal relationships leads to poor self-worth, depression, and anxiety, undermining health-seeking behaviors.	Community engagement, family support, and stable relationships were recognized as facilitators of health and well-being. Community engagement in safe spaces, such as community-based organizations, served as a respite from hiding, shame, fear, and violence. The support of other MSM was essential for developing social networks of friends as well as for learning where to find a trustworthy health care provider.
INDIVIDUAL	Structural and interpersonal barriers were connected to health vulnerabilities at the individual level. Many men described limited access to education, work, and sustainable income, contributing to substance abuse and sex work among some participants.	Participants recognized that stable financial resources, sustainable work, and education were protective and could significantly expand personal opportunities and improve quality of life.

CONCEPTUAL FRAMEWORK

The consistency between the quantitative and qualitative findings indicated a strong pattern of relationships. These relationships are described in the framework below, illustrating the structural, community/interpersonal, and individual factors that impact access to HIV services for MSM and sexual health more broadly.

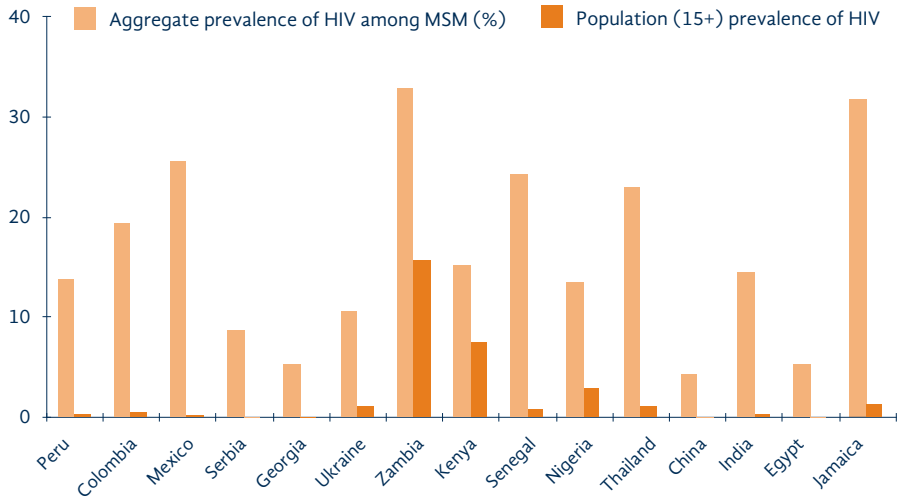
	Structural	Community/ Interpersonal	Individual	
Facilitators	Safe spaces Comprehensive, tailored health & mental health services	Stable relationships Family support Community engagement	Financial resources Sustainable work Education	Sexual Health
Barriers	Criminalization Sexual prejudice Discrimination Cultural norms Poverty Insensitive/uninformed providers	Extortion Blackmail Ridicule Eviction Job termination Violence	Fear Poor self-worth Depression Suicide Anxiety Substance abuse Delay/avoidance of services Treatment interruption	Service Access
Critical Enablers	Political will Laws, policies & practices	Mobilization Organizational capacity Provider sensitization Education & training Social connectivity	Linkage to care and comprehensive services	

Introduction

Gay men and other men who have sex with men (MSM) continue to shoulder a disproportionate HIV disease burden in virtually every country that reliably collects and reports surveillance data. This fact has been true since the epidemic began in the early 1980s.[i,ii]

In many high-income countries, HIV epidemics among MSM continue to climb even while overall HIV epidemics are in decline.[iii,iv] In the United States, new HIV infections among MSM have been increasing 8% per year since 2001. [v] In low- and middle-income countries across Africa, Asia, the Caribbean, and Latin America, HIV rates among MSM are skyrocketing, far exceeding those of the general population.

Figure 1. HIV Prevalence rates for MSM and general population, selected countries (World Bank, 2011)



Due to stigma, discrimination, and criminalization, the HIV epidemic among MSM continues to go largely unaddressed in many countries. As of December 2011, 93 countries had failed to report any data on HIV prevalence among MSM over the previous 5 years,[vi] and reports indicate that less than 2% of global HIV prevention funding is directed toward MSM.[vii]

These troubling trends are taking place as the HIV prevention and treatment landscape has begun to shift dramatically. New research has shown the prevention potential of biomedical interventions like Pre-Exposure Prophylaxis (PrEP) and antiretroviral treatment, blurring the traditional lines between prevention and treatment. These advances have led some to predict the beginning of the end of AIDS, and they have profound implications for the health and human rights of MSM around the world. However, in order for MSM to benefit from new (and existing) prevention and treatment interventions, we must clearly understand the barriers and facilitators that affect access to these interventions for MSM in diverse contexts.

The Bill & Melinda Gates Foundation commissioned the Global Forum on MSM & HIV (MSMGF) to identify barriers and facilitators of PrEP uptake among MSM globally. The MSMGF took this as an opportunity to strengthen understanding of the structural-level, community-level, and individual-level factors that influence access to services for MSM more broadly, placing challenges to access within the context of lived experiences and concerns of MSM.

Toward this goal, the MSMGF developed and implemented a global multilingual online survey to identify and examine barriers and facilitators to service access for MSM around the world. The quantitative data from the online survey was supplemented with qualitative data from a series of focus group discussions with MSM in South Africa, Kenya, and Nigeria.Discussions were focused on the specific needs of MSM within their respective political, social, and individual contexts.

Combining the online survey and focus group discussions, our specific aims were to:

1. Identify and explore barriers and facilitators that affect access to prevention and treatment services for gay men and other MSM globally; and

2. Place access to HIV services in the broader context of sexual health and lived experiences of gay men and other MSM.

This report first describes the methods and results of the online survey, followed by the methods and results of the focus group discussions. These sections are followed by a discussion section that explores the barriers and facilitators revealed by quantitative data in the survey, as well as the broader context of these barriers and facilitators as revealed in the focus group discussions. The report ends with a look forward at future directions.

Online Survey

METHODS

Survey Instrument

In March 2012, the MSMGF formed a multidisciplinary research team to design and implement a multilingual online survey to identify and explore barriers and facilitators affecting access to HIV services for MSM at the structural level, community level, and individual level. The team hypothesized potential barriers and facilitators for service access and met weekly for 16 weeks to develop domain categories, scales, and items to measure their level of impact on access to services. Some domains, scales, and items were adapted from previously published scales, and others were newly developed for this survey (See Table 1 for survey domains). The English survey was translated into Chinese, French, Georgian, Russian, and Spanish.

Recruitment and Implementation

From April 23 to August 20, 2012, a global convenience sample of cisgender MSM was recruited to complete the 30-minute online survey. Survey participants were recruited via the MSMGF's extensive networks and ties to community-based organizations focused on advocacy, health, and social services. The MSMGF sent e-mail blasts advertising the survey through regional and global listservs focused on MSM and/or HIV, and community-based organizations advertised the survey through their local networks of MSM. The MSMGF also placed web banners on social networking sites popular with MSM.

Data

The 4 outcomes listed in Table 1 were measured using 5-point Likert-like scales, with 1 indicating complete inaccessibility and 5 indicating that a service is easily accessible. These variables were dichotomized so that respondents were considered to have access if they reported the highest level of accessibility.

Table 1. Predictor Variables and Outcome Variables

Hypothesized Barriers	Hypothesized Facilitators	Outcomes
Provider Stigma	Community Engagement	Access to Condoms
Homophobia	Connection to Gay Community	Access to Lubricants
Violence – HIV	Comfort with Provider	Access to HIV Testing
Violence – MSM	Outness	Access to HIV Treatment
Negative Consequences for Outness		

Barrier and facilitator variables were measured using multiple-item scales. All scales ranged from 1 to 5 except Provider Stigma, which ranged from 0 to 1. To assess reliability of these scales, we calculated Cronbach alphas overall and by survey language. As shown in Table 2, overall reliability of scales used in the analyses was in an acceptable range (alpha levels ranged from 0.71 to 0.85). However, there was low reliability for the scales measuring HIV-related violence and provider stigma in the French survey, and low reliability for the scale measuring connection to the gay community in the Georgian survey. Because of missing responses, it was not possible to determine the reliability of the HIV-related violence scale for the Georgian survey.

In addition to assessing access to HIV services, the survey was also designed to investigate PrEP acceptability among participants. PrEP acceptability and PrEP stigma are described in Table 2. Prep knowledge was measured by asking 2 yes/no questions about PrEP and assigning a score depending on the respondent's answers to both questions.

Country income was investigated as a possible predictor for access to services, as well as for PrEP acceptability. The country income variable was derived from World Bank classifications of country income. Country income categories were as follows: Low Income, Lower Middle Income, Upper Middle Income, and High Income.

Table 2. Scale Reliabilities

Scale Description	CRONBACH ALPHAS						
	OVERALL	English	Spanish	Russian	Chinese	French	Georgian*
Homophobia: Perceptions of homophobia in participant's country. *eg, In your country, how many people believe that a person who is gay/MSM cannot be trusted?*	**.85**	.86	.76	.70	.73	.88	.59
Violence – MSM: Experiences of violence for being perceived to be MSM. *eg, In the past 12 months, how often were you physically assaulted (slapped, punched, pushed, hit or beaten) for being gay/MSM?*	**.81**	.81	.75	.83	.71	.88	.84
Violence – HIV**: Experiences of violence for being HIV positive. *eg, In the past 12 months, how often were you physically assaulted (slapped, punched, pushed, hit or beaten) for being HIV positive?*	**.75**	.75	.65	.87	.86	.56	–
Provider Stigma: Experiences of stigma from health providers. *eg, In your country, has a health provider ever treated you poorly because of your sexuality?*	**.72**	.72	.77	.68	.71	.56	1
Outness: To what degree the participant's sexuality is known to others. *eg, How many of your co-workers know that you are attracted to men?*	**.84**	.84	.81	.74	.74	.84	.81
Negative Consequences of Outness: Negative experiences because the participant's sexuality is known to others. *eg, How often have you experienced negative consequences as a result of coworkers knowing that you are attracted to men?*	**.71**	.71	.70	.71	.71	.76	.91
Community Engagement: Level of engagement in social activities with other MSM. *eg, During the past 12 months, how often have you participated in gay social groups or in activities such as a book or cooking club?*	**.76**	.76	.77	.72	.81	.76	.66
Connection to Gay Community: The degree to which the participant feels connected to a community of MSM. *eg, How connected do you feel to the gay community where you live?*	**.78**	.79	.80	.69	.78	.75	.36
Comfort with Provider: Degree of comfort with health provider. *eg, In your country, how comfortable would you feel discussing HIV with your health care provider?*	**.81**	.82	.72	.72	.70	.86	.71
PrEP Stigma**: Perceptions of stigma associated with taking PrEP. *eg, If you thought other people would find out that you were taking PrEP drugs to avoid being infected with HIV, how likely is it that you would use PrEP?*	**.74**	.72	.71	.76	.77	.76	.86
PrEP Acceptability**: Acceptability of PrEP as an HIV prevention method. *eg, How comfortable are you with the idea of using HIV medications to avoid becoming infected with HIV?*	**.82**	.83	.79	.78	.79	.82	.78

* Psychometric properties for Georgian scales based on a small sample size (for most, range of N from 14 to 29).
**The scales for acceptability of PrEP and PrEP stigma were only measured among respondents who reported being HIV negative, or being unsure of their HIV statuses. HIV-related violence was only measured among respondents who reported living with HIV.

Analysis

Multivariable logistic regression was used to model the dichotomous outcomes for access to condoms, access to lubricants, access to HIV testing, and access to HIV treatment. The continuous outcome for acceptability of PrEP was modeled using multivariable linear regression. Likelihood ratio tests were used to assess the statistical significance of the country income classification variable and Wald tests were used to assess the statistical significance of the other predictors. McNemar tests for paired proportions were used to assess differences in the different outcomes (eg, to test the difference in proportions of respondents who reported having access to condoms compared to those who reported having access to lubricants).

In order to select predictor variables to include in multivariable models, bivariate associations between each predictor and outcome were examined. Predictor variables that were associated with outcomes with a statistical significance of 0.1 were included in the model. All data analysis was carried out using the statistical package, "R."

Results

ONLINE SURVEY FINDINGS

Respondent Characteristics

Overall, 5779 men accessed the survey and 4083 completed it, indicating a 71% completion rate. The majority of the surveys were completed in English (58%, N=2361), followed by Spanish (17%, N=710), Russian (12%, N=483), Chinese (9%, N=356), French (3%, N=147), and Georgian (1%, N=28). The mean age of participants was 35 (range: 12–90 years old). Participants described themselves as "gay" (84%), "bisexual" (13%), "heterosexual" (2%), and "other" (1%).

A total of 165 countries were represented in the sample. The sample contained a high degree of diversity by region and by country income level (see Figures 2 and 3; full list of countries represented available in Appendix I). The sample was also diverse in regard to socioeconomic variables, including personal income level, education level, and housing status (see Figures 4, 5, and 6).

Eighteen percent of respondents reported that they were living with HIV. Of these respondents, the vast majority reported that they were taking antiretroviral medication, and CD4 counts were generally high (see Figures 7, 8, and 9). Among participants living with HIV whose CD4 count was lower than 350 (N=176), 23% reported not taking antiretroviral medications.

Most survey participants indicated being sexually active in the last 12 months (91%). Among those who had sex in the last year, 76% reported having sex with 2 or more partners in the prior year, while 24% reported sex with only 1 partner in the prior year; most of these participants said they had sex in the last year with men only (90%), 5% said they had sex with men and women, 2% said they had sex with women only, and 1% said they had sex with transgender partners.

Figure 2. Participants by Region

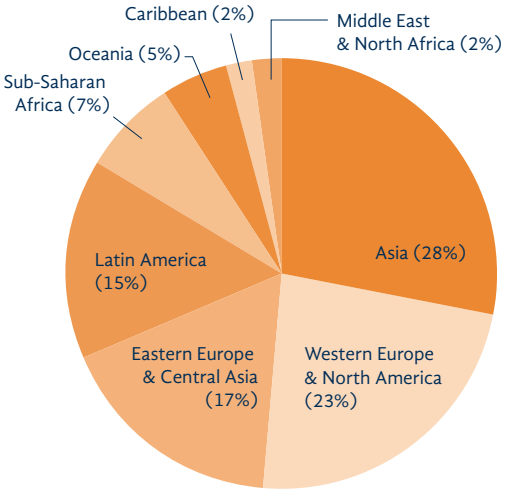


Figure 3. Participants by Country Income Level

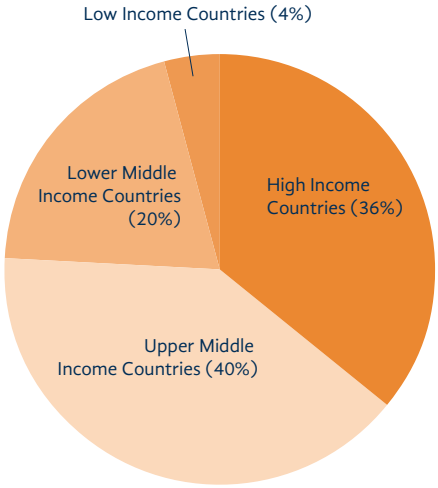


Figure 4. Level of Education

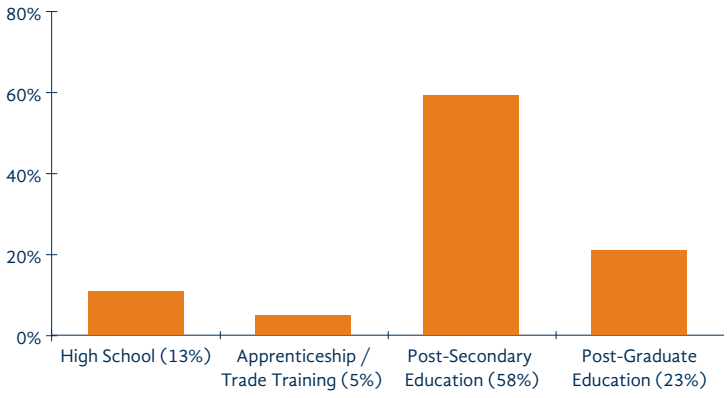


Figure 5. Level of Income

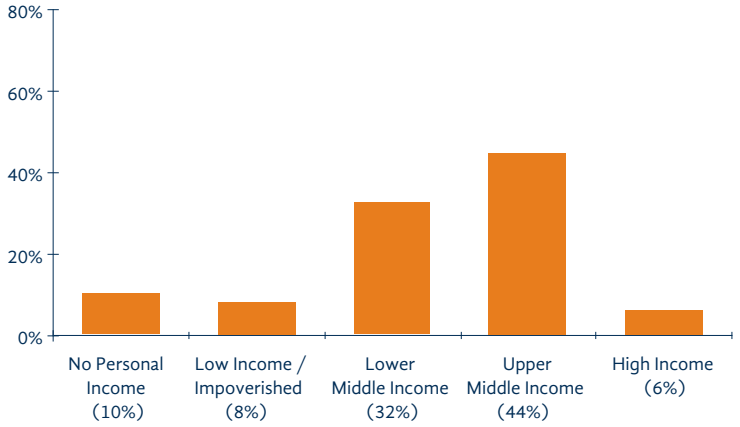


Figure 6. Housing Status

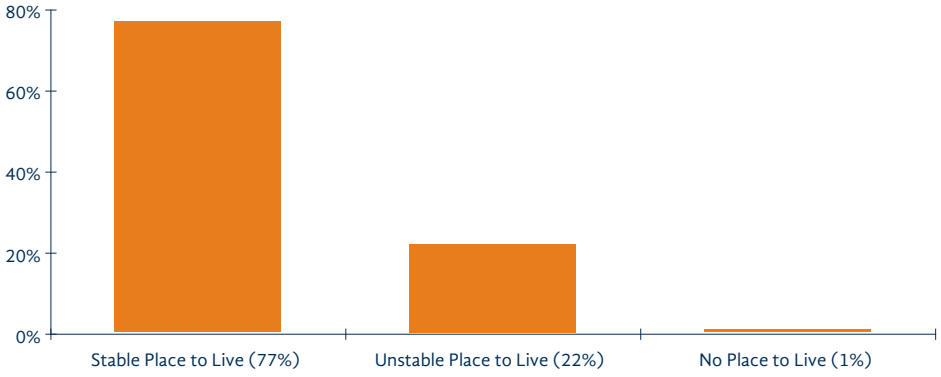


Figure 7. HIV Status

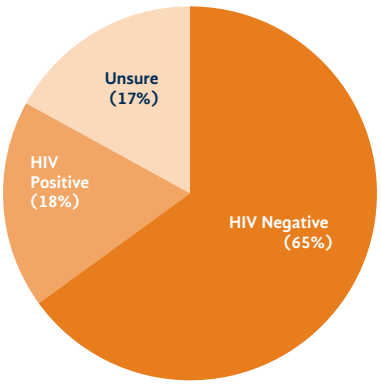


Figure 8. Treatment Status

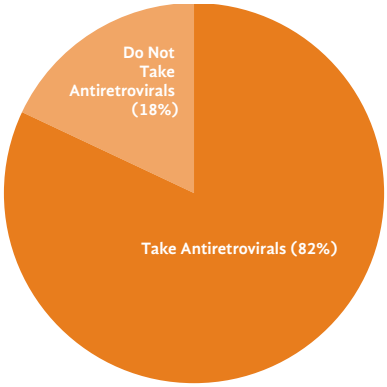
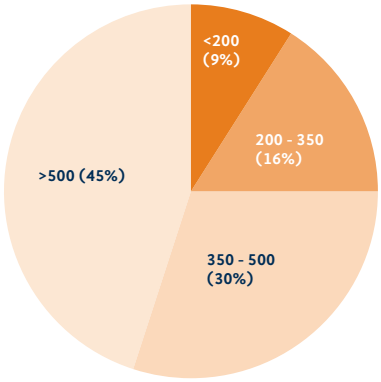


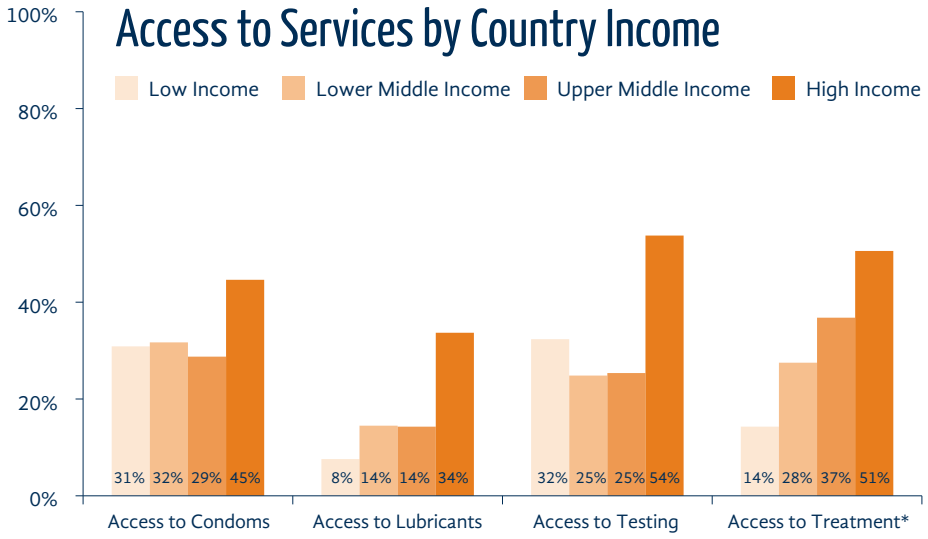
Figure 9. CD4 Count



Access to Services

A low percentage of respondents reported that condoms, lubricants, HIV testing, and HIV treatment were easily accessible (see Figure 10). Among participants living with HIV, access to treatment was higher than access to condoms ($p = 0.02$) and access to lubricants ($p < 0.001$). Among HIV-negative participants and participants who were unsure about their HIV status, access to testing was significantly higher than access to lubricants ($p < 0.001$) but not significantly different from access to condoms ($p = 0.24$).

Figure 10. Percent of MSM reporting that condoms, lubricants, HIV testing, and HIV treatment are easily accessible, organized by country income level according to World Bank classifications



*Access to HIV treatment was measured only among respondents who reported living with HIV.

Bivariate Analysis[1]

Bivariate analyses were conducted to identify predictors (barriers and facilitators) that were significantly associated with outcomes (access to services). Significant associations were found for most hypothesized barriers and hypothesized facilitators.

Homophobia, violence toward MSM, and negative consequences for being out as MSM were significantly associated with lower odds of having access to condoms, lubricants, HIV testing, and HIV treatment. Increased provider stigma was significantly associated with lower odds of having access to condoms, lubricants, and HIV testing, but was not associated with access to HIV treatment. Among respondents living with HIV, experiences of violence for being HIV positive were significantly associated with lower access to HIV treatment.

Conversely, community engagement, connection to gay community, being out as gay or MSM, and comfort with provider were each significantly associated with higher odds of having access to condoms, lubricants, HIV testing, and HIV treatment.

Finally, respondents from low income countries reported significantly less access: to all services compared to those from high income countries; to lubricants and HIV treatment compared to upper middle income countries; and to lubricants compared to low middle income countries. However, compared to lower and upper middle income countries, respondents from low income countries had significantly more access to HIV testing.

For each of the associations mentioned above, Table 3 (below) shows the odds ratio associated with a 1-point increase in the predictor.

Table 3. Bivariate associations between hypothesized barriers, hypothesized facilitators, and outcomes

		Access to Condoms	Access to Lubricants	Access to HIV Testing	Access to HIV Treatment
		Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio
Barriers	Homophobia	0.55^{+}	0.40^{+}	0.39^{+}	0.37^{+}
	Violence – MSM	0.84^{+}	0.69^{+}	0.72^{+}	0.65^{+}
	Violence – HIV*	-	-	-	0.59^{+}
	Provider stigma	0.58^{+}	0.68^{+}	0.70^{+}	0.75^{NS}
	Negative consequences for outness	0.76^{+}	0.64^{+}	0.60^{+}	0.64^{+}
Facilitators	Outness	1.19^{+}	1.21^{+}	1.38^{+}	1.28^{+}
	Community engagement	1.6^{+}	1.51^{+}	1.7^{+}	1.28^{+}
	Connection to gay community	1.40^{+}	1.41^{+}	1.51^{+}	1.25^{+}
	Comfort with provider	1.7^{+}	1.96^{+}	2.31^{+}	1.72^{+}
Country Income	Lower Middle Income vs Low Income	1.04	2.06^{+}	0.69^{++}	2.28
	Upper Middle Income vs Low Income	0.90	2.03^{+}	0.71^{++}	3.49^{+}
	High Income vs Low Income	1.80^{+}	6.19^{+}	2.43^{+}	6.14^{+}

For country income, an overall test of significance was conducted using likelihood ratio tests. The country income variable was significantly associated with each outcome at the 0.1 level. Relationships that were significant at the 0.05 level are marked with + and those that are significant at the 0.1 level are marked with ++. Those that were not significant at the 0.1 level are marked with NS.

*Because HIV-related violence was only measured among respondents who reported being HIV positive, it was only analyzed as a predictor for the Access to HIV Treatment among respondents reporting HIV-positive status.

1 Bivariate analysis identifies predictors that are statistically associated with the outcomes, but this association may not indicate causation.

Adjusted Analysis[2]

Adjusting for barriers and facilitators and for country income, higher access to condoms was associated with less homophobia (AOR[3]=0.69, 95%CI: [0.59 to 0.81]), fewer experiences of provider stigma (AOR=0.65; 96%CI: [0.49 to 0.85]), more community engagement (AOR=1.29; 95%CI: [1.09 to 1.52]), and more comfort with provider (AOR=1.49; 95%CI: [1.34 to 1.67]).

Higher access to lubricants was associated with less homophobia (AOR=0.58; 95%CI: [0.48 to 0.70]), more community engagement (AOR=1.22; 95%CI: [1.01 to 1.48]), more comfort with provider (AOR=1.62; 95%CI: [1.42 to 1.84]), and less outness (AOR=0.77; 95%CI: [0.68 to 0.87]).

Higher access to HIV testing was associated with less homophobia (AOR = 0.67; 95%CI: [0.57 to 0.79]), more community engagement (AOR=1.29; 95%CI: [1.09 to 1.54]), more comfort with provider (AOR=1.75; 96%CI: [1.56 to 1.96]), and fewer negative consequences for outness (AOR=0.81; 95%CI: [0.71 to 0.93]).

Among participants living with HIV, higher access to HIV treatment was associated with less homophobia (AOR=0.41; 95%CI: [0.28 to 0.57]) and higher comfort with provider (AOR=1.39; 95%CI: [1.09 to 1.79]).

Country income was significantly associated with access to lubricants and HIV testing, but not significantly associated with access to condoms or HIV treatment. Respondents from high income countries reported significantly more access to lubricants than respondents from low income countries (AOR = 4.12; 95%CI: [1.40 to 17.68]). Access to HIV testing was significantly higher in high income countries than in upper middle income countries (AOR=1.65, 95%CI: [1.41 to 1.94]).

Figure 11 (next page) shows the adjusted odds ratio associated with a 1-point increase in each predictor. In each case, the height of the arrow corresponds to the strength of association. The faint bars represent predictors that were not statistically significant in the adjusted model.

2 An adjusted analysis controls for potential confounding factors that may distort the relationship between the predictor and outcome of interest. This analysis is an estimate of the association between the predictor and outcome, independent of confounding factors.
3 AOR = Adjusted Odds Ratio

Figure 11. Adjusted odds ratios for Access to Condoms, Lubricants, HIV Testing, and HIV Treatment

Each statistic reported is an adjusted odds ratio significant at p<.05. The height of the arrow indicates the strength of association. Arrow height corresponds to the logarithm of the odds ratio.

PrEP Knowledge and Acceptability

Half of the participants reported high levels of knowledge about PrEP (48%), with the remaining participants split between medium (23%) and low (29%) levels of PrEP knowledge.

Bivariate analysis revealed surprising relationships between PrEP acceptability and barriers and facilitators. Homophobia, provider stigma, negative consequences for outness, and violence against MSM were positively associated with PrEP acceptability, whereas outness and community engagement were negatively associated. Higher country income level was associated with lower PrEP acceptability and higher knowledge about PrEP was associated with lower PrEP acceptability. Unsurprisingly, PrEP stigma was negatively related with PrEP acceptability. For each predictor, Table 4 (below) shows the beta coefficient associated with a 1-point increase in the predictor.

Table 4. Bivariate beta coefficients for PrEP acceptability

		PrEP Acceptability
		Coefficient
Barriers	Homophobia	0.2+
	Violence – MSM	0.16+
	Provider stigma	0.16+
	Negative consequences for outness	0.17
Facilitators	Outness	-0.11
	Community engagement	-0.08
	Connection to gay community	-0.02NS
	Comfort with provider	-0.03NS
PrEP Specific	PrEP Stigma	-0.42+
	PrEP Knowledge	-0.37+
Country Income	Lower Middle Income vs Low Income	-0.23+
	Upper Middle Income vs Low Income	-0.45+
	High Income vs Low Income	-0.83+

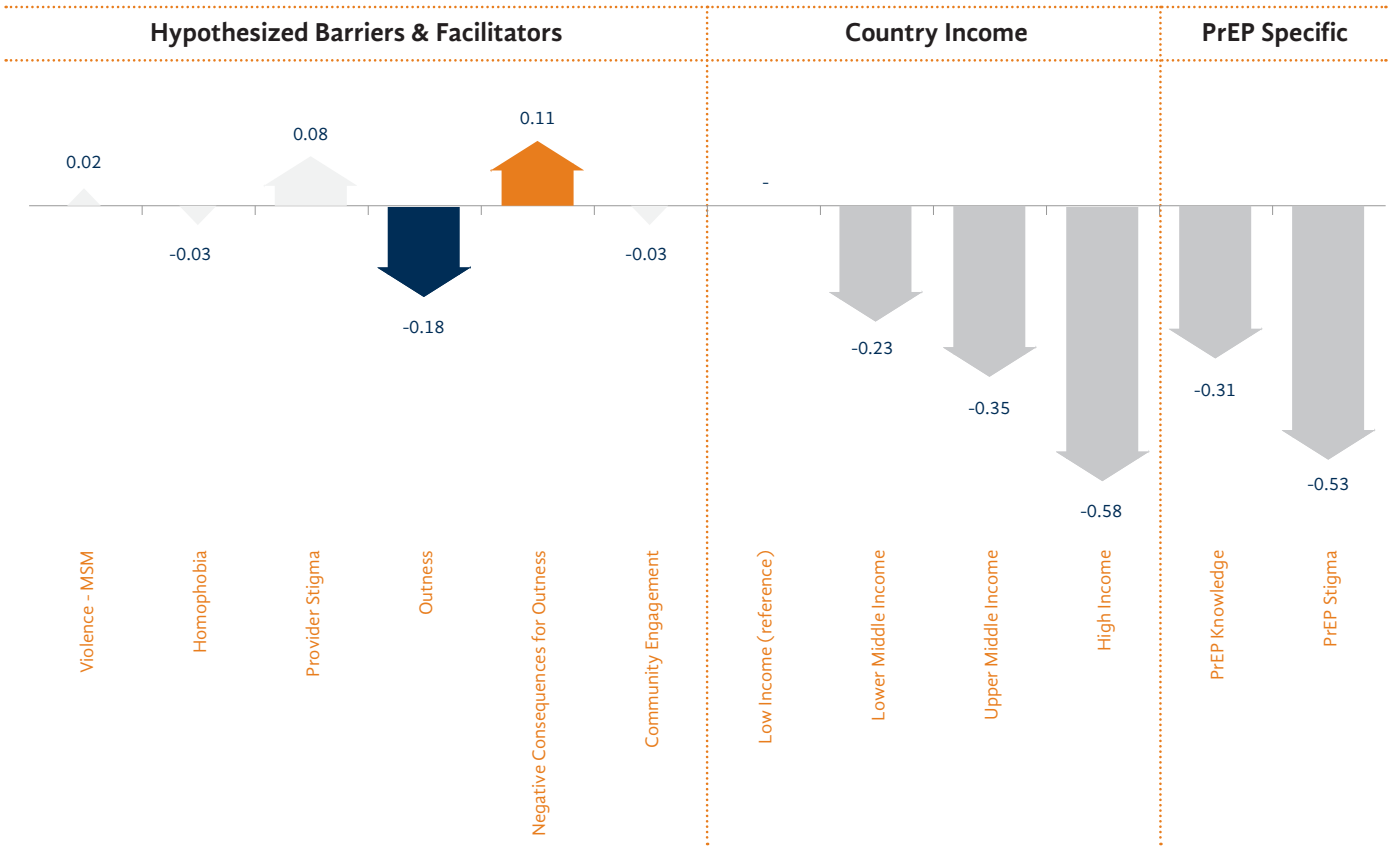
For country income, an overall test of significance was conducted using likelihood ratio tests. The country income variable was significantly associated with each outcome at the 0.1 level.

Relationships that were significant at the 0.05 level are marked with + and those that are significant at the 0.1 level are marked with ++. Those that were not significant at the 0.1 level are marked with NS.

Adjusting for barriers, facilitators, and knowledge of PrEP, country income level was significantly associated with acceptability of PrEP ($p<0.001$). Respondents in upper middle income countries reported less acceptability of PrEP than respondents in low income countries (β=-0.35; 95%CI: [-0.63 to -0.07]). Respondents in high income countries also reported less acceptability than respondents in low income countries (β=-0.58; 95%CI: [-0.87 to -0.29]).

Higher acceptability of PrEP was associated with lower PrEP stigma (β= -0.53; 95%CI: [-0.57 to -0.49]), less outness (β= -0.18; 95%CI: [-0.22 to -0.13]), more negative experiences due to outness (β =0.11; 95%CI: [0.05 to 0.17]), and less knowledge about PrEP (β= -0.31; 95%CI: [-0.41 to -0.21]). Figure 12 (next page) shows the adjusted beta coefficient associated with a 1-point increase in the predictor. The height of the arrow corresponds to the strength of association. The faint bars represent predictors that were not statistically significant in the adjusted model.

Figure 12. Adjusted beta coefficients for PrEP acceptability



Each statistic reported is an adjusted beta coefficint significant at p<.05. The height of the arrow indicates the strength of association. Arrow height corresponds to the value of the beta coefficient.

Focus Group Methods

The MSMGF worked with the African Men for Sexual Health and Rights (AMSHeR) and local partner organizations in South Africa, Kenya, and Nigeria to conduct focus group discussions in 5 different cities.

Sub-Saharan Africa was selected as the target region for focus group discussions based on requests from the MSMGF's constituents and donors. The focus on sub-Saharan Africa is particularly relevant given the growing health and rights movements happening among gay men and other MSM in Africa, as well as the HIV-related resource needs in the region.

Focus group discussions took place in Nairobi, Kenya; Lagos and Abuja, Nigeria; and Pretoria and Johannesburg, South Africa. Countries and cities were selected using a set of predetermined criteria:

1. The presence of well-established and respected local community-based organizations (CBOs) focused on the HIV prevention and sexual health needs of MSM; and

2. Government interest in exploring comprehensive prevention approaches, including PrEP, targeted at key affected populations, including MSM.

Focus Group Protocol and Discussion Guide

The MSMGF research team developed an initial focus group protocol and discussion guide with the goal of facilitating meaningful conversations focused on structural-level, community-level, and individual-level barriers and facilitators affecting uptake of prevention services and implementation of PrEP. The questions in the discussion guide were designed to place these barriers and facilitators in the context of the lived experiences of MSM in their respective cities.

The research team shared the protocol and discussion guide with AMSHeR and implementing partners in South Africa, Kenya, and Nigeria for their feedback. The discussion guide was revised based on multiple rounds of feedback, and a final version was sent to all partner organizations for their final approval.

Implementation

Before conducting each focus group discussion, members of the MSMGF research team met with the executive directors and staff of partner organizations to discuss the purpose of focus groups. Each focus group discussion was conducted with local community members at the offices of the partner organization.

A total of 71 MSM participated across the 5 focus groups. Focus group participants were recruited by local partner organizations. In order to protect the confidentiality of focus group participants, identifying information was not collected. All participants were MSM, most estimated between the ages of 20 and 40 years old. Though not the majority in any group, sex workers and men living with HIV were represented in each of the 5 groups.

Focus group discussions were not recorded in order to help protect the identities of participants. Instead, AMSHeR and MSMGF research staff took notes during the 5 focus groups. Immediately after each focus group, researchers and CBO staff conducted debriefing discussions, which were recorded. Written notes and debriefing recordings did not include any personal identifiers that could link participants to notes or observations.

MSMGF research staff met at the beginning and end of each day to further explore major themes that emerged from the focus groups and to modify questions used in the focus group protocol. Emergent themes from previous focus groups were further explored during subsequent focus group discussions in an iterative data collection process.

For our analyses, MSMGF research staff compiled and reviewed all written focus group notes and recordings of debriefing meetings. We then summarized main findings by salient themes across the 5 groups, noting any differences between the 5 respective cities. A draft report of findings was developed, which was then reviewed by the broader research team, external stakeholders and MSMGF staff prior to revising and finalizing this report.

Focus Group Results

Focus group interviews revealed common concerns among participants across countries, sexual identity, and HIV serostatus. Specifically, participants discussed sexual health concerns and the challenges they faced accessing HIV-related services. Differences in discussion topics that arose were nuanced—linked more to the participants' sub-region, place of residence, or sexual identity and varied only by degree or level of salience. PrEP was discussed in the context of participant sexual health concerns and day-to-day struggles linked with being MSM.

We organized themes that emerged from participant discussions into 4 main categories: 1) Structural Factors; 2) Community/Interpersonal Factors; 3) Individual Factors; and 4) Knowledge and Attitudes about PrEP. These themes are summarized below.

Structural Factors

Focus group discussions indicated that structural barriers make a significant impact on the health of MSM, reducing the capacity of MSM to engage in health-seeking behaviors and delaying or reducing the likelihood of testing for HIV and other sexually transmitted infections. Structural barriers were also found to delay, interrupt, or altogether thwart onset of treatment.

> The extent to which health care providers continue to shame, humiliate, or chastise MSM is the degree to which MSM will avoid prevention and care services.

At the policy level, a history of criminalization of homosexuality (Kenya, Nigeria) provides a pretext for extortion, blackmail, and violence targeting MSM. However, even when the law does not explicitly criminalize such behavior (South Africa), high levels of homophobia and stigma toward MSM and people living with HIV support an environment where extortion, blackmail, and violence are allowed to persist.

Participants in all 5 groups provided examples of police harassment or brutality toward men whom the police had assumed to be MSM; landlord evictions of men assumed to be MSM; blackmail and extortion on the part of strangers, acquaintances, friends, or family members in exchange for keeping the sexual lives of their targets secret; and physical or sexual violence toward men thought to be MSM.

Cultural norms that favor heterosexual relationships foment homophobic attitudes in social and political settings. These cultural norms permeate health care systems as well. Participants provided multiple examples of health care providers who proselytized against homosexuality rather than provide education regarding HIV prevention or focus on diagnosing and treating participants for the symptoms they presented. Examples included health care providers citing biblical excerpts, chastising men for their sexuality, and bringing in other staff to "look at the MSM." As a result, some described avoiding treatment for infections because "the way I am treated makes me feel worse when I leave than when I came in."

In this regard, participants acknowledged that physical health is meaningful only in the context of a life worth living, noting that "physical health is only one aspect of well-being." The extent to which health care providers continue to shame, humiliate, or chastise MSM is the degree to which MSM will avoid prevention and care services. Experiencing such frequent mistreatment, participants preferred to protect their sense of self and emotional well-being rather than face persistent verbal abuse at the hands of health care providers. Participants also noted that negative attitudes toward MSM on the part of health care providers were exacerbated by a lack of basic knowledge regarding health care needs of MSM.

...the inability of MSM to reveal their sexual lives with health care providers was related to misdiagnosis, delayed diagnosis, and delayed treatment...

Explicit examples of discrimination toward MSM were accompanied by implicit acts of stigma that create an environment of shame and fear of exposure. Stigma and discrimination were ubiquitous and reflected in cultural norms that force men to develop fictional identities to protect themselves from these abuses. Participants explained the pressure they felt to get married, to have a girlfriend, or to pretend to have a girlfriend in order to maintain the favor and support of their families or others in their respective communities.

Participants explained how maintaining a secondary identity has direct negative implications for physical and mental health. For example, the inability of MSM to reveal their sexual lives with health care providers was related to misdiagnosis, delayed diagnosis, and delayed treatment, leading to poor health prognosis and higher risk of HIV and STI transmission to sexual partners. In addition, being forced to hide their sexuality from family, friends, coworkers, and broader society can lead to internalized shame and poor self-worth, often manifesting in depression and anxiety. Although some men did not name their pain as a form of poor mental health, when other men described feelings of depression, all the men recognized and endorsed an urgent need to address this phenomenon.

Participants also explained that wealthy men could navigate homophobic environments more easily, since their lives could be more private as could their health care. Conversely, poverty was a major theme for discussion participants, who described needing to hide their sexuality from employers, landlords, teachers, and family in order to sustain a minimum livelihood.

The negative consequences of structural barriers were moderated by the existence of safe spaces to meet other MSM, safe spaces to receive services, access to competent mental health care, and access to comprehensive health care.

The negative consequences of structural barriers were moderated by the existence of safe spaces to meet other MSM, safe spaces to receive services, access to competent mental health care, and access to comprehensive health care. Participants described the community-based organizations where the focus groups took place as safe spaces where they could celebrate their true selves, receive respectful and knowledgeable health care, and in some cases receive mental health services. These organizations serve as models for expanding safety in country contexts in which safety was too often absent for MSM.

Table 5. Illustrative Examples of Structural-Level Barriers and Facilitators to Accessing Services

BARRIERS

Criminalization	[In South Africa] we do not have laws that criminalize gay/MSM, but this does not mean that the legal system has a mechanism for protecting gay/MSM from hate crimes and violence. Same-sex sexual activity among men has been legal in South Africa since 1998; and is illegal in Kenya (Penalty: up to 14 years' imprisonment) and in Nigeria (penalty varies).
Homophobia	We are seen as less than human. People have disdain for men who are or appear to be MSM, even if the person is not MSM, he might be hated because he is with someone who appears to be MSM. MSM are dehumanized and made to feel unworthy of protection and family and friends.
Social Norms	Religion plays a big part in determining how we are perceived. The religion says we must not be with other men. So, even though there are good things about religion, there are also painful things too. Religion says homosexuality is a crime. There is much pressure from my family to get married and have children. My family already has chosen a woman for me to marry. I feel pressure to marry her if I want to remain close with my family, and I am young and rely on them for financial support. I could never tell my family that I am MSM, they would disown me.
Sexual Prejudice/ Discrimination	At school, men who are MSM have been expelled for appearing to be MSM or gay. It is not safe to be out at school. People will report you and then you get kicked out. I trained to be a [professional*] and passed all my exams. I invested a lot of time and energy doing this because it is what I had always wanted to do. But, in the end, they found out that I am gay and told me I could not work there. Our government does not want us, nothing is in place for us, and it is as if MSM should be recycled. At public health clinics, staff discriminate against us, make fun of us, or shame us. Often the cure is worse than the disease. **Profession deleted to protect participant's identity*
Provider Stigma and Insensitivity	There are very few places where one can go to get health care that addresses the needs of MSM. Providers are not knowledgeable about MSM-specific health care needs, so they treat us for what they know even if it is not appropriate. The best care is at MSM-specific organizations, where they understand our needs. I can come here to get tested for HIV and if I am positive, I can get some treatment here. However, if I get referred out to a public health clinic for something they do not treat here, then I am in trouble. The staff, doctors and other providers need lots of training around how to treat patients humanely. They should focus on health concerns, not trying to shame you for being MSM or trying to make you be straight. I went to the hospital and the nurse pulled out a bible to lecture me about being gay. She did not pay attention to my health. The doctor brought in other doctors to see "the gay man", as if I was a spectacle for show. I will not go back. The doctor spent more time trying to find out if I was MSM than he did in the examination. I knew if I told him, it would not be good for me. I know that a lot of us delay going to get treatment for STIs for fear of how we will be treated.

Poverty	The law is against us, the poor ones, not the rich ones because they have money. I have to hide my sexuality because I cannot afford to be out. If I reveal my sexuality, my family will no longer help me financially. Sometimes, even other MSM report us to the police or our landlords because they need money. It is hard to find work, especially for young men who come from the country (rural areas). How can you have human rights when you are not economically stable? As hard as it is here in the urban area, men who are struggling in the rural areas have it worse. They come here looking for work and sexual freedom and end up in the sex trade.

FACILITATORS

Safe Spaces	This [CBO] is the only place I can be myself. We need to safe spaces where we can engage with each other and others who are friendly to gay/MSM. We want to be able to socialize, learn, commune, eat, play, and work in safe environments.
Mental Health Services	Definitely, we need to deal with our mental and spiritual selves. We have absorbed too much of the negativity society imposes on us and we must turn this around. We desperately need mental health services to be able to deal with the constant fear and self-loathing we experience. Physical health is not all that matters. My mental health is also an important health consideration.
Comprehensive Health Care	I am grateful for being able to come here for HIV services. But what about the rest of me? If I need health care for something that is not HIV-specific and I get referred to another program, I know I will be treated poorly. We need a more comprehensive approach to health care that addresses our needs as whole human beings.

Community/Interpersonal Factors

Men who participated in the discussions related how the structural factors described above undermined their ability to sustain or develop close personal relationships. It was understood among participants that their relationships within their social circles—peers, partners, family members, teachers, health providers, and others—influence the way they engage other individuals, groups, and society, as well as the decisions they make about their own sexual lives. These structural factors have contributed to reduced trust, reduced communication, reduced learning opportunities, and reduced social support between men and their familial, social, and health networks. The injury to social and interpersonal relationships leads to poor self-worth, depression, and anxiety, undermining health-seeking behaviors.

In contrast, community engagement, family support, and stable relationships were recognized as facilitators of health and well-being. For example, some men described the desire for family recognition, which would help in the face of broader societal insults. Most significantly, community engagement in safe spaces was a salient factor in ameliorating the loss of family and social connection. Community engagement in safe spaces, such as the community-based organizations hosting the discussion groups, also served as a respite from hiding, shame, fear, and even violence. The support of other MSM was essential to developing social networks of friends as well as for learning where to find a trustworthy provider.

Table 6. Illustrative Examples of Community-Level/Interpersonal Barriers and Facilitators to Accessing Services

BARRIERS

HIV-Related Stigma	Stigma against people with HIV makes negotiating disclosure unsafe, so people keep their status to themselves. People will put your business out in the street. There is a lack of confidentiality and then people will talk about you.
Extortion	Extortion is a huge threat for gay men. I have had to give money to strangers who threatened to beat me up if I did not.
Blackmail	We should not have to buy our safety. I have had to give money to someone to prevent them from telling others about me. We have all experienced blackmail. It is everywhere in this country.
Ridicule	When I went to the police, they called in other police to look at me. They made fun of me. People yell vicious things at us from cars when they pass us on the street.
Eviction	Neighbours spy on us and report to our landlords and then we get evicted. I was kicked out of my apartment and it turned out it was another MSM who reported it. He had to do it, or something bad would have happened to him.
Violence	I have pretended to not recognize a friend in public because he was acting like a girl. If someone sees me greeting him or acting like I know him, then I am outed by association and I would be at risk of being beaten. I was beaten up and went to the police, but they did nothing to help me. Instead, they ridiculed me and blamed me for what happened to me. Violence is a regular occurrence. If you are out, you are at risk of being physically beaten or raped.

FACILITATORS

Community Engagement	Even if it is in secret, here [CBO] we have a sense of community. We can support each other and learn from each other. I wish we could have this in the open. I like coming to the different events [CBO-sponsored]. I can relax for a while. I can be myself. There is a lot of gossip among us that is sometimes good, but it would be good to feel that my business will not be out on the street.
Family Support	We need our families. Some people come out too young and then they get kicked out and have nowhere to go. My brother can come home with his girlfriend. I want to be able to do that with my boyfriend.
Stable Relationships	Straight couples have the support of their families and friends regarding their relationships. How can you benefit from this when you have to keep your own relationship a secret? I want to be able to trust my friends and partners. In the back of my mind, I have to wonder who might betray me.

Individual Factors

Focus group discussions also revealed the impact of structural and community/interpersonal barriers on individual health vulnerabilities. Many men described limited access to education, work, and sustainable income, contributing to substance abuse and sex work among some participants. Nonetheless, participants recognized that stable financial resources, sustainable work, and education were protective and could mean "the difference between a life worth living and one where one is simply alive."

Table 7. Illustrative Examples of Individual-Level Barriers and Facilitators to Accessing Services

BARRIERS

Fear	When I am going out, I put on a wonderful outfit, but I must cover it up. If not, I will become a target for ridicule or violence. When I arrive to the party, if it is a safe place, then I can uncover my outfit and shine. When I see someone I know in public, I cannot greet him if he looks like he might be perceived to be MSM. By association, I will be at risk. I cannot be myself in public, I am even afraid in private. I never know when someone might turn me in.
Poor Self-Worth	How can I see myself as a good person when everyone and everything tells me I am a sinner? We have poor self-worth. We need mental health services to deal with this. We must teach young men who come from the country to behave like "real men" when they are out in public. Otherwise, they will get beaten up.

Depression	Being forced to hide my sexuality is depressing. It makes me sad and worried about an important aspect of who I am. Sometimes I am so low, I do not go out. Most of us have high levels of depression. We learn to live with it or die.
Anxiety	I worry about being found out to be MSM. My family will disown me and some of my friends will too. It is hard to feel safe at home knowing that anyone could report me to my landlord.
Suicide	I have thought that it would be better to end my life, and have tried to kill myself.
Substance Abuse	Sometimes drinking is the only escape from so much pain.

FACILITATORS

Financial Resources	For men who are wealthy, being MSM is not a problem. They can buy safety and respect.
Sustainable Work	It is hard to find work in my country, and harder as an MSM. Some men turn to sex work when they cannot find any other way to support themselves.
Education	Schools can kick you out if you are found out to be MSM. But education is so important to our sense of worth and critical for us to be able to advocate for ourselves.

Knowledge and Attitudes About PrEP

Overall, most focus group participants had not heard of PrEP, and among those who had, only 1 person had accurate knowledge about PrEP. As we introduced the definition of PrEP, participants became interested in the concept of taking a daily pill that could reduce the likelihood of becoming infected with HIV if exposed to the virus. However, as they considered issues of safety, efficacy, feasibility, cost, side effects, and resistance, they expressed concern about introducing PrEP in their respective cities and countries without seriously considering the numerous barriers and facilitators to accessing HIV-related services that they had so poignantly discussed.

Participants strongly recommended that PrEP be considered only in the context of a comprehensive sexual health approach that supports the well-being of MSM at multiple levels. Table 8 (next page) summarizes the PrEP-specific themes that were raised during the focus group discussions.

Table 8. PrEP-Specific Illustrative Examples from Focus Group Participants

Drug-Resistance	What if I test positive, will I have to start using a stronger ARV regimen because I am resistant to PrEP? What about the men who do not know they have become positive while they are taking PrEP? It is not so easy to get HIV-tests.
Prevention vs Treatment	Very few men who need ARV treatment are getting it. Introducing PrEP seems premature. We cannot even get proper treatment, why should we have PrEP for negatives?
Cost	How much will it cost? (*daily pill of Truvada up to $ 14 000 per person per year in the United States*). I do not think we can afford it. You are taking the money away from life-saving ARVs which are needed by those already infected.
Context	Many people do not know their HIV status, and many are afraid to get tested. We need to focus on improving the few programs we have that work and are cost-effective How are we going to give this to sex workers and MSM when the law discriminates against us? We have to change the laws first. We need better guidelines for comprehensive health for MSM. PrEP could be a part of that.
Sustainability	If they come in and implement PrEP and it does not work, then they will just leave us to deal with the negative consequences. Even if it does work or if the money runs out, we will have to pay the price. People will stop using it and build resistance to PrEP. It makes no sense if there is not a long term investment, making sure men can take it for life.
Education	Men who have HIV are already sharing ARVs with other positive men due to the barriers to treatment. They do not understand about the importance of adherence or possible resistance. To use PrEP would require massive counseling and testing to be able to identify those who are eligible, to follow up with those on PrEP, to educate about adherence and importance of using condoms. Education of both individuals taking PrEP as well as those in the communities where they live and of providers is critical.
Research	We need more studies in real-world settings on how to implement PrEP properly. Research must be done side-by-side with any intervention to see if it is working.
PrEP Candidates	Sex workers and discordant couples should come first. It should be available to anyone who is at risk. Maybe only sex workers and hospital people who work with HIV positive people.

Discussion

The survey's quantitative findings show that MSM worldwide have unacceptably poor access to the most essential HIV prevention tools. Roughly one-third of MSM surveyed reported that condoms and HIV testing were easily accessible, and even fewer (21%) had easy access to lubricants. Forty-two percent of MSM living with HIV reported that treatment was easily accessible, and these men had significantly less access to condoms and lubricants than access to HIV treatment. These findings indicate an urgent need to address access to proven prevention tools such as condoms and lubricants prior to—or at least parallel to—implementation planning for new HIV prevention strategies like PrEP.

Structural barriers at the policy and cultural level played a central role in hindering access to condoms, lubricants, HIV testing, and HIV treatment for MSM around the world. Focus group participants described how criminalization and social stigma negatively affected both access to services and health seeking behaviors. Discrimination on the part of health care providers was especially damaging, causing men to delay or avoid treatment for HIV and other sexually transmitted infections. The impact of structural barriers trickled down to the interpersonal and individual level, leading to social alienation, poor mental health outcomes, and further declines in access to services and health-seeking behaviors.

Contrary to the expectations of the research team, data from adjusted odds analysis indicated that "outness" served as a barrier to lubricant access as opposed to a facilitator. Outness can act as a stigmatizing marker, increasing the impact of other barriers like homophobia; however, outness may also be viewed as a proxy for connection to the gay community. Controlling for all other barriers and facilitators examined in the survey (including homophobia and connection to the gay community), outness remained associated with lower access to lubricants. Further research on this association is necessary.

There was considerable variation in access by country income. Access to condoms, lubricants, HIV testing, and HIV treatment was lower in low income countries compared to high income countries. When adjusting for other variables, access to lubricants and access to HIV testing were significantly higher in high income countries than in low income countries and upper middle income countries respectively.

Both quantitative and qualitative inquiries revealed the powerful protective role of community engagement and safe spaces to receive services. Focus group participants described the importance of local community-based organizations as venues to meet other men like themselves and to receive health services from knowledgeable, non-judgmental service providers who understand health needs of MSM from a holistic perspective. Strong relationships with family and community were cited as facilitators of health and well-being, as was the ability to access stable educational and employment opportunities.

The consistency between the quantitative and qualitative findings indicated a strong pattern of relationships. Based on these relationships, the research team developed a framework for describing the structural, community/interpersonal, and individual factors that impact access to HIV services for MSM and sexual health more broadly. The framework helps to organize the results of this study in an explanatory order that suggests at what level intervention efforts and resources might be focused, providing a schematic for assessing expected proximal as well as distal effects of an intervention (see Figure 13). By organizing the study findings as a conceptual framework, we offer testable hypotheses and a basis for ongoing theory development that can advance knowledge about the determinants of both access to services for MSM and MSM sexual health.

Figure 13. Conceptual Framework for Understanding Structural, Community/Interpersonal, and Individual Factors Affecting Sexual Health and Health Service Access among MSM[4]

	Structural	Community/ Interpersonal	Individual	
Facilitators	Safe spaces Comprehensive, tailored health & mental health services	Stable relationships Family support Community engagement	Financial resources Sustainable work Education	Sexual Health
Barriers	Criminalization Sexual prejudice Discrimination Cultural norms Poverty Insensitive/uninformed providers	Extortion Blackmail Ridicule Eviction Job termination Violence	Fear Poor self-worth Depression Suicide Anxiety Substance abuse Delay/avoidance of services Treatment interruption	Sexual Health
Critical Enablers	Political will Laws, policies & practices	Mobilization Organizational capacity Provider sensitization Education & training Social connectivity	Linkage to care and comprehensive services	Service Access

4 This framework is not intended to be all-inclusive, but rather a way of describing GMHR study results thus far.

Although this framework lends itself to exploring a range of HIV-related and other sexual health–related factors, it is also well suited for considering PrEP implementation as part of the larger service context. To this end, the facilitators are those constructs that ameliorate or moderate the effects of barriers at the structural, community/interpersonal, and individual levels. The critical enablers are also factors that moderate the effects of barriers. The degree to which targeted efforts can reduce barriers, support facilitators, and impact critical enablers is dependent on the level of funding directed explicitly toward those goals. When considering the implementation of PrEP or any other sexual health intervention for MSM, it is important to assess the relationships among all these factors in any given setting.

This study had some limitations that are important to note. First, the translation of the survey may have contributed to poor construct validity, in turn affecting the reliability of some scales in some languages. Second, the survey data was gathered using a convenience sample, creating a possibility of selection bias for MSM who are socially connected to HIV or MSM organizations or online MSM communication infrastructure, as well as for those who have Web and e-mail access. Therefore, levels of participation were limited from MSM in regions where Internet access is generally difficult, including sub-Saharan Africa. In order to address this limitation, paper and pen surveys were developed and distributed among MSM in 10 countries across sub-Saharan Africa. The findings from these surveys will be analyzed in the coming weeks and compared to the online survey to begin addressing possible differences. Third, there may also be selection bias for MSM who are particularly motivated to participate. However, this bias is likely to overestimate access and knowledge and underestimate experiences of sexual prejudice, discrimination, and stigma. Finally, although focus group discussions provided deep and compelling narratives of the subjective experiences of participants that helped contextualize survey findings, focus groups were only carried out in 3 African countries. Future focus groups and interviews are needed to characterize the experiences of MSM from other regions.

In summary, the study findings underscore the need to improve global efforts to ensure that gay men and other MSM have access to basic HIV prevention and treatment services. Structural, community/interpersonal, and individual barriers and facilitators to service access must be addressed at multiple levels; interventions must both disrupt the negative effects of barriers *and* support the protective effects of facilitators. When considering PrEP implementation, study findings indicate an urgent need for the dissemination of more and better information regarding HIV prevention strategies generally and PrEP in particular.

From the narratives of MSM who participated in this study, it is clear that local and global advocacy efforts are needed to create enabling sociopolitical environments that will increase access to HIV-related services and improve MSM health overall. Securing the human rights of MSM is essential to HIV prevention and treatment strategies, new and old.

Future Directions

This report presents key findings from the first of many analyses that will be conducted using data from the survey and focus group discussions. Findings from future analyses will be used to generate technical bulletins, white papers, conference presentations, webinars, and journal publications. In particular, we plan to conduct future analysis examining other factors covered by the survey that were not represented in the analysis presented in this report, including sexual happiness, sexual freedom, relationship stability, and sense of community connection. We also plan to conduct further analyses that explore differences by region, age, country income level, online versus paper and pen surveys, and mediation and moderation models of the barriers and facilitators of MSM sexual health.

In conclusion, findings point to the need for a comprehensive approach to improving the health and well-being of MSM. Policy makers, researchers, service providers, and advocates will need to work collaboratively to reduce structural barriers and promote protective facilitators that impact access to resources and services for MSM worldwide.

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Appendix I

Appendix 1. Frequency Distribution of Country Residence by World Bank Country Income Classification

Low Income (n=224)	Lower Middle Income (n=1150)	Upper Middle Income (n=2328)	High Income (n=2077)
Afghanistan	Albania	Algeria	Andorra
Bangladesh	Armenia	Angola	Australia
Burkina Faso	Belize	Antigua and Barbuda	Austria
Burundi	Bhutan	Argentina	Bahamas
Cambodia	Bolivia	Azerbaijan	Bahrain
C. African Republic	Cameroon	Belarus	Barbados
Comoros	Coite d'Ivoire	Bosnia & Herzegovina	Belgium
Dem. Rep. Congo	Congo	Botswana	Brunei Darussalam
Ethiopia	Egypt	Brazil	Canada
Guinea	El Salvador	Bulgaria	Cayman Islands
Haiti	Fiji	Chile	Croatia
Kenya	Georgia	China	Cyprus
Kyrgyzstan	Ghana	Colombia	Czech Republic
Liberia	Guatemala	Costa Rica	Denmark
Malawi	Guyana	Cuba	Estonia
Mali	Honduras	Dominica	Finland
Mauritania	India	Dominican Republic	France
Mozambique	Indonesia	Ecuador	Germany
Myanmar	Iraq	Grenada	Greece
Nepal	Kosovo	Iran	Hungary
North Korea	Lesotho	Jamaica	Iceland
Rwanda	Moldova	Jordan	Ireland
Sierra Leone	Mongolia	Kazakhstan	Israel
Somalia	Morocco	Latvia	Italy
Tajikistan	Nicaragua	Lebanon	Japan
Tanzania	Nigeria	Lithuania	Luxembourg
Togo	Pakistan	Macedonia	Malta
Uganda	Papua New Guinea	Malaysia	Monaco
Zimbabwe	Paraguay	Mauritius	Netherlands
	Philippines	Mexico	New Zealand
	Samoa	Montenegro	Norway
	Sao Tome & Principe	Namibia	Poland
	Senegal	Panama	Portugal
	Sri Lanka	Peru	Puerto Rico
	Sudan	Romania	Qatar
	Swaziland	Russia	Saudi Arabia
	Syria	St. Lucia	Singapore
	Timor-Leste	Serbia	Slovenia
	Ukraine	South Africa	South Korea
	Uzbekistan	Suriname	Spain
	Vanuatu	Thailand	Sweden
	Viet Nam	Tunisia	Switzerland
	Yemen	Turkey	Trinidad and Tobago
	Zambia	Uruguay	United Arab Emirates
		Venezuela	United Kingdom
			United States

The Global Forum on MSM & HIV (MSMGF) is a coalition of advocates working to ensure an effective response to HIV among MSM. Our coalition includes a wide range of people, including HIV-positive and HIV-negative gay men directly affected by the HIV epidemic, and other experts in health, human rights, research, and policy work. What we share is our willingness to step forward and act to address the lack of HIV responses targeted to MSM, end AIDS, and promote health and rights for all. We also share a particular concern for the health and rights of gay men/MSM who: are living with HIV; are young; are from low and middle income countries; are poor; are migrant; belong to racial/ethnic minority or indigenous communities; engage in sex work; use drugs; and/or identify as transgender.

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Access to HIV Prevention and Treatment for Men Who Have Sex with Men
Findings from the 2012 Global Men's Health and Rights Study (GMHR)

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