**INVESTIGATING THE IMPACT OF HUMAN RIGHTS VIOLATIONS ON ACCESS TO HIV PREVENTION & TREATMENT SERVICES FOR MEN WHO HAVE SEX WITH MEN IN AFRICA**

by

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**ABSTRACT**

**Background:** Currently, there are 76 countries worldwide with laws criminalizing homosexuality, and nearly half of these countries are located in Africa. These laws are of particular public health significance because they incite stigma, discrimination, overt acts of violence, and a variety of other human rights violations towards men who have sex with men (MSM). This review contextualizes the extent to which criminalization of homosexuality and human rights violations impact access to HIV-related healthcare and risk for HIV infection among MSM in African countries and compares these findings within and between the various regions of Africa.

**Methods:** One hundred twenty-two relevant research articles and reviews were identified through PubMed using four major concepts: 1) African countries & regions, 2) sexual identity & same-sex practices (specifically gay, bisexual, and other MSM), 3) HIV prevalence and behavioral risks, and 4) human rights violations and laws criminalizing homosexuality.

**Results:** Reports of human rights violations experienced by MSM due to sexuality and same-sex practices in North, West, East, and Southern Africa vary by country, region, and occasionally presence of laws criminalizing homosexuality. Collectively, this literature reveals a trend towards MSM experiencing human rights violations and being unable or afraid to access HIV/STI prevention and treatment services, which may account for generally low knowledge and risk perceptions, numerous behavioral risks, and elevated bacteremia and viremia among communities of MSM in each region of Africa. Laws criminalizing homosexuality also hinder health professionals and LGBT-serving organizations from providing HIV-related services to MSM. Most importantly, this review reveals a growing body of evidence that suggests a strong correlation between experiencing human rights violations and HIV infection among MSM.

**Conclusions:** Laws criminalizing homosexuality in Africa promote stigma, discrimination, overt acts of violence, and other human rights violations, which ultimately deter MSM from accessing HIV prevention and treatment services and put them at greater risk for HIV infection. However, decriminalizing homosexuality is not enough to increase access to HIV-related healthcare. A combination of social and legal reforms in addition to scale-up of MSM-specific biobehavioral interventions are needed to effectively change the course of HIV epidemics disproportionately burdening MSM in Africa.

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ABBREVIATIONS

AIDS……………………………………………………..Acquired Immunodeficiency Syndrome

ART.…………………………………………………..............……………Antiretroviral Therapy

CDC…………………………………………………...Centers for Disease Control and Prevention

FSW…………………………………………………………………………....Female Sex Worker

HIV………………………………………………………………Human Immunodeficiency Virus

HCW……………………………………………………………………………Healthcare Worker

HRV………………………………………………………..…………... Human Rights Violations

ICCP………………………………………...International Covenant on Civil and Political Rights

IDU………………………………………………………………………….,,,,.Injection Drug Use

LGBT………………………………………….…...……Lesbian, Gay, Bisexual, and Transgender

MENA…………………………………………………………….....Middle East and North Africa

MSM……………………………………………………………..…Men Who Have Sex With Men

PLWH………………………....…………………………...……………...People Living with HIV

PrEP…………………………………………………………….……….Pre-Exposure Prophylaxis

PEP…………………………………………………………………….Post-Exposure Prophylaxis

RDS……………………………………………………………..……Respondent-Drive Sampling

TasP……………………………………………………………………….Treatment as Prevention

UNAIDS……………………………………….....Joint United Nations Programme on HIV/AIDS

WBL………………………………………………………………………....….Water-Based Lube

# Introduction

On June 5th, 1981, the Centers for Disease Control and Prevention (CDC) released in its *Morbidity and Mortality Weekly Report* cases of various unusual infections including a rare lung infection, *Pneumocystis carinii pneumonia,* in five previously healthy, young gay men living in Los Angeles, California. These were the first official cases of what would later be officially known as the Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) epidemic (HIV.gov, 2015). Since then, an estimated 78 million cases of HIV have been diagnosed and 35 million people have died from AIDS-related illnesses (AVERT.org, 2017).

Within the last three and a half decades, we have made significant scientific advances in understanding the epidemiological and biological basis of HIV/AIDS and have designed effective behavioral and biomedical interventions to prevent HIV transmission as well as promote longevity and quality of life for those living with HIV. Major interventions include: HIV education, rapid testing, and risk-reduction counseling, male circumcision, pre- and post-exposure prophylaxis (PrEP and PEP), antiretroviral therapy (ART), and treatment as prevention (TasP) (Beyrer et al., 2016; Wirtz et al., 2013). As a result, an estimated 36.7 million people worldwide are now living with HIV, 19.5 million (53%) of whom were receiving ART in 2016 compared to only 7.5 million in 2010 (AVERT.org, 2017). UNAIDS also reports a 16% reduction in incident HIV worldwide each year since 2010 (AVERT.org, 2017). For instance, in 2016 only 1.8 million people were newly diagnosed with HIV compared to 2.1 million in 2015 (AVERT.org, 2017). Additionally, only 1 million people worldwide died from AIDS-related illnesses in 2016 (AVERT.org, 2017).Despite our progress, these prevalence and mortality statistics serve as a daunting reminder that HIV continues to be a serious global burden that requires our immediate and unwavering attention.

## The Burden of HIV in Africa

No other continent has been more impacted by HIV/AIDS than Africa (AVERT.org, 2017). This is in part because Pan troglodytes (i.e. Chimpanzees), which are known to be the original source of zoonotic HIV transmission, are indigenous to Africa. Africa’s generally limited healthcare infrastructure further complicates HIV intervention strategies. When coupled, these factors provide evidence to explain why Africa continue to be the continent most affected by HIV.

As illustrated by Figure 1, countries in East and Southern Africa experience the greatest global burden of HIV/AIDS with 19.4 million reported people living with HIV (PLWH) in 2016 followed by countries in Western and Central Africa (6.1 million), Asia and the Pacific (5.1 million), and Western/Central Europe and North America (2.1 million) (AVERT.org, 2017).

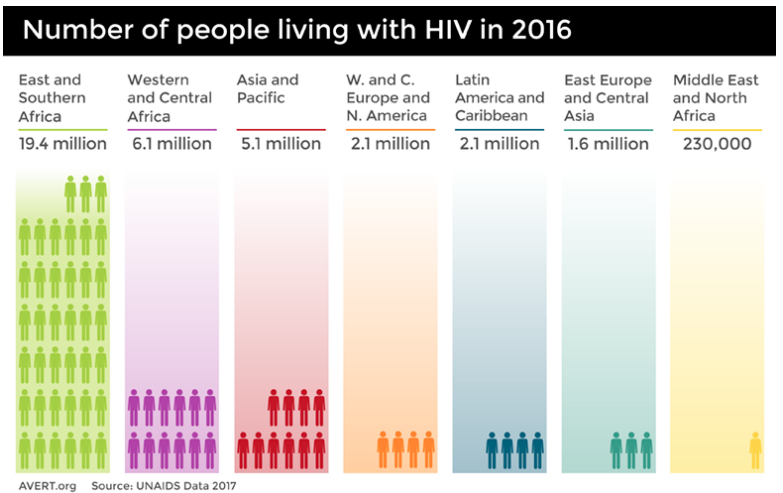


Figure . Number of People Living with HIV in 2016

(AVERT.org, 2017)

According to the Central Intelligence Agency World FactBook, approximately 85% of African countries (46/54) ranked among the top 109 countries with the highest HIV prevalence among adults ages 15-49 in 2016 (Central Intelligence Agency, 2016). The first 44 countries on this list are almost exclusively African countries (Central Intelligence Agency, 2016). Notably, the first nine countries are exclusively countries in Southern Africa (e.g. Swaziland, Lesotho, Botswana, South Africa, Namibia, Zimbabwe, Zambia, Mozambique, and Malawi) followed predominantly by a mixture of Central, East, and West African countries (e.g. Uganda, Equatorial Guinea, Kenya, Tanzania, Central African Republic, Cameroon, Gabon, Rwanda, Republic of the Congo, Guinea-Bissau, Nigeria, Côte D’Ivoire, South Sudan, Togo, Angola, etc.) (Central Intelligence Agency, 2016).

Previous literature indicates that many countries, especially in East and Southern Africa, experience generalized HIV epidemics, which are driven by high-risk heterosexual and vertical transmission (Baral et al., 2009; Jobson, Struthers, & McIntyre, 2015; Risher et al., 2013). Therefore, global response efforts have largely focused on reducing HIV transmission among heterosexual couples and pregnant women (e.g. through education, condom distribution and negotiation strategies, risk reduction counseling, male circumcision, increased HIV/STI testing, and ART for those who are HIV-positive) (Fay et al., 2011). With substantial social and political support, funding, and scale-up of these HIV prevention and treatment initiatives, significant decreases in heterosexual and vertical HIV transmission have been demonstrated (Baral, Burrell, et al., 2011; Fay et al., 2011).

Despite these global declining trends, recent literature indicates that the rate of incident HIV is actually increasing among gay, bisexual and other men who have sex with men (MSM), especially in many African countries (see Figure 2) (Baral et al., 2009; Chris Beyrer et al., 2016; Fay et al., 2011; Jobson et al., 2015; Risher et al., 2013; Zahn et al., 2016).

Stahlman et al. (2015) suggest this is due in part to the fact that only 5-10% of MSM, the majority of which are in high-income countries, have access to HIV prevention and treatment services (Wirtz et al., 2013). In African countries, this is largely due to structural barriers such as stigmatization, discrimination, and criminalization of homosexuality, which not only hinder the availability and accessibility of HIV resources for MSM, but also impede HIV surveillance and research to better understand HIV behavioral risks and specific needs of MSM in these countries (Baral et al., 2009; Jobson et al., 2015; Risher et al., 2013). However, in African countries where MSM-specific data does exist, the prevalence of HIV is higher among MSM than other men of similar reproductive age (Baral et al., 2009).

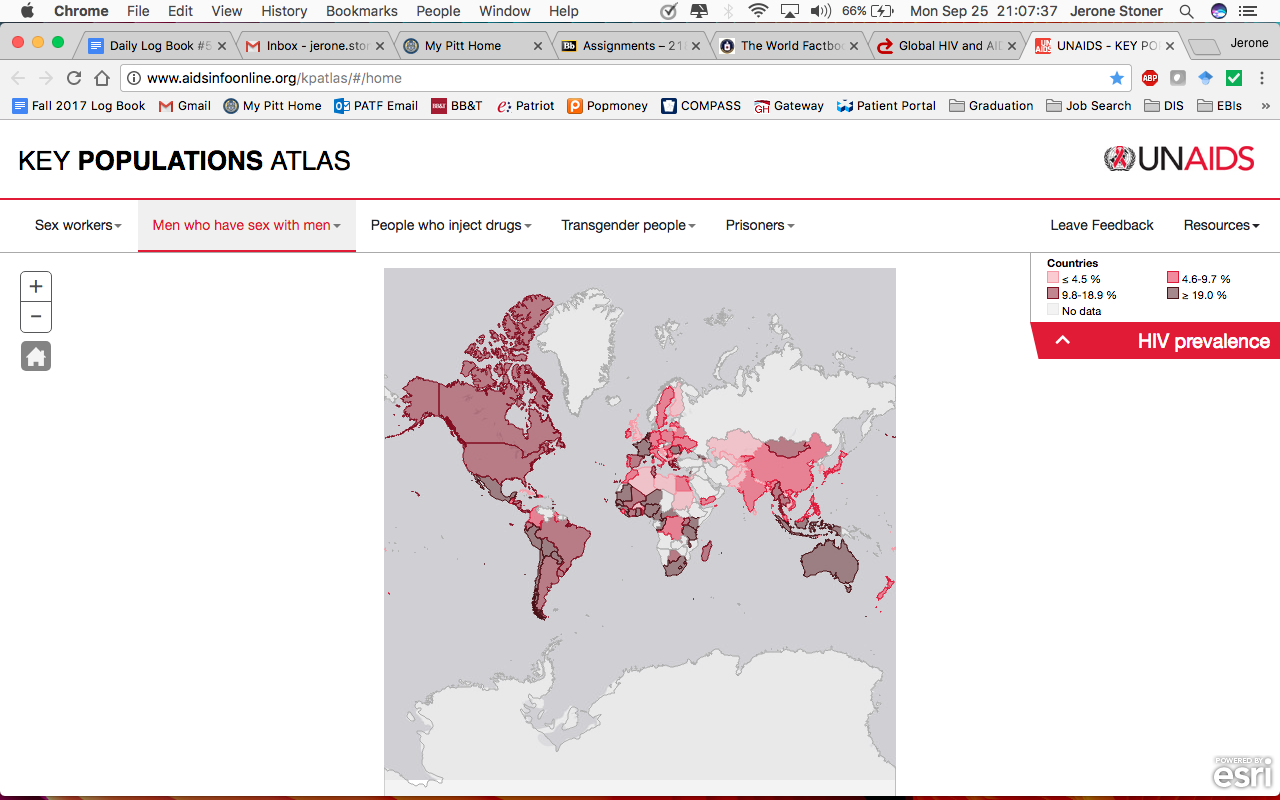
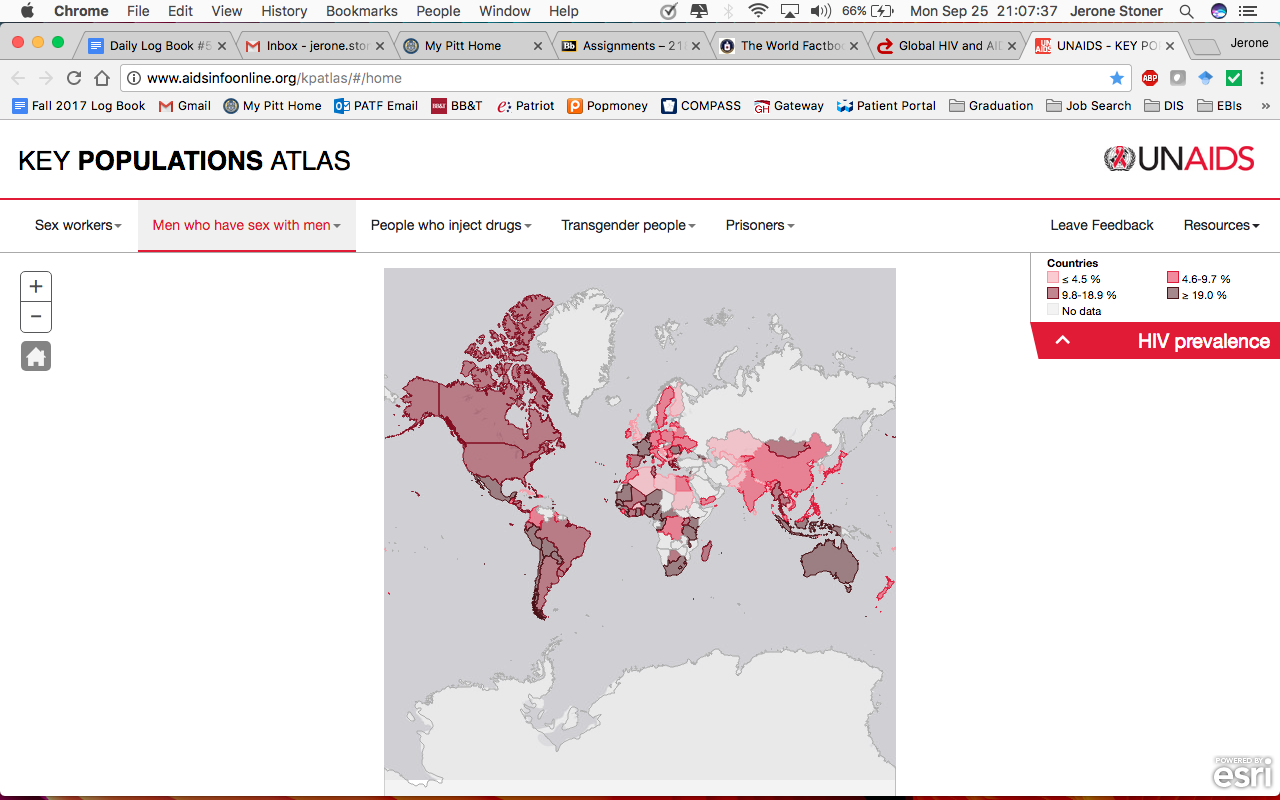
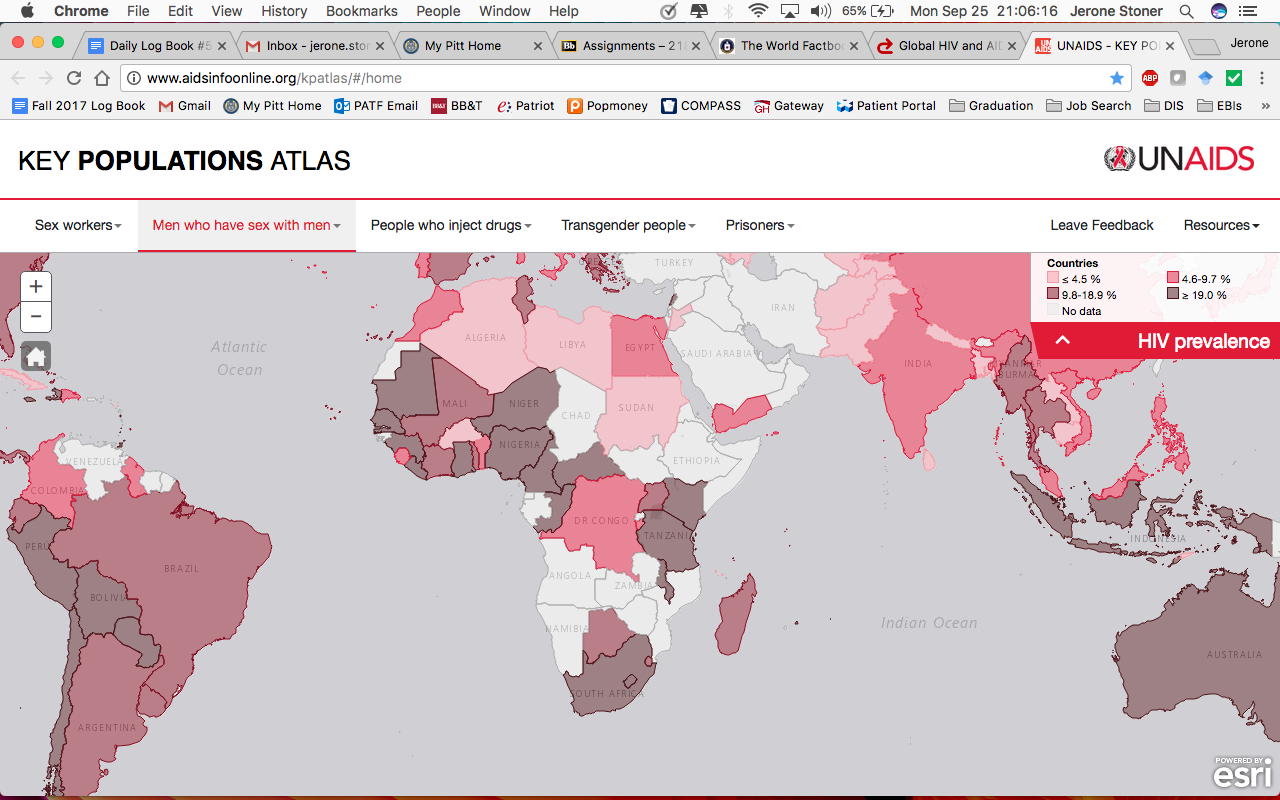


Figure . HIV Prevalence among MSM by Country

(UNAIDS, 2017)

## GLOBAL CRIMINALIZATION OF HOMESEXUALITY

In 2017, the International Lesbian, Gay, Bisexual, Trans, and Intersex Association published a report that found 76 countries (out of all 195 worldwide) have laws that criminalize homosexuality (Gaffey, 2017). While this number tends to range from 73 to 80, the general trend of regions/countries that criminalize homosexuality does not (Fenton, 2016; Gaffey, 2017; Gerber, 2016; Nunez, 2016; United Nations for LGBT Equality, n.d.). Africa consistently houses the majority of countries criminalizing homosexuality (33 in total) followed by the Middle East and Asia (see Figure 3) (Gerber, 2016). Interestingly, 75% of these countries and many of their laws can be tracked back to British colonial rule in the 1860s (e.g. prohibition of “carnal intercourse against the order of nature”) (Fenton, 2016; Nunez, 2016; United Nations for LGBT Equality, n.d.). Some countries have additional laws that prohibit promotions of homosexuality (e.g. Russia) and “gay panic” clauses that their citizens can invoke to justify assaulting and killing LGBT individuals (Fenton, 2016; Gerber, 2016). Punishments for defying anti-homosexuality laws vary in severity between countries, but can include any combination of fines, corporal punishment (e.g. caning or flogging), imprisonment (up to 14 years or life), and even death (see Figure 3) (Fenton, 2016; Gaffey, 2017; Gerber, 2016; Nunez, 2016; United Nations for LGBT Equality, n.d.).

In 1994, the United Nations Human Rights Committee established the International Covenant on Civil and Political Rights (ICCPR) after the landmark case *Toonen vs. Australia.* The ICCPR declares that laws criminalizing homosexuality defy basic human rights to protection, privacy, and non-discrimination (Gerber, 2016; United Nations for LGBT Equality, n.d.). An Optional Protocol to the ICCPR was also established so that citizens in countries that ratified the ICCPR could file formal complaints to the United Nations Human Rights Committee if they ever felt their rights had been breached (United Nations for LGBT Equality, n.d.). Of the countries that currently criminalize homosexuality, 55 previously ratified the ICCPR (31/33 African countries) and 26 ratified the Optional Protocol (18/33 African countries), which means these countries are deliberately violating vows to provide equal protection under the law (Gerber, 2016).

In Africa specifically, tolerance for homosexuality varies greatly between countries with negative views of homosexuality largely stemming from British colonial rule as well as longstanding cultural and religious beliefs about sex and marriage (Zahn et al., 2016). Often instead of protecting or addressing the rights of MSM, political and religious leaders, who have substantial social capital, openly condemn MSM and call for their persecution. Some even actively deny the existence of MSM or refer to MSM as being “un-African” (Zahn et al., 2016).

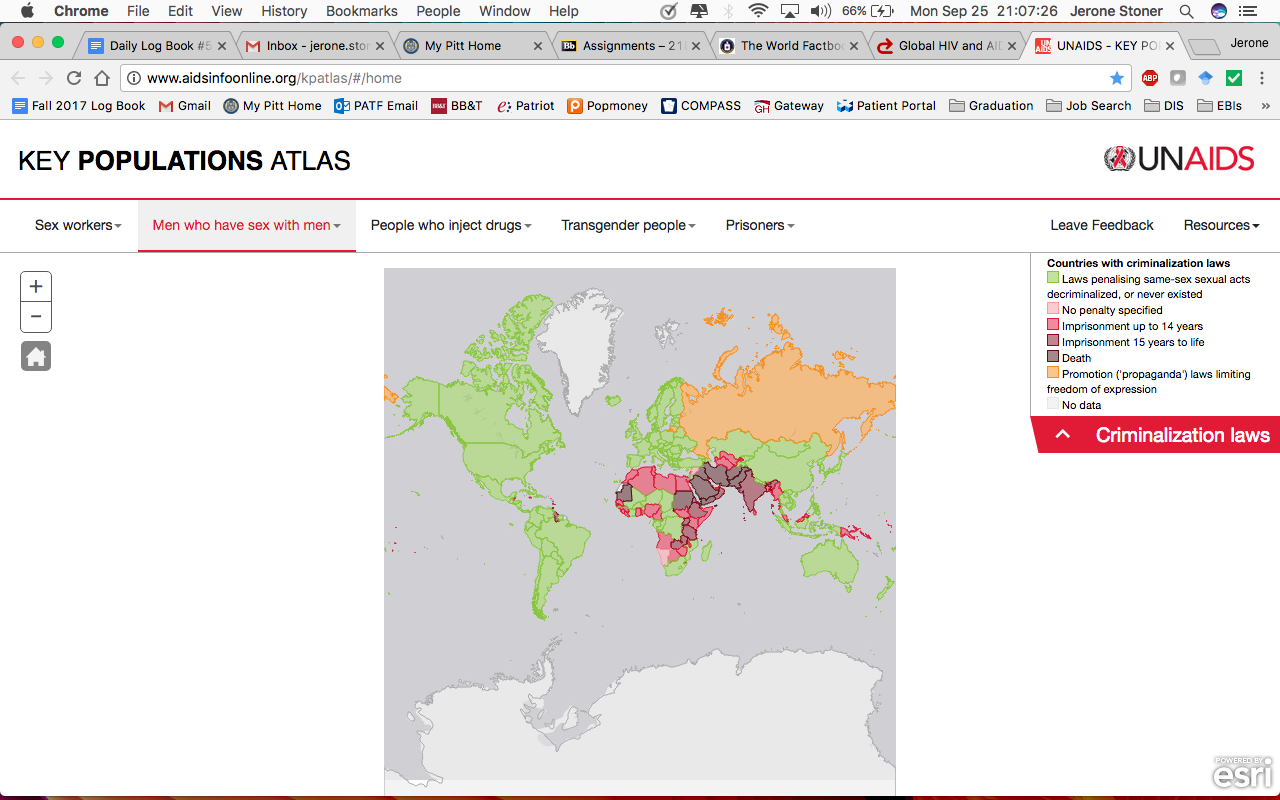
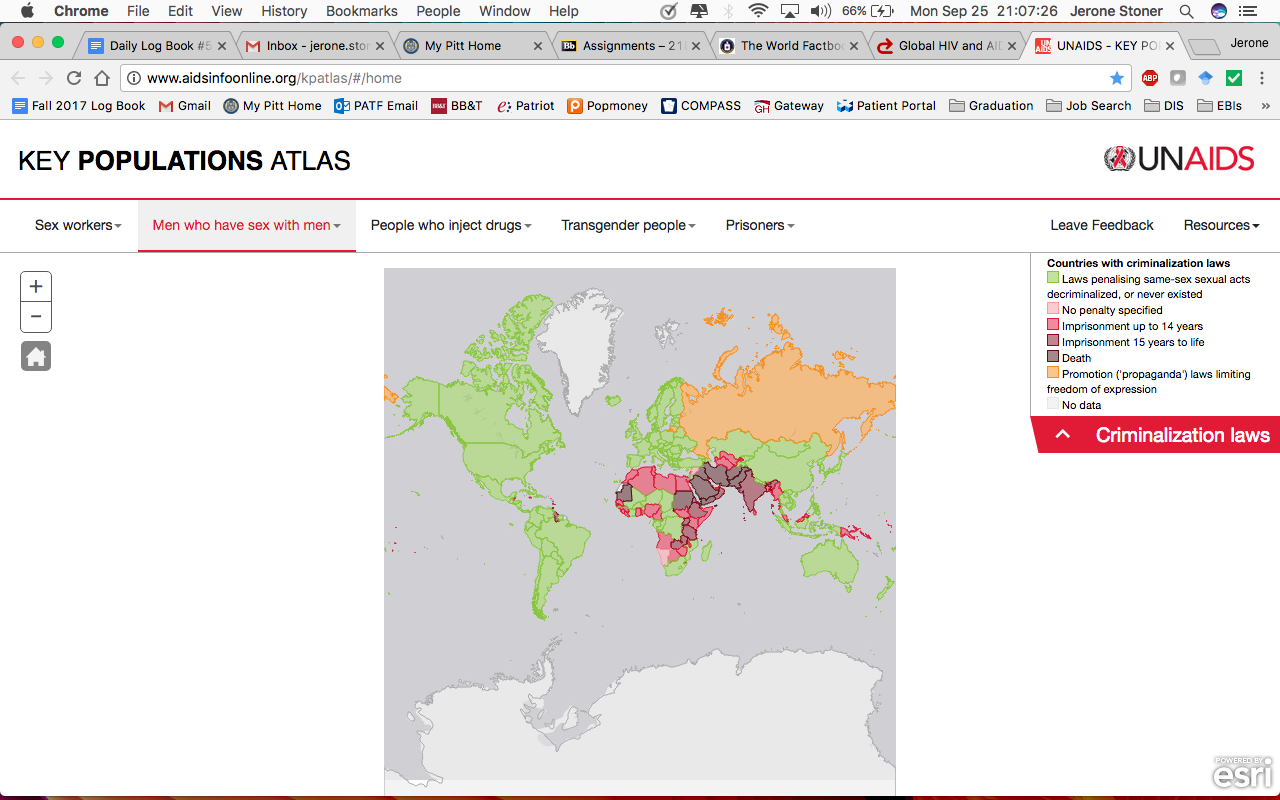
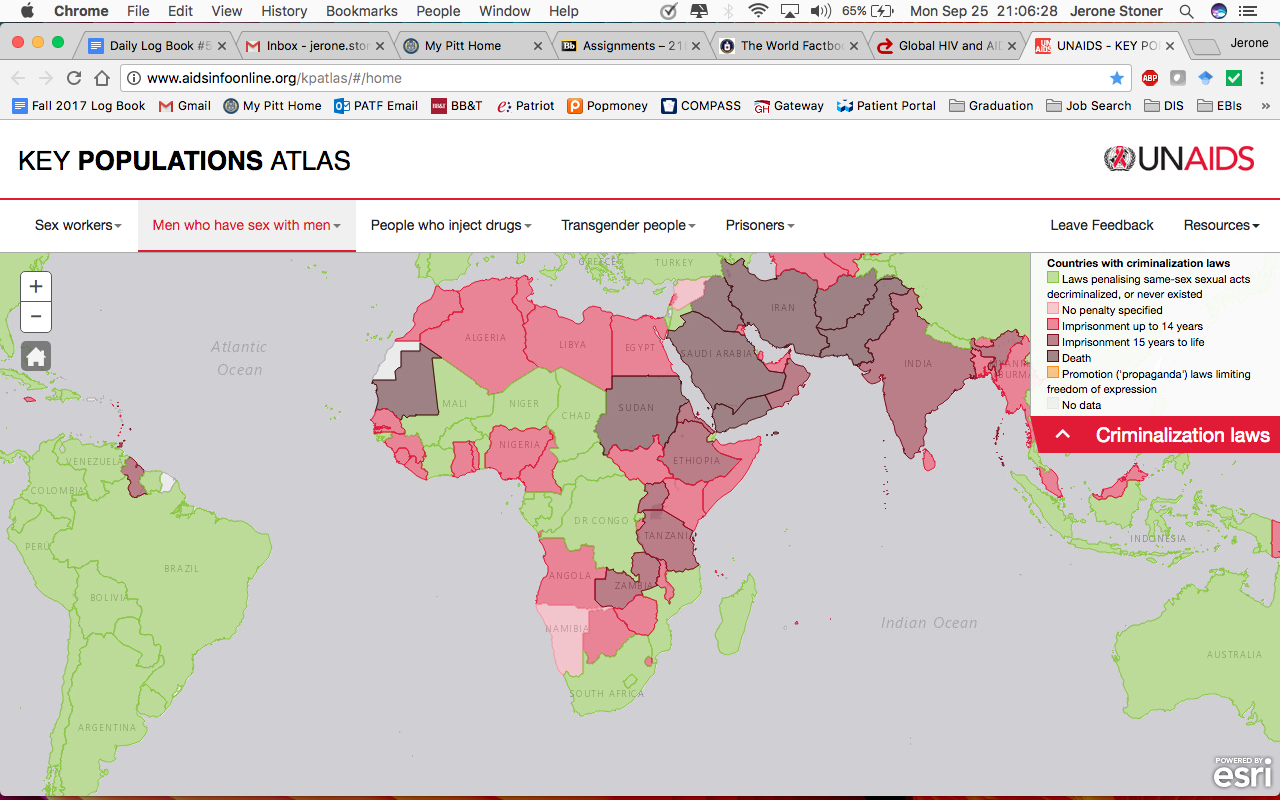
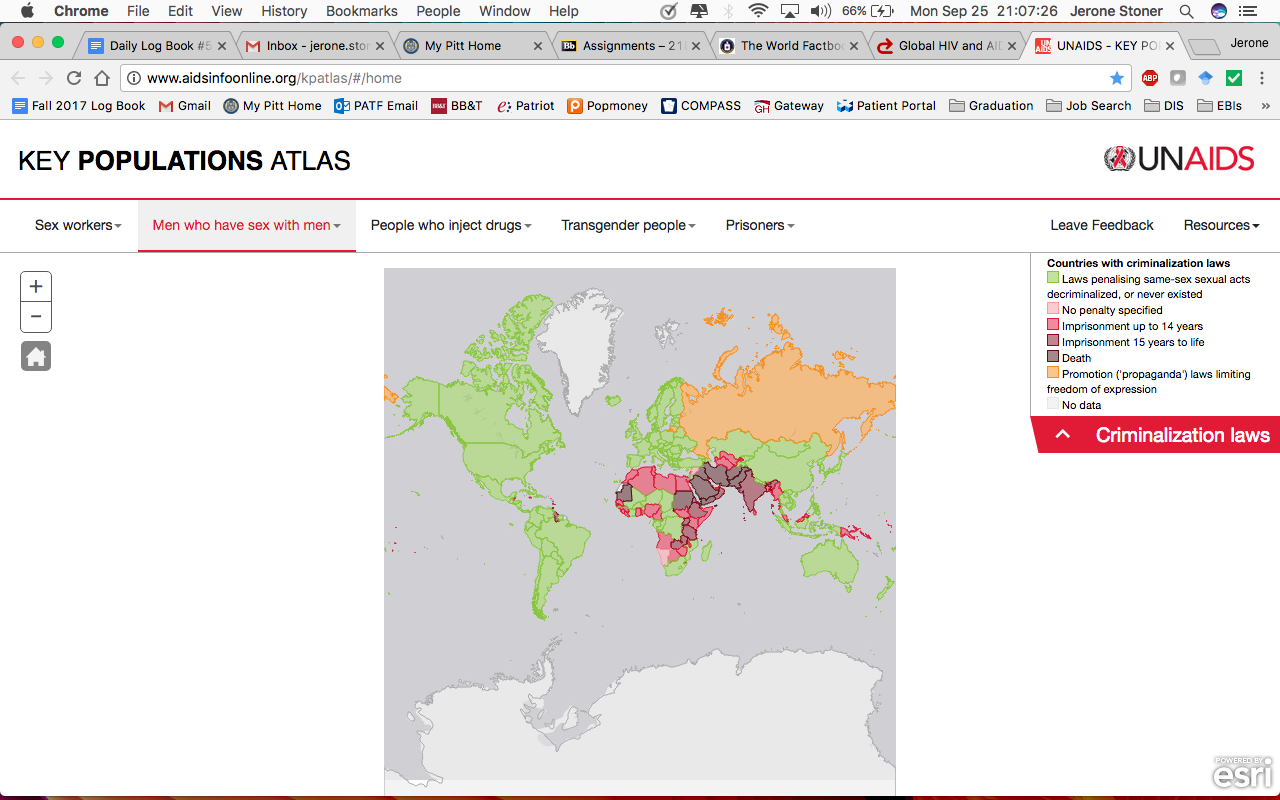


Figure . Countries with Laws Criminalizing Homosexuality

(UNAIDS, 2017)

As previously mentioned, 33 out of 54 African countries criminalize homosexuality, 25 of which sentence MSM to imprisonment for up to 14 years, five of which sentence MSM to imprisonment for 15 years to life, two of which sentence MSM to death, and one with no specific penalty (see Figure 3) (Gerber, 2016). LGBT allies and individuals who provide health care to MSM are also at risk of punishment and penalties ranging from fines and arrests to extortion and even death(Zahn et al., 2016). Moreover, 24 out of 34 African countries that explicitly name MSM as an at-risk population in their AIDS National Strategic Plan criminalize homosexuality, which raises questions about where that funding is being allocated (Jobson et al., 2015). Ultimately, criminalization of homosexuality means that funding and support cannot go towards MSM-specific interventions, research, or prevention, treatment, and care services without repercussions for both the MSM they are geared towards and for the health professionals and allies who might provide this assistance (Fay et al., 2011).

Collectively, these data provide substantial evidence that criminalization of homosexuality has a negative impact on providing HIV prevention and treatment services to MSM in Africa (United Nations for LGBT Equality, n.d.). For example, these data may explain why 27 out of the 33 (81%) countries in Africa that criminalize homosexuality were among the top 109 countries with the highest HIV prevalence in 2016 (Central Intelligence Agency, 2016). It is important to note that the majority of those African countries that do not criminalize homosexuality (18 out of 21 or 86%) rank highest in HIV prevalence, which may be explained by increased likelihood to seek HIV prevention and treatment services (Central Intelligence Agency, 2016). Conversely, it is extremely likely that the majority of countries that criminalize homosexuality underestimate the burden of HIV among MSM in their respective countries and therefore may actually rank higher than they currently do (Central Intelligence Agency, 2016).

## Global Protection of Homosexuality

Although there are still 76 countries in the world with sociopolitical climates that promote discrimination, stigmatization, and criminalization of homosexuality, this number is actually down from 92 countries reported in 2006 (Nunez, 2016). Encouragingly, on September 29, 2017, the United Nations Human Rights Council voted 27-13 (with 7 abstentions) in favor of a resolution to condemn the death penalty for consensual same-sex relations. While this resolution does not stop countries from implementing other forms of punishment, it does prohibit using the death penalty in a discriminatory manner (Embury-Dennis, 2017; Human Rights Council, 2017; Paletta, 2017).

Moreover, 36 countries have laws (e.g. prohibitions on “incitement to hate speech”) that protect the rights of MSM (see Figure 4) (Nunez, 2016). African countries including South Africa (in 1994) and Lesotho (in 2012) also passed legislation providing freedom from discrimination based on sexual orientation, and other countries such as Angola and Mozambique are staring to follow suit (Stahlman, Bechtold, et al., 2015; Zahn et al., 2016). As a result, theoretically more funding, research, and HIV prevention and treatment services are available for MSM to use with less fear of social and legal consequences. However, MSM in these countries still report high rates of stigma, discrimination and violence, which limit their uptake of successful biobehavioral HIV interventions (Beyrer et al., 2016; Stahlman, Bechtold, et al., 2015; Zahn et al., 2016).

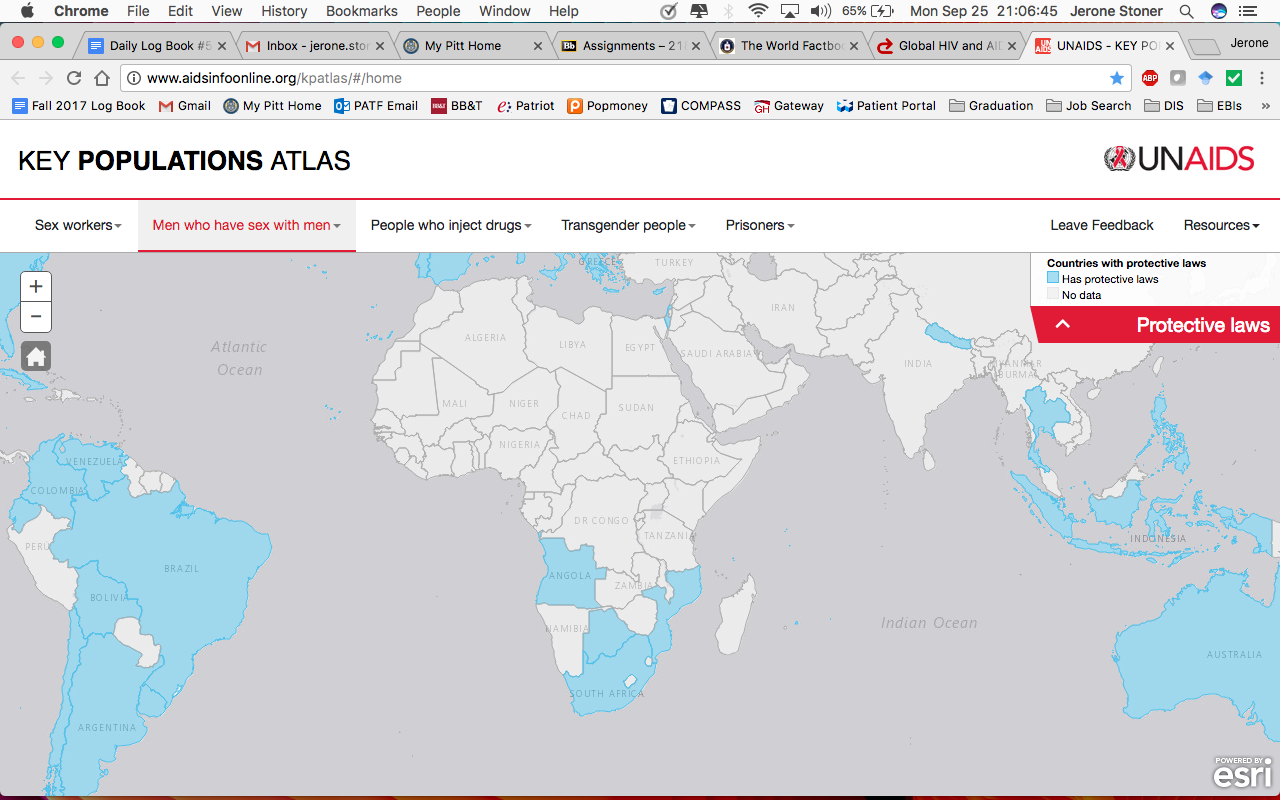
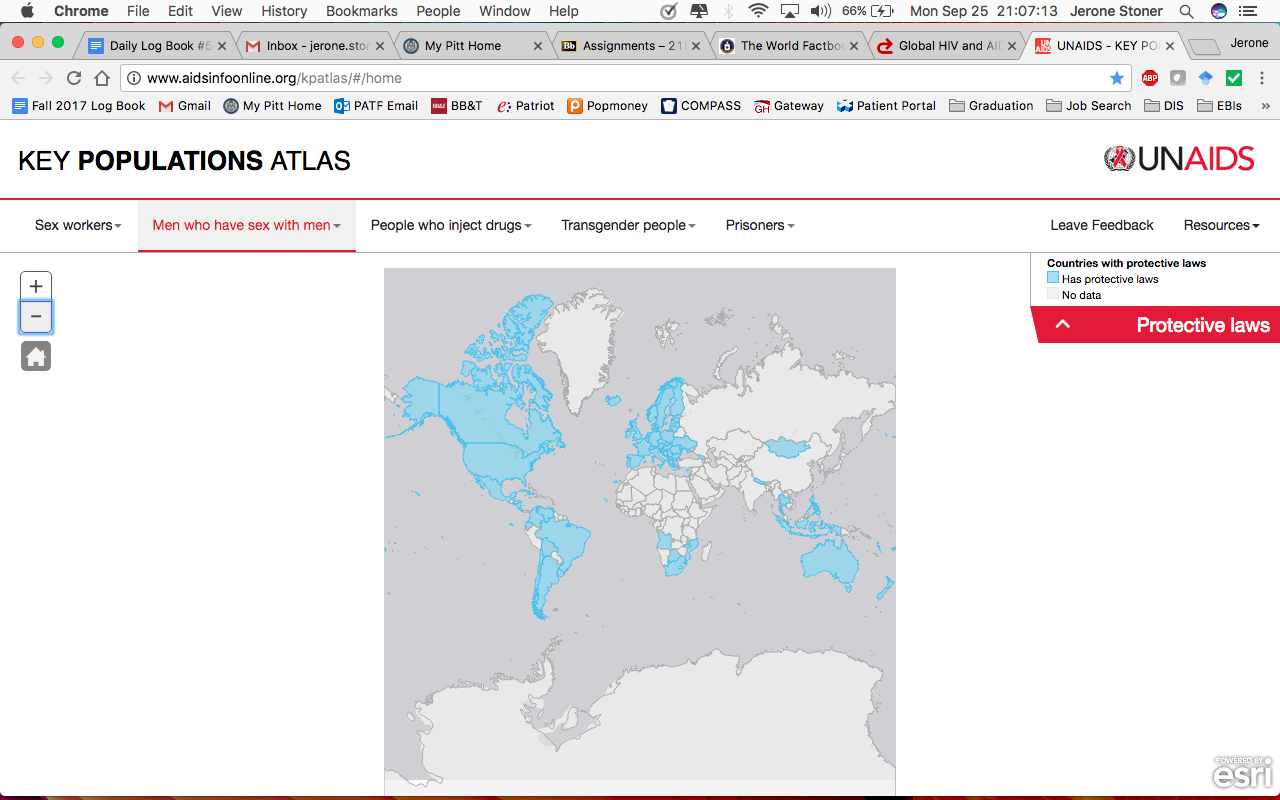
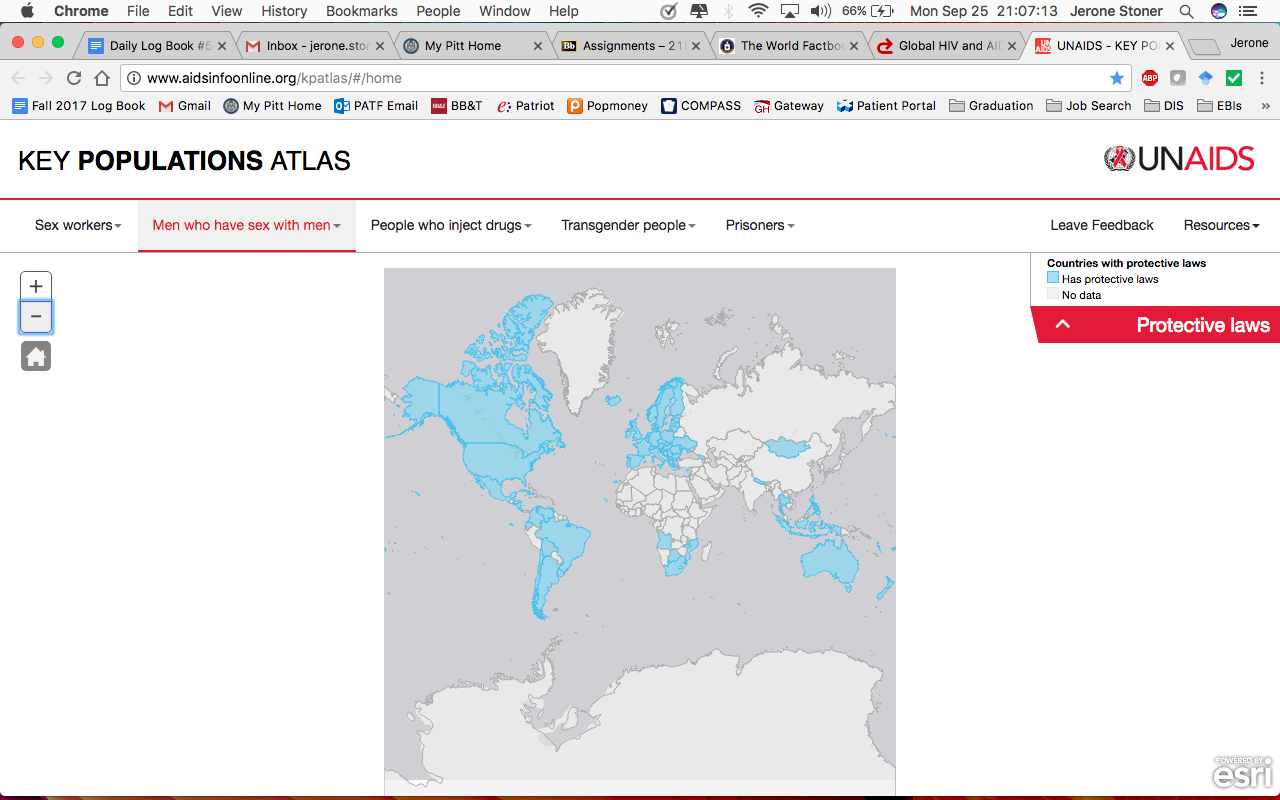


Figure . Countries with Laws Protecting Homosexuality

(UNAIDS, 2017)

## Purpose of Review

The purpose of this review is to further contextualize how human rights violations, which are incited by laws criminalizing homosexuality, serve as barriers to accessing and providing HIV prevention, treatment, and care services and lead to disparities in prevalent and incident HIV among MSM in Africa. In this review, enacted and perceived human rights violations include verbal, emotional, moral, physical, and sexual harassment or abuse (collectively referred to as “overt acts of violence” in this review), criminalization of homosexuality, stigma and discrimination in social settings, the workplace, or healthcare settings, provision of poor healthcare services, denial of healthcare services, denial of legal services or protection, blackmail, and arrests on false pretenses, which are related to same-sex identities, same-sex practices, or that are generally homophobic in nature and which are committed by any person (i.e. family, friend, partner, stranger, healthcare professional, law enforcement official, etc.). This review also examines fear of seeking healthcare, active avoidance of healthcare, fear of disclosing sexuality or same-sex practices, and fear of walking freely in the community, which may result from the enacted and perceived human rights violations previously outlined.

This review will provide a brief country-by-country analysis of 1) HIV prevalence and behavioral risks among MSM in the five regions of Africa; 2) existing laws that criminalize or protect homosexuality; 3) human rights violations experienced by MSM (e.g. verbal, physical and sexual abuse, denial of health care services, etc.); and 4) the impact these factors have on accessing HIV prevention and treatment services (e.g. testing, treatment, HIV education, and outreach). This review will then compare the experiences of MSM in respective countries, given available data, within and between each of the five regions of Africa. In doing so, this review will attempt to answer the question: Do human rights violations and criminalization of homosexuality differentially impact access to HIV prevention and treatment services for MSM in various regions of Africa? Lastly, this review will discuss what can be done in the future to decrease human rights violations and increase access to and development of MSM-specific HIV prevention and treatment interventions. Ultimately, this review provides an up-to-date narrative examining the impact of human rights violations on access to HIV prevention and treatment for MSM across Africa.

# Methods

The information cited within this review was collected from 88 primary research articles and reviews published between 2000 and 2017, which were identified using PubMed. The PubMed search was conducted with four major concepts under consideration: 1) African countries & regions (e.g. Africa, North Africa), 2) sexual identity & same-sex practices (e.g. gay, bisexual, MSM), 3) HIV prevalence and behavioral risks (e.g. STI infection, HIV testing, HIV education), and 4) human rights violations and laws criminalizing homosexuality (e.g. criminalization, stigma, abuse/violence, barriers to HIV services). For the full electronic PubMed search query, see Appendix A. Only articles dealing with criminalization of homosexuality, other human rights violations, barriers to HIV education, testing, prevention, and treatment services, and gay, bisexual, and other MSM within the context of Africa were included in this review. Lastly, only articles that were available in English and full-text via University of Pittsburgh institutional subscription services were selected.

The initial PubMed search identified 794 articles, of which 356 were full-text (Figure 5). Articles regarding male and female sex workers as well as injection drug use (IDU) and other substance use were excluded from this review in order to eliminate additional human rights issues that might confound the effect of criminalization of homosexuality on access to HIV prevention and treatment services among MSM in Africa. Additionally, papers that primarily focused on women who have sex with women, HIV-positive women, transgender individuals, pregnant and perinatally-infected HIV-positive individuals, and heterosexual individuals were excluded in order to hone in on articles specific to gay, bisexual, and other MSM. See Appendix A for the full electronic PubMed search query with exclusion criteria.

After excluding these articles, the PubMed search identified 702 articles, 673 of which were in English, and 298 of which were full-text and in English (see Figure 5). The author independently read through all 298 article abstracts and selected all eligible articles specific to criminalization of homosexuality or other human rights issues (stigma, discrimination, acts of violence, etc.) related to being MSM in Africa, HIV prevalence/incidence among MSM in Africa, and barriers to accessing and providing HIV prevention and treatment services to MSM in Africa. Based on these criteria, 88 articles were identified. An additional 34 primary research articles and reviews were identified by reading through the references cited in previously selected articles.

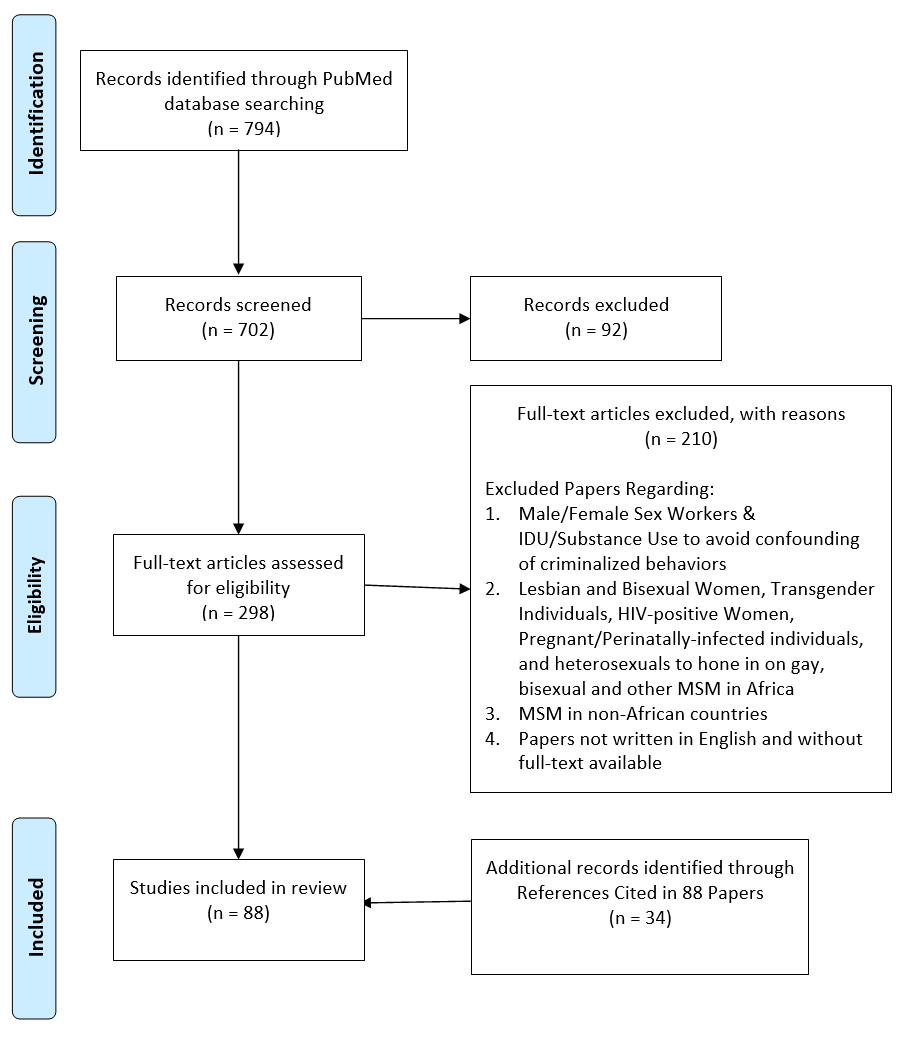


Figure . Condensed Flowchart Illustration of Literature Included and Excluded from Review

This scope of the literature allows for a more comprehensive understanding of how sociopolitical climates in the five regions of Africa influence human rights and the ability of MSM in these countries to access HIV prevention, treatment, and care services. This review, however, is limited to only 21 African countries due to a general paucity of MSM research in Africa. Additionally, this review does not take into account the experiences of, or the burden of HIV among, other sexual and gender minorities (e.g. lesbian and bisexual women and transgender individuals) that are also impacted by criminalization laws, stigma, discrimination, and overt acts of violence in these African countries and many other regions worldwide. It is, however, likely that MSM and other sexual and gender minorities in other African countries and regions of the world face similar barriers given similarly hostile sociopolitical environments. Therefore, these limitations should be kept in mind for future studies and development of future interventions.

# RESULTS

## North Africa

### Egypt

Recent literature indicates that the prevalence of HIV among adults (15-49) in Egypt is less than 0.1% (UNAIDS, 2016). Analysis of Egypt’s case notification reports indicate that anal sex between males has contributed cumulatively about 13% to new HIV infections since the first diagnosed case of HIV in Egypt (Mumtaz et al., 2010). In comparison to other countries in the Middle East and North Africa (MENA) (e.g. Bahrain – 4.9%, Pakistan – 2.6%, Syria – 1.8%, Tunisia – 4.9%), the cumulative MSM contribution to new HIV diagnoses in Egypt is significantly higher (G. Mumtaz et al., 2010). Limited surveillance data from 2006 and 2010 indicate that the prevalence of HIV among MSM in Egypt is roughly 6%, but varies considerably by city (e.g. 5.9% in Alexandria, 5.7% in Cairo, and 0% in Luxor) (G. Mumtaz et al., 2010).

A systematic review of risk behaviors among MSM in MENA found that most MSM have a basic knowledge of HIV, with some surveys indicating that at least 82% of Egyptian MSM have heard of HIV (G. Mumtaz et al., 2010). Despite general awareness, most MSM in MENA lacked a comprehensive understanding of HIV transmission, with many believing that the risk of acquiring HIV through anal sex was lower than through vaginal sex and that being the insertive partner completely eliminates any HIV risk (G. Mumtaz et al., 2010). In Egypt, roughly 47% of MSM even believed themselves to be at no risk whatsoever for acquiring HIV (El-Sayyed, Kabbash, & El-Gueniedy, 2008; G. Mumtaz et al., 2010). Low perceptions of HIV risk may then play a part in explaining why a small percentage (between 2-22%) of Egyptian MSM have ever tested for HIV (G. Mumtaz et al., 2010). Moreover, one particular study found that 7.5% of Egyptian MSM had been infected with syphilis at some point in their lifetime and that 8.8% were positive for gonorrhea and another 8.8% were positive for chlamydia at the time of the study (G. Mumtaz et al., 2010), which suggests these MSM do indeed have risk factors for HIV.

This systematic review also found that, although the overall rate of consistent condom use among MSM in MENA countries was generally low (25% and below), MSM in Egypt were among the least likely to report condom (G. Mumtaz et al., 2010). This could explain why Egyptian MSM contribute more to overall HIV infections than MSM in other MENA countries. Mumtaz’s review also found that although 80% of MSM in MENA were generally aware of condoms, only 31-51% of MSM were actually cognizant of the fact that condoms provide protection from HIV and other STIs (G. Mumtaz et al., 2010). Additionally, many MSM in MENA reported disliking condoms due to a reduced sense of pleasure (G. Mumtaz et al., 2010). Roughly 22% of Egyptian MSM also cited barriers to accessing condoms as their reason for inconsistent condom use (G. Mumtaz et al., 2010). This review does not specifically mention what difficulties MSM experience, which limit their ability to access and use condoms, if desired. However, criminalization of homosexuality in Egypt as well as experiences of stigmatization, discrimination, and overt acts of violence likely serve as significant barriers to accessing and providing MSM-specific HIV education, prevention, and treatment services.

Egypt ratified the ICCPR on January 24, 1983, but has not ratified the Optional Protocol to ICCPR (Gerber, 2016). Despite this vow to protect the human rights of all Egyptian citizens, the Egyptian *Penal Code* and *Law on the Combating of Prostitution* are frequentlyused to criminalize homosexuality and punish MSM in Egypt (see Figures 5 and 6) (Gerber, 2016). Penalties for consensual same-sex relations, or “debauchery” as Egyptian laws describe it, as well as harboring homosexuals and “promoting debauchery” can include imprisonment up to five years and/or fines up to 1,000 Egyptian pounds. Article 9 of the *Law on the Combatting of Prostitution* even permits medical examinations of MSM upon arrest to check for HIV and STIs. If positive, MSM can be forcibly treated and sent to a reformatory for up to three years (Gerber, 2016).

Article 98(f)

“Detention for a period of not less than six months and not exceeding five years, or paying a fine of not less than five hundred pounds and not exceeding one thousand pounds shall be the penalty inflicted on whoever exploits and uses the religion in advocating and propagating by talk or in writing, or by any other method, extremist thoughts with the aim of instigating sedition and division or disdaining and contempting any of the heavenly religions or the sects belonging thereto, or prejudicing national unity or social peace.”

Article 269 bis

“Whoever is found on a public road or a traveled and frequented place inciting the passerby with signals or words to commit indecency shall be punished with imprisonment for a period not exceeding one month. If the felon recurs to committing this crime within one year of the first crime, the penalty shall become imprisonment for a period not exceeding six months and a fine not exceeding fifty pounds. A ruling of conviction shall necessitate placing the convict under police supervision for a period equal to that of the penalty.”

Article 278

“Whoever commits in public a scandalous act against shame shall be punished with detention for a period not exceeding one year or a fine not exceeding three hundred pounds.”

Figure . Egypt's *Law 58/1937* promulgating *The Penal Code*

Article 9

“Punishment by imprisonment for a period not less than three months and not exceeding three years and a fine not less than 25 LE and not exceeding 300 LE […] or one of these two punishments applies in the following cases:

a) Whoever lets or offers in whatever fashion a residence or place run for the purpose of debauchery or prostitution, or for the purpose of housing one or more persons, if they are to his knowledge practicing debauchery or prostitution.

b) Whoever owns or manages a furnished residence or furnished rooms or premises open to the public and who facilitates the practice of debauchery or prostitution, either by admitting persons so engaged or by allowing on his premises incitement to debauchery or prostitution.

c) Whoever habitually engages in debauchery or prostitution. Upon the apprehension of a person in the last category, t is permitted to send him for a medical examination. If it is discovered that he is carrying a venereal disease, it is permitted to detain him in a therapeutic institute until his cure is completed. It is permitted to determine that the convicted person be placed, upon completion of his sentence, in a special reformatory until the administrative agency orders his release. This judgment is obligatory in cases of recidivism, and the period spent in the reformatory is not allowed to be more than three years. […]”

Figure . Egypt's *Law 10/1961* *on the Combating of Prostitution*

In 2004, Human Rights Watch released an article called *In a Time of Torture: The Assault on Justice in Egypt’s Crackdown on Homosexual Conduct*, which documents 179 reports of “lawful” arrests, detentions, and torture experienced by MSM in Egypt for more than a decade (de Gruchy & Fish, 2004). Many MSM recounted being “humiliated, whipped, beaten, bound, suspended in painful positions, burned with cigarettes, submerged in ice-cold water, and tortured with electric shocks to their limbs, genitals, or tongue” as punishment for “habitual practices of debauchery” (de Gruchy & Fish, 2004). Many MSM also reported invasive and abusive forensic anal examinations conducted against their will by doctors of the Forensic Medical Authority to provide “evidence” that these men had engaged in same-sex relations (de Gruchy & Fish, 2004). Many Egyptian men also reported being stigmatized, discriminated against, and punished for suspected “debauchery” based solely on the way they walk, the way they style their hair, and even the color of underwear they choose to wear (de Gruchy & Fish, 2004).

These reports of human rights violations may explain why MSM communities in Egypt are largely hidden (G. Mumtaz et al., 2010). Despite efforts to remain hidden, it is not uncommon for Egyptian police to use wiretaps and informants to determine where MSM live and socialize (Human Rights Watch, 2004). There have also been reports of Egyptian police using online chat rooms and personal advertisements to arrange meetings and arrest MSM (Human Rights Watch, 2004). After one specific raid of MSM in Cairo in October 2008, dozens were arrested and, in addition to forensic anal examinations, were tested for HIV unknowingly and unwillingly (Moszynski, 2008). Men who tested positive were chained to hospital beds where they remained for months until a court order was established to have them released. Four of these men were then charged with “habitual practices of debauchery” and were sentenced to three years in prison with an additional three years of close police supervision post-release (Moszynski, 2008).

In summation, Egyptian laws that criminalize homosexuality, that liken MSM to extremists, pedophiles, and prostitutes, and that promote stigmatization, discrimination, and overt acts of violence towards MSM likely play a significant role in driving MSM into hiding and discouraging them from accessing HIV education, prevention, and treatment services. Egyptian MSM who do access HIV-related healthcare services are also likely to have difficulty disclosing their identity and same-sex behaviors, which may result in not receiving relevant information for reducing their behavioral risks. Reports of experienced police brutality, forced medical examination, and other human rights violations may also explain why Egyptian MSM have low uptake of HIV testing and report barriers to accessing condoms, more specifically (El-Sayyed, Kabbash, & El-Gueniedy, 2008; G. Mumtaz et al., 2010).

### Libya

Recent literature indicates that the prevalence of HIV among adults (15-49) in Libya is 0.3% (IndexMundi, 2015). Although the HIV epidemic in Libya is mostly concentrated in injection drug use populations, MSM in Libya are also significantly at risk of HIV infection (Valadez et al., 2013). Valadez et al. (2013) were the first to survey MSM in Libya in order to estimate HIV prevalence among this community and assess their knowledge of HIV and behavioral risk factors. Their cross-sectional analysis of 227 MSM in Tripoli revealed an estimated HIV prevalence of 3.1%, which is just short of the 5%-threshold of a concentrated epidemic (Valadez et al., 2013).

Valadez et al. (2013) found that basic knowledge of HIV prevention and sexual transmission was low, with only 16.8% of MSM being able to correctly name ways to prevent transmission and correctly point out misconceptions about HIV. Roughly 50% of the sample also perceived themselves to be at no risk for HIV infection, with only 5.7% of MSM perceiving themselves as being at high risk, 19.5% at medium risk, 15.4% at low risk, and 9.6% unsure of their risk level. Consequently, only 45.6% of MSM had been tested for HIV in the past 12 months and were aware of their status (Valadez et al., 2013). Knowledge of STIs was also low, with only 1.3% of MSM being able to name two symptoms associated with STIs in men and women (Valadez et al., 2013). And, despite the fact that roughly 95% of MSM knew where to get condoms, only 12.1% actually knew how to use them and only 21% reported using them the last time they engaged in anal sex (Valadez et al., 2013). Similarly, although 75.7% of MSM knew where to get lube, only 54.3% reported ever using lube and only 0.6% have actually used recommended water-based lube (WBL) (Valadez et al., 2013). Lastly, only 0.9% of the 227 MSM in this study reported exposure to prevention programs promoting HIV testing and condom use. As Valadez et al. (2013) briefly elude to, criminalization of homosexuality in Libya likely serves as a significant barrier to educating MSM and providing HIV prevention and treatment services.

Libya ratified ICCPR on May 15, 1970 and ratified the Optional Protocol to ICCPR on May 16, 1989. Despite these measures to protect their citizen’s rights, Libya’s *Penal Code of 1953* has frequently been used to criminalize homosexuality and punish MSM (see Figure 7) (Gerber, 2016). The penalty for consensual same-sex relations, referred to as “indecent acts” in Libyan laws, is imprisonment for up to five years (Valadez et al., 2013).

Article 407(4)

“Whoever has intercourse with a person with his consent will be punished with his partner by imprisonment of not more than five years.”

Article 408(4)

“Whoever commits an indecent act with a person with his consent will be punished with his partner with imprisonment.”

Figure . Libya's *Penal Code of 1953 –* Amended by *Law 70* on October 2, 1973

Although, this review did not find much data regarding human rights violations in Libya, extant literature suggests that criminalization laws facilitate stigmatization, discrimination, and overt acts of violence towards MSM (Valadez et al., 2013). For instance, Valadez et al. (2013) found that 10.9% of MSM in their study had been arrested in the previous year for various reasons including being under the influence of drugs or alcohol, possessing drugs, fighting, sex work, and “other,” which likely includes arrests strictly on the basis of same-sex relations. Additionally, 0.8% of Libyan MSM reported being physical assaulted (e.g. hit, kicked, or beaten) in the previous year due to being perceived as MSM (Valadez et al., 2013). Roughly 10% of MSM in Libya also experienced one or more verbal insults in the last year related to being perceived as MSM (Valadez et al., 2013). Forced sex within the last year was also reported by 5.2% of MSM, with 13.8% of MSM revealing that their first sexual encounter was nonconsensual (Valadez et al., 2013). Moreover, 5.2% of MSM reported being refused services including healthcare, employment, education, customer service at restaurants, and even police assistance in the previous year due to perceptions of being MSM (Valadez et al., 2013). Lastly, Valadez et al. (2013) found that MSM who engaged in receptive anal sex, in addition to those living with HIV, were highly stigmatized by the general population as well as other MSM.

In summation, Libyan laws that criminalize homosexuality and promote violence towards MSM likely explain why the prevalence of HIV among MSM in Libya has nearly reached the threshold for a concentrated epidemic (Valadez et al., 2013). For instance, it is likely that fear of verbal, physical, and sexual assault, arrest, and/or imprisonment deter MSM in Libya from seeking out available HIV/STI prevention and treatment services, which limits opportunities for education, testing, risk-reduction counseling, and distribution of condoms and condom-compatible lube. Continuous denial of services, including healthcare, education, and police assistance, is especially concerning because it promotes the idea that MSM do not have human rights to knowledge, health, and safety. Libyan MSM may internalize this false ideology over time, leading them to become complacent about their health and safety despite global efforts to increase access to MSM-specific HIV interventions.

### Morocco

Although the HIV epidemic is largely driven by and concentrated in injection drug use and sex work populations in Morocco, contributing to an overall HIV prevalence of 9%, recent studies indicate that the prevalence of HIV is also high among MSM in Morocco, ranging from 11-14% (Johnston et al., 2013; G. R. Mumtaz et al., 2013). Additionally, Mumtaz et al. (2013) found that males in Morocco account for nearly 90% of HIV infections due to high risk behaviors.

Johnston et al. (2013) were one of the first to investigate HIV prevalence and risk behaviors among MSM in Morocco. Their cross-sectional analysis of 232 MSM in Agadir and 346 MSM in Marrakesh found that roughly 6% of MSM in Agadir and 3% of MSM in Marrakesh were HIV-positive and 31.6% and 56.4% of MSM in these cities, respectively, were co-infected with syphilis (Johnston et al., 2013). MSM in these two cities also reported numerous HIV risk factors including multiple sex partners (male and female), engaging in transactional sex, and inconsistent use of condoms (Johnston et al., 2013). Condom use was particularly low among MSM in Marrakesh with 62.9% reporting no condom use with an occasional male partner in the last six months (vs. 50% in Agadir), 59.1% reporting no condom use with a regular male partner (vs. 53.5% in Agadir), and 70.8% reporting no condom use with their last female sex partner (vs. 52.8% in Agadir) (Johnston et al., 2013). In addition to low rates of condom use, many MSM in Agadir and Marrakesh reported exchanging sex for money, though fewer reporetd paying for sex (Johnston et al., 2013).

Johnston et al. (2013) also found that the majority of MSM in Agadir and Marrakesh identified as bisexual and that nearly half of MSM who reported engaging in sex work also reported either being in a relationship with a female partner or having had a female partner in the last six months. Johnston et al. (2013) believe that MSM in these cities may actually use sex work and casual relations with female partners to mask same-sex sexual preferences, which are stigmatized and criminalized in Morocco (e.g. “Sex with other men is strictly for the money, so I’m not gay” and “I can’t be gay, I have sex with women”).

Morocco ratified ICCPR on May 3, 1979, but has not ratified the Optional Protocol to ICCPR. Despite this vow to protect their citizen’s rights, the Moroccan *Penal Code of November 26, 1962* is frequently used to criminalize homosexuality and punish MSM (see Figure 8) (Gerber, 2016; Johnston et al., 2013). Penalties for consensual same-sex relations, described as “lewd” and “unnatural acts” in Moroccan laws, can range from imprisonment up to three years to fines up to 1,000 dirhams (Gerber, 2016; Johnston et al., 2013). Article 489 of the Moroccan *Penal Code* has a clause that says these punishments will be doled out “unless the facts of the case constitute aggravating circumstances” (Gerber, 2016), which potentially leaves room for other men to claim they were forced to have sex with another man (despite actually consenting to or initiating sex at the time) in order to escape legal recourse.

Article 489

“Any person who commits lewd or unnatural acts with an individual of the same sex shall be punished with a term of imprisonment of between six months and three years and a fine of 120 to 1,000 dirhams, unless the facts of the case constitute aggravating circumstances.”

Figure . Morocco's *Penal Code of November 26, 1962*

Little to no data related to human rights violations experienced by MSM in Morocco due to these laws was uncovered in this review, however, existing literature alludes to stigma, discrimination, and overt acts of violence hindering MSM from accessing HIV prevention and treatment services (Johnston et al., 2013). Moreover, Johnston et al. (2013) point out that there are few (if any) voluntary counseling and testing programs, let alone other health services, specifically for MSM in Morocco. A combination of limited HIV resources for MSM as well as criminalization of homosexuality may explain why rates of condom use are so low and HIV prevalence among MSM in Morocco is so high in comparison to HIV prevalence (0.15%) in the general population (Johnston et al., 2013; G. R. Mumtaz et al., 2013). Criminalization laws may also explain why so many MSM in Agadir and Marrakesh identify as bisexual (rather than gay) and report engaging in transactional sex with men despite having female partners (Johnston et al, 2013). Overall, these data support the need for legal and social reforms to reduce stigma and discrimination that hinder access to HIV-related healthcare services, and for more aggressive MSM-specific education and outreach, in order for more MSM in Morocco to be tested, treated, and linked to care (Johnston et al., 2013; G. R. Mumtaz et al., 2013).

### Intraregional Analysis of North African Countries

This review found that all of the countries in North Africa for which data were available via this search strategy have concentrated HIV epidemics, with MSM in respective countries having notably higher HIV prevalence than the general population. Additionally, MSM reported myriad HIV risk behaviors, which vary by country, but include limited knowledge of HIV, low perceptions of risk, multiple, concurrent sexual relationships with men and women, low rates of condom use, WBL use, and testing as well as high rates of bacterial STIs.

This review found very little existing research on human rights violations experienced by MSM in North African countries, with Libya being the only country to produce these statistics. However, anecdotal reports of verbal, physical, and sexual abuse as well as discrimination in healthcare settings and actively being denied healthcare and legal services were not uncommon, especially in Egypt and Libya (Table 3). Laws criminalizing homosexuality condone police raids, forced anal examinations and HIV testing by medical professionals, and literal torture of MSM in Egypt, which drives MSM into hiding and discourages them from accessing and utilizing basic resources like condoms and HIV testing, let alone ART (El-Sayyed et al., 2008; G. Mumtaz et al., 2010). In Libya, fear of verbal, physical, and sexual violence as well as arrest and imprisonment deter MSM from seeking out HIV/STI prevention and treatment services, contributing to low levels of HIV knowledge, perceptions of low risk, and low levels of condom and lube use (Valadez et al., 2013). Laws criminalizing homosexuality and limited HIV resources in Morocco may provide insight into why Moroccan MSM also report inconsistent condom use and why many identify as bisexual and report engaging in transactional sex with men (Johnston et al., 2013; G. R. Mumtaz et al., 2013). While none of the literature in this section reveals a direct correlation between experiencing human rights violations and HIV infection, there appear to be trends towards experiencing human rights violations, being unable to or afraid to access HIV resources, and increased HIV risk behaviors, which may explain why MSM in these North African countries are disproportionately burdened by HIV.

## West Africa

### Burkina Faso

Previous research indicates that the prevalence of HIV among MSM in Burkina Faso is approximately 4.8% compared to 1% in the generalized population (Duvall et al., 2015). In-depth interviews and focus groups with MSM and other key informants in two cities in Burkina Faso, Ouagadougou and Bobo-Dioulasso, revealed multiple risk factors among MSM including multiple male and female sex partners, inconsistent condom use, and low uptake of HIV testing (Research to Prevention, 2014). Many MSM in Burkina Faso reported being bisexually active with more than 50% of MSM reporting both male and female sex partners in the last 12 months (Research to Prevention, 2014). Roughly 70% of MSM in Ouagadougou and 60% in Bobo-Dioulasso also reported having two or more male partners in the last 12 months (Research to Prevention, 2014). Frequency of condom use with regular male and female sex partners (roughly 50%) was similar among MSM in both cities. MSM in each city were more likely to consistently use condoms with casual partners; however, a notable 5-10% discrepancy in condom use between male and female casual partner was discovered (70% and 60% with male partners and 75.5% and 73.5% female partners, respectively) (Research to Prevention, 2014). Lastly, very few MSM reported ever being tested for HIV (only 25% in each city). Of those who received a test, roughly 23% said that was the first and only HIV test they had ever taken (Research to Prevention, 2014).

Historically, there have been no official laws or policies that overtly criminalize homosexuality or same-sex relations between men in Burkina Faso (Duvall et al., 2015). However, MSM in Ouagadougou and Bobo-Dioulasso still frequently reported stigma, discrimination, and overt acts of violence as well as absence of inclusive/protective policies and intentional misapplication of other policies as barriers to accessing HIV prevention and treatment services (Duvall et al., 2015; Research to Prevention, 2014). Duvall et al. (2015) found that while Burkina Faso has laws in place to protect the rights of all citizens, many MSM reported stigma and discrimination from health professionals and law enforcement officials who were ignorant of (or intentionally ignored) protective laws due to their own negative opinions of same-sex relations.

For instance, many MSM reported being harassed, blackmailed, and arrested by law enforcement under false pretenses (e.g. prostitution laws). Moreover, although there are operational guidelines that mandate free and confidential HIV testing and counseling services for all adults, certain public health laws in Burkina Faso allow health professionals to conduct HIV testing without permission (e.g. sick patients coming in for checkups) (Duvall et al., 2015). There are also no specific initiatives in place to educate health professionals and law enforcement on the needs of MSM (Duvall et al., 2015). Without these initiatives, MSM may be less likely to seek medical treatment for fear of disclosing their status, and may be more likely to be tested for HIV unknowingly, and experience further stigma and discrimination (Duvall et al., 2015).

Additionally, although there are various sexual and reproductive health laws in Burkina Faso that are supposed to guarantee all citizens access to free or low-cost HIV prevention and treatment resources, MSM report that condoms, WBL, HIV/CD4 testing supplies, and even ART are frequently out-of-stock (Duvall et al., 2015). Even when ART medications are financially available, the cost of regular provider visits, CD4 testing, and treating opportunistic infections serves as an additional financial barrier (Duvall et al., 2015). Prison policies and penal codes have also been used in Burkina Faso to deny MSM who are detained access to HIV prevention and treatment services (including condoms and lube) (Duvall et al., 2015).

Duvall et al. (2015) also found that there are no laws requiring that a certain percentage of Burkina Faso’s budget be allocated to MSM-specific programs or that data related to MSM population size and health be collected systematically. Additionally, no policies exist that allow MSM to serve on committees with authority over policy-making or program development, implementation, and evaluation, which limits MSM ability to express their needs and concerns.

Lastly, although homosexuality and same-sex relations are not criminalized at the country-level, MSM report a large amount of stigma, discrimination, and violence from the general population (Research to Prevention, 2014). For instance, roughly 25% of MSM in Ouagadougou and 40% of MSM in Bobo-Dioulasso reported being physically assaulted and many more MSM reported being frequently verbally harassed (Research to Prevention, 2014). Roughly 15% of MSM in both cities also reported being sexually assaulted, with notably high rates of forced sex among HIV-positive MSM in each city (43% of HIV-positive MSM in Ouagadougou and 20% in Bobo-Dioulasso) (Research to Prevention, 2014). And although few MSM reported being denied services, a large percentage of them reported actively avoiding healthcare settings (36% in Ouagadougou and 20% in Bobo-Dioulasso). These findings suggest that even in the absence of laws overtly criminalizing homosexuality, cultural stigma prevails and continues to restrict MSM from accessing HIV prevention and treatment services as well as engaging in relevant policy and program planning processes (Duvall et al., 2015).

### Cameroon

Previous literature indicates that the prevalence of HIV among the general population in Cameroon is 4.5%, which is notably less than estimates of HIV prevalence among Cameroonian MSM (18-37%) (C. Holland et al., 2015; Park et al., 2013). The few studies documenting HIV prevalence among MSM in Cameroon found that these MSM have a variety of HIV risk factors including: limited knowledge of HIV, inconsistent use of condoms and condom-compatible lube, multiple concurrent male and female sex partners, drug use, transactional sex, high rates of syphilis infection, and limited uptake of healthcare services (C. Holland et al., 2015; Park et al., 2013). For instance, in their cross-sectional surveillance study of 272 MSM in Douala and 239 MSM in Yaoundé, Park et al. (2013) found that 31.9% and 37.1% of MSM in respective cities reported having four or more sexual partners with 46.2% of total MSM reporting concurrent male and female partnerships. Additionally, 64.1% of MSM reported inconsistent condom use with regular male partners and 46.2% reporting inconsistent condom use with casual male and female partners. Roughly 45% of MSM also experienced condoms slipping or breaking during sex. Although 90% of MSM reported using lube, a closer look revealed that nearly 30% actually used saliva and/or a variety of substances that are non-compatible with condoms (e.g. lotion, Vaseline), which may partially explain why so many MSM experienced difficulties with condom use. Nearly 5% of MSM in Douala and Yaoundé also reported paying another man to have sex. In the year prior to this study, nearly 34.6% of MSM also reported experiencing STI symptoms. Lastly, while many MSM reported being tested for HIV at least once in their lifetime (81.6%), very few MSM reported receiving annual HIV testing with only 54.3% of MSM reporting being tested in the last 12 months (Park et al., 2013). These risk factors likely play a significant role in explaining why 25.5% of MSM in Douala and 44.4% of MSM in Yaoundé screened positive for HIV during the study (Park et al., 2013). However, existing literature suggests that criminalization of homosexuality, perceived and enacted stigma, and discrimination also serve as significant barriers to accessing HIV prevention and treatment and therefore influence HIV prevalence among Cameroonian MSM (C. Holland et al., 2015; C. E. Holland et al., 2015; Park et al., 2014; Park et al., 2013).

Cameroon ratified ICCPR and its Optional Protocol on June 27, 1984. Despite these measures to protect their citizen’s rights, the Cameroonian *Penal Code of 1965 and 1967* is frequently used to criminalize homosexuality and punish MSM (see Figure 9) (Gerber, 2016). Penalties for consensual same-sex relations can include imprisonment for up to five years and/or fines of up to 200,000 franc (Gerber, 2016; Park et al., 2013).



Figure . Cameroon's *Penal Code of 1965 and 1967 –* Amended in 1972

As a result of these laws, many Cameroonian MSM have reported experiencing stigma, discrimination, and overt acts of violence from health professionals, law enforcement officials, and the general population (Park et al., 2014). For instance, Human Rights Watch released an article called *Criminalizing Identities: Rights Abuses in Cameroon based on Sexual Orientation and Gender Identity*, which documents MSM being arrested, physical assaulted in public and by police, sexually assaulted by prison officials while incarcerated, blackmailed, falsely accused of crimes, and humiliated and degraded without legal protections or recourse.

Park et al. (2014) found that MSM in Douala frequently cited experiences of being stigmatized and discriminated against in healthcare settings and being denied services as reasons for avoiding necessary HIV/STI prevention and treatment services. These experiences are unsurprising considering in a 2013 study of 95 health centers across Cameroon, 50% of the health centers lacked any health professionals specifically trained to deal with MSM health issues. This study also found that, although rates of HIV testing/counseling and ART coverage were relatively high among general clients of these health centers, only 19.8% reported providing HIV counseling/testing and 13.2% reported providing ART to MSM. Furthermore, studies estimate that only 25% of HIV-positive MSM in Cameroon are actually receiving ART compared to the UNAIDS goal of 90% (C. Holland et al., 2015). Therefore, it is unsurprising that the majority of Cameroonian MSM who reported receiving services at public and private hospitals also said they were not likely to return in the future (Park et al., 2014). These structural-level and community-level barriers help to explain why MSM in Cameroon frequently report a variety of HIV risk factors and limited uptake of healthcare services, which then provides insights as to why they experience a disproportionate burden of HIV.

### Côte d’Ivoire

Recent literature indicates that while the prevalence of HIV in the general population is only 3.7%, the prevalence of HIV among MSM in Côte d’Ivoire could be as high as 18% (Aho et al., 2014; Hakim et al., 2015). Aho et al. (2014) and Hakim et al. (2015) were among the first to assess and document HIV knowledge, risk-taking behaviors, and related barriers to accessing HIV prevention and treatment services in Côte d’Ivoire as well as West Africa. Both cross-sectional, biobehavioral studies found that MSM in Abidjan, Côte d’Ivoire have limited knowledge of HIV, low perceptions of HIV risk, and report a multitude of HIV risk behaviors including multiple sex partners, inconsistent condom and WBL use, high rates of transactional sex, and low rates of HIV testing (Hakim et al., 2015). For instance, 63% of MSM believed sex with men was equally as risky as sex with women, roughly 60% of MSM did not know that anal sex has the highest sexual risk for HIV, and 53.3% of MSM believed HIV risk was the same for insertive and receptive anal sex (Aho et al., 2014; Hakim et al., 2015). As a result, a large portion of MSM, roughly 59-76%, reported being at low to no risk of HIV. These studies also found that nearly 30% of MSM reported having at least six male partners in the past 12 months and nearly 30% also reported at least three female sex partners in the past 12 months. Roughly 70% of MSM report inconsistent condom use with men and 60% with women in the last 12 months (Hakim et al., 2015. An additional 90% of MSM also reported inconsistent use of WBL during unprotected sex in the last 12 months. Of those who used condoms, 40-50% of MSM also reported at least one instance of a condom breaking in the last 12 months. Additionally, 25% of MSM in Abidjan reported some form of transactional sex in the last 12 months. Lastly, only 32% of MSM reported having been tested in the past 12 months and an additional 34% reported never having been tested (Aho et al., 2014; Hakim et al., 2015). In the study conducted by Hakim et al. (2014), 86.4% of MSM who were HIV-positive were also newly diagnosed during the study.

Historically, there have been no official laws or policies that overtly criminalize homosexuality or same-sex relations between men in Côte d’Ivoire (Aho et al., 2014; Gerber, 2016; Hakim et al., 2015). However, MSM in Abidjan still frequently reported stigma, discrimination, and overt acts of violence as barriers to accessing HIV prevention and treatment services (Aho et al., 2014; Hakim et al., 2015). For instance, nearly 40-45% of MSM reported some form of abuse or harassment directly related to their same-sex relations. More specifically, 33% of MSM reported verbal harassment (e.g. insults and threats), 6.3% experienced emotional abuse (e.g. isolation and exclusion), 8.5% reported physical abuse, and 20-25% reported being forced to have sex (Aho et al., 2014; Hakim et al., 2015). Hakim et al. (2015) found that MSM in Abidjan had significantly higher odds of being HIV-positive if they had reported physical abuse (aOR = 3.66; 95% CI: 1.45-9.23) or forced sex (aOR = 2.54; 95% CI: 1.31-4.93), which makes these human rights violations of particular concern.

In-depth interviews with MSM in Abidjan also revealed that perceived and enacted stigma and discrimination from health professionals and law enforcement serve as additional barriers to accessing HIV prevention and treatment. For instance, of MSM who reported inconsistent condom and WBL use, 38% said that convenience stores were closed, 32.4% said they were too far away, 21.2% perceived WBL lube as being too costly, and others reported concerns of being perceived as gay when purchasing lube in public (Aho et al., 2014). Nearly 55% of MSM also reported feeling obligated to hide their same-sex relations when accessing health care facilities due to fear of stigma and discrimination (Aho et al., 2014). Many MSM also avoided seeking out legal aid due to consistent reports of being ignored. For instance, one MSM stated, “When we go to lodge a complaint at the police station, it doesn’t go anywhere. They don’t care. They say: ‘they are gay, they are not worth it’ (Aho et al., 2014). Despite lacking laws that criminalize homosexuality and same-sex relations, stigma and discrimination are still prevalent in Côte d’Ivoire and serve as significant barriers to accessing HIV education, testing, and treatment as well as supplies for practicing safer sex (i.e. condoms and lube), which may explain why the prevalence of HIV is much higher in MSM than the general population (Aho et al., 2014; Hakim et al., 2015).

### Gambia

In the first cross-sectional study of HIV prevalence and associated risk factors among MSM in the Gambia, Mason et al. (2013) found that the HIV prevalence among 207 MSM was 9.8%, with only one person actually being aware of their HIV-status. This statistics is roughly six times higher than the prevalence of HIV among the general population (1.6%) (Mason et al., 2013).

Mason et al. (2013) also found that MSM in the Gambia had a variety of HIV risk factors including limited basic knowledge of HIV, inconsistent condom use, multiple male and female sex partners, and little to no access to condoms and lube. For instance, 90% of respondents were unaware that receptive anal sex is the riskiest sexual practice, and nearly 80% of respondents were unaware that WBL was the safest lube to use with latex condoms (Mason et al., 2013). Roughly 30% of MSM reported having both female and male partners in the last twelve months, and condom use was equally inconsistent with male and female partners (roughly 10% always used condoms) (Mason et al., 2013). While 70% of MSM said they had access to condoms, 82.5% reported not having access to lube, which may partially explain why 31% of MSM also said they never used lube for anal sex with men (Mason et al., 2013). It is important to mention, however, that no new cases of HIV were reported in this study among MSM in the Gambia who were aware that receptive anal sex was the riskiest sexual activity and that latex-compatible lubes were safest to use. Similarly, no new cases of HIV were reported among MSM who reported consistent condom use (Mason et al., 2013). These findings suggest scale-up of HIV education, testing, and distribution of condoms and lube are vital to decreasing incident HIV among MSM in the Gambia.

The Gambia ratified ICCPR on March 22, 1979 and ratified the Optional Protocol to ICCPR on June 9, 1988. Despite its vows to protect the rights of all citizens, *The* *Criminal Code of 1965* has frequently been used to criminalize homosexuality and punish MSM in the Gambia (see Figure 10) (Gerber, 2016; Mason et al., 2013). The penalty for consensual same-sex relations, referred to as “having carnal knowledge [of another male] against the order of nature” in Gambia’s laws, is imprisonment up to 14 years (Gerber, 2016).

Article 144: Unnatural Offences

“Any person who –

a) Has carnal knowledge of any person against the order of nature; or

b) Has carnal knowledge of an animal; or

c) Permits any person to have carnal knowledge of him or her against the order of nature; is guilty of a felony, and is liable to imprisonment for a term of 14 years.”

“Carnal knowledge of any person against the order of nature” includes:

a) Carnal knowledge of the person through the anus or the mouth of the person;

b) Inserting any object or thing into the vulva or the anus of the person for the purpose of simulating sex; and

c) Committing any other homosexual act with the person.”

Figure . Gambia's *Criminal Code of 1965* – Amended in 2005

Unlike laws used in other countries, criminalization laws in the Gambia clearly and explicitly target MSM. For instance, Article 144 describes carnal knowledge as oral and anal sex with any person in addition to “any [other] homosexual act with a person” (Gerber, 2016). With clear laws like this and a hefty 14-year prison sentence, it is unlikely that MSM would be willing to seek out HIV prevention and treatment services, which might force them to disclose their same-sex sexual practices and preferences. Moreover, these laws condemn oral and anal sex, which may suggest that males in Gambia only receive information about preventing HIV and STIs that are transmitted through socially acceptable sexual practices (i.e. vaginal sex). Therefore, limited (and potentially irrelevant) sexual health education may explain why many MSM in the Gambia are unaware that receptive anal sex is the highest HIV risk behavior and that lube is an important HIV risk mitigation resource (Mason et al., 2013). While no data were uncovered in this literature search regarding experienced stigma, discrimination, physical, verbal, and sexual violence, or denial of healthcare services, it is likely that these are all human rights violations experienced by MSM in the Gambia that serve as barriers to accessing HIV-related healthcare and provide context for why they have an HIV prevalence rate six times higher than the general population (Mason et al., 2013).

### Ghana

While HIV prevalence among Ghana’s general population appears to be decreasing (2.3% in 2010 to 1.3% in 2012), the prevalence of HIV among Ghanaian MSM remains firm at 17.5%, which is nearly 15 times higher than the general population (Laar & DeBruin, 2017). Nelson et al. (2015) conducted a secondary data analysis of a cross-sectional survey of 137 Ghanaian MSM that revealed limited knowledge of HIV and STIs and various behavioral risk factors, which may partially explain why MSM in Ghana are disproportionately burdened by HIV. For instance, Nelson et al. (2015) found that most Ghanaian MSM lack a basic understanding of HIV/STI symptoms, prevention, and transmission. Additionally, 93% of Ghanaian MSM reported having more than one current male sex partner, with an overall mean of five, and average of one female partner (Nelson et al., 2015). Roughly 50% of MSM reported at least one new sex partner in the last three months with a mean of 2.5 new partners (Nelson et al., 2015). Nelson et al. (2015) found that condom use was reported more frequently with female partners (75% of the times they engaged vaginal sex) than with male partners (50% of the time they engaged in anal sex) in the last six months (Nelson et al., 2015). Lastly, approximately one-third of Ghanaian MSM also reported never having been tested for HIV, with 25% of the MSM in this study being currently unaware of their HIV status (Nelson et al., 2015).

Ghana ratified ICCPR and its Optional Protocol on September 7, 2000. Despite these measures to protect their citizen’s rights, the Ghanaian *Criminal Code of 1960,* specifically *Act 29,* is frequently used to criminalize homosexuality and punish MSM (see Figure 11) (Gerber, 2016; Laar & DeBruin, 2017). The penalty for consensual same-sex relations, referred to as “unnatural carnal knowledge” in Ghanaian laws, is imprisonment ranging from 3-25 years. These laws suggest that MSM are similar to pedophiles and persons practicing bestiality and should be punished accordingly (Gerber, 2016; Laar & DeBruin, 2017).

Section 104: Unnatural Carnal Knowledge

“Whoever has unnatural carnal knowledge –

a) Of any person of the age of sixteen years or over without his consent shall be guilty of a first-degree felony and shall be liable on conviction to imprisonment for a term of not less than five years and not more than twenty-five years; or

b) Of any person of sixteen years or over with his consent is guilty of a misdemeanor; or

c) Of any animal is guilty of a misdemeanor.”

“Unnatural carnal knowledge is sexual intercourse with a person in an unnatural manner or with an animal.”

Article 296(4)

“A misdemeanor shall be liable to imprisonment for a term not exceeding three years” [if there was consent].

**Figure 12. Ghana's *Criminal Code of 1960, Act 29* – Amended in 2003**

Although literature on MSM in Ghana, uncovered in this review, was sparse, most articles indicated that MSM perceive and experience substantial amounts of stigma and discrimination from health professionals, law enforcement, and the general population (Laar & DeBruin, 2017). For instance, Nelson et al. (2015) found that a large number of MSM experienced physical abuse and harassment from police in particular. Nelson et al. (2015) also found that structural- and community-level stigma were significantly correlated with lower uptake of sexual health services among MSM in Ghana as well as higher rates of inconsistent condom use with male partners. Moreover, because of Ghana’s strict anti-sodomy laws, most men only received sexual education relevant to heterosexual couples (i.e. how to have safer vaginal sex). This may explain why knowledge of HIV risk associated with anal sex and unprotected anal intercourse with other men was so infrequently reported (Laar & DeBruin, 2017). In recent years, efforts have been made to reduce stigma surrounding MSM and to increase access to HIV prevention and treatment, however, these efforts have been met with significant uproar from the public and additional measures have been enacted to further marginalize MSM (Laar & DeBruin, 2017).

It is important to note that HIV is already highly stigmatized in Ghana. As a result, HIV-positive MSM in Ghana are subjected to dual stigma. For instance, many MSM believe the general population places substantial amounts of “shame, disgust, and dishonor” on HIV-positive MSM and even goes so far as to say they deserved the infection (Nelson et al., 2015). The fact that very few HIV/AIDS treatment centers exist in Ghana only makes this matter worse because any person utilizing these facilities risks revealing their status, potential sexual preferences, and risk behaviors (Laar & DeBruin, 2017). Difficulties with transportation and financial costs are cited as additional barriers to accessing ART services. Therefore, criminalization laws and existing stigma help to explain why MSM in Ghana are disproportionately burdened by HIV.

### Nigeria

Previous literature indicates that Nigeria accounts for 10% of the overall global burden of HIV and is the country with the second highest number of PLWH in Africa (behind South Africa) (Stromdahl et al., 2012). Its HIV epidemic is often described as being “mixed,” because more than 1% of the general population is living with HIV (roughly 4.1% of reproductive age adults in a 2010 survey), yet most of the epidemic is concentrated in subpopulations including MSM (Stromdahl et al., 2012). The prevalence of HIV among MSM is estimated to be more than four times higher than that of the general population (roughly 17.2%), but varies city-by-city in Nigeria, ranging from 2.4% to 36.7% (Stromdahl et al., 2012). MSM are estimated to account for up to 7-14% of all new HIV infections each year in Nigeria (Stromdahl et al., 2012).

Elevated HIV prevalence among Nigerian MSM can be explained in part by a variety of risk factors identified during previous biobehavioral surveillance surveys (Stromdahl et al., 2012). For instance, in a sample of 297 MSM living in Abuja, Nigeria, Stromdahl et al. (2012) found that nearly 67% of MSM were bisexually active and had multiple concurrent partners in the past six months (e.g. 28% had more than five sexual partners of either sex with 12% reporting more than five male partners and 3% reporting more than five female partners). Consistent condom and WBL use was relatively low with only 11% of MSM reporting always using condoms and lube with male and female partners in the last six months. With respect to male partners, 53% of MSM reported consistent condom use and 64% reported always using lube, however, only 36% using WBL while 33% reported using body cream and 17% reported using petroleum jelly (Stromdahl et al., 2012). Stromdahl et al. (2012) also found that roughly half of MSM in Abuja also reported being paid for sex with another man (61.7%) or paying for sex with another man (44.5%). Lastly, basic knowledge of HIV transmission, perceptions of risk, and health-seeking behavior (e.g. testing) among Nigerian MSM were found to be low (Stromdahl et al., 2012) with 30% of MSM not knowing that HIV can be transmitted through anal sex and roughly 50% of MSM not being able to name one STI that can be transmitted through anal sex. That said, Stromdahl et al. (2012) did find that MSM were more likely to report consistent condom use if they reported ever being tested and having at least a basic knowledge of HIV, which suggests increasing access to HIV testing and education (as well as access to condoms and condom-compatible lubes) among MSM could make a significant difference in reducing incident HIV. However, many Nigerian MSM reported experiencing stigma, discrimination, and other human rights violations, which deterred them from accessing HIV/STI prevention and treatment services as well as disclosing their same-sex relations and other risk behaviors upon accessing these services (Stromdahl et al., 2012).

Nigeria ratified ICCPR on July 29, 1993, but has not ratified the Optional Protocol to ICCPR. Despite its vow to protect the rights of all citizens, Nigeria’s *Criminal Code Act of 1990* is frequently used to criminalize homosexuality and punish MSM (see Figure 12) (Gerber, 2016; Schwartz et al., 2015). The penalty for consensual same-sex relations, referred to as “having carnal knowledge against the order of nature” and “gross indecency” in Nigerian laws, is imprisonment up to 14 years (Gerber, 2016; Schwartz et al., 2015). In several Northern Nigerian states, many of which have adopted Sharia laws, MSM may also be sentenced to death (Sekoni, Ayoola, & Somefun, 2015). On January 7, 2014, the Same-Sex Marriage Prohibition Act was also established. In addition to prohibiting civil unions between Nigerian MSM, this Act prohibits public displays of affection between MSM and threatens to imprison MSM for up 10 years (see Figure 13). This Act also prohibits other individuals and organizations from advocating for gay rights and providing services to MSM (Sekoni, Ayoola, & Somefun et al., 2015).

Figure 13. Nigeria's *Criminal Code. Laws of the Federation of Nigeria of 1990*

Section 214: Unnatural Offences

“Any person who –

a) Has carnal knowledge of any person against the order of nature; or

b) Has carnal knowledge of an animal; or

c) Permits a male person to have carnal knowledge of him or her against the order of nature; is guilty of a felony, and is liable to imprisonment for fourteen years.”

Section 215: Attempt to Commit Unnatural Offences

“Any person who attempts to commit any offences defined in the last preceding section is guilty of a felony, and is liable to imprisonment for seven years. The offender cannot be arrested without warrant.”

Section 217: Indecent practices between males

“Any male person who, whether in public or private, commits any act of gross indecency with another male person, or procures another male person to commit any act of gross indecency with him, or attempts to procure the commission of any such act by any male person with himself or another male person, whether in public or private, is guilty of a felony, and is liable to imprisonment for three years. The offender cannot be arrested without warrant.”

Section 1(1)

“A… civil union entered into between person of same sex is prohibited in Nigeria.”

Section 5

“A person who enters into a… civil union commits an offence and is liable on conviction to a term of 14 years imprisonment.”

Section 4(2)

“The public show of same sex amorous relationship directly or indirectly is prohibited.”

Section 5(2)

“A person who…directly or indirectly makes public show of same sex amorous relationship in Nigeria commits an offence to a term of 10 years imprisonment.”

Figure . Nigeria’s *Same Sex Marriage Prohibition Act of 2013*

Laws criminalizing homosexuality and punishing MSM in Nigeria have created a culture wherein stigmatizing, discriminating against, inciting fear, and promoting harm towards MSM is widely acceptable. As a result, Nigerian MSM report various human rights violations and substantial fear of accessing HIV prevention and treatment services. In their sample of 291 MSM living in Lagos State, Nigeria, Sekoni, Ayoola, & Somefun (2015) found that nearly 33% of MSM had experienced at least one human rights violation (e.g. 45.7% reported aggression, 29.9% reported alienation, 8.2% reported discrimination in the workplace, 2.1% reported being evicted, and 4.1% reported being denied services) as a result of being MSM. Additionally, 20.3% of MSM in their sample reported being the victim of at least one violent act (e.g. 19.2% were verbally abused, 20.3% were psychologically abused, 17.9% were physically abused, and 16.8% were sexually abused/raped by another man) (Sekoni, Ayoola, & Somefun, 2015).

Furthermore, Schwartz et al. (2015) used data from TRUST, a prospective cohort study of MSM living in Abuja, Nigeria, to investigate the impact that the Same Sex Marriage Prohibition Act of 2013 has on enacted stigma and discrimination as well as health-seeking behavior among MSM (Baral et al., 2015). Analysis of 756 pre-Act and 420 post-Act visits revealed that fear of seeking healthcare significantly increased from 25% to 38% and that MSM were more inclined to avoid seeking healthcare services (20% to 28%) after enactment (Schwartz et al., 2015). In addition to increased fear and avoidance, MSM also reported increased verbal harassment, blackmail, and difficulty finding safe spaces to socialize with other MSM after enactment (Schwartz et al., 2015). These reports of human rights violations, spurred by laws criminalizing homosexuality and punishing MSM, help to explain why Nigerian MSM have limited knowledge of HIV transmission, reported inconsistent condom and condom-compatible lube use and difficulty accessing additional HIV prevention and treatment services, and ultimately why Nigerian MSM are so heavily burdened by HIV.

### Senegal

Previous literature indicates that the prevalence of HIV among MSM in Senegal is roughly 50 times higher (22-33%) than the prevalence of HIV in the general population (0.5% among reproductive age adults) and that nearly one-fifth of HIV-positive persons in Senegal are MSM (Drame, Crawford, Diouf, Beyrer, & Baral, 2013; Geibel, Tun, Tapsoba, & Kellerman, 2010; Lyons et al., 2017). These studies also indicated that Senegalese MSM have various HIV risk factors including inconsistent condom and WBL use, multiple concurrent partnerships with both males and females, transactional sex, high rates of STIs, and low rates of STI testing/counseling (Drame et al., 2013; Geibel et al., 2010; Lyons et al., 2017). For instance, Drame et al. (2013) found that only 65.2% of the 119 MSM they studied in Dakar, Senegal reported consistent use of condoms and WBL, with many other MSM reporting use of Vaseline, shea butter, body lotion, and shaving gels/creams rather than WBL (Geibel et al., 2010). Roughly 77% of MSM reported having both male and female sex partners at the time of the study. Approximately 30% and 50% of MSM also reported paying for and being paid for sex, respectively. Moreover, although 88% reported having at least been tested for HIV once in their lifetime, 76.5% of MSM from Dakar never received their results. Furthermore, only 46.2% of their MSM reported ever having received STI counseling, which may explain why 49.2% of MSM tested positive for an STI at their initial screening. Approximately 36% tested positive for HIV at baseline as well (Drame et al., 2013). Previous literature has cited community-level and structural level stigma and discrimination as major barriers to accessing HIV/STI prevention and treatment among MSM (Drame et al., 2013; Geibel et al., 2010; Lyons et al., 2017).

Senegal ratified ICCPR and its Optional Protocol on February 13, 1978. Despite these measures to protect the rights of all Senegalese citizens, Senegal’s *Penal Code of 1965* is frequently used to criminalize homosexuality and punish MSM (see Figure 14) (Gerber, 2016). Penalties for consensual same-sex relations, referred to as “improper or unnatural acts” in Senegalese laws, are punishable by fines up to 1,500,000 francs and/or imprisonment up to five years (Gerber, 2016).

Article 319

“Without prejudice to the more serious penalties provided for in the preceding paragraphs or by articles 320 and 321 of this Code, whoever will have committed an improper or unnatural act with a person of the same sex will be punished by imprisonment of between one and five years and by a fine of 100,000 to 1,500,000 francs. If the act was committed with a person below the age of 21, the maximum penalty will always be applied.”

Figure .Senegal’s *Penal Code of 1965*

These laws have not only led to arrests of many Senegalese MSM, but also to arrests of health professionals trying to provide HIV/STI prevention services to MSM in Senegal. Drame et al. (2013) recount one particular incident in 2008 where numerous health workers were arrested, not for providing services, but for being perceived as homosexual. Word of these arrests caused widespread panic among various agencies, ultimately convincing many to stop and/or scale-back their efforts to provide services to MSM. Agencies that continued to distribute condoms and lube reported notable declines in the number of MSM they were serving as well.

Perceived and enacted stigma and discrimination are highly reported by Senegalese MSM in healthcare settings as well (Drame et al., 2013; Geibel et al., 2010; Lyons et al., 2017; Niang et al., 2003). For instance, Lyons et al. (2017) found that in a sample of 724 MSM in Senegal, 17.7% reported being afraid of seeking health services, 15.3% actively avoided health services, and 5.5% of MSM who engaged in health services reported overhearing gossip and discriminatory remarks being made about them by health professionals. An additional 1.3% of healthcare-seeking MSM also reported being actively denied services because they were MSM (Lyons et al., 2017). With such high rates of perceived and enacted stigma, it is unsurprising that Senegalese MSM report such high rates of STIs, which put them at greater risk for HIV (Drame et al., 2013; Niang et al., 2003).

Stigma and discrimination within and outside of healthcare settings has had a detrimental impact on many HIV-positive MSM in Senegal as well. For instance, many HIV-positive MSM reported having troubles accessing and being denied treatment because providers were afraid to provide services (Drame et al., 2013). This may help to explain why only 58.6% of HIV-positive Senegalese MSM in a study conducted by Lyons et al. (2017) reported ever receiving a CD4 test, only 82.8% ever started ART, only 91.7% who ever started ART were currently taking ART, and only 63.6% were virally suppressed.

While specific statistics on physical, verbal, and sexual violence experienced by Senegalese MSM were not reported by the studies included in this review, most articles still suggested that these human violations serve as additional barriers to accessing HIV/STI testing, counseling, and treatment (Drame et al., 2013; Geibel et al., 2010; Lyons et al., 2017).

### Togo

Previous studies indicate that the prevalence of HIV among MSM in Togo is roughly 9.55%, compared to 2.9% in the generalized population, but varies by city (Duvall et al., 2015). For example, studies employing respondent-driven sampling found the HIV prevalence among a sample of 354 MSM in Lomé was 18.5% versus 0.6% in a sample of 329 MSM in Kara (Research to Prevention, 2014). Despite these drastic differences in HIV prevalence, roughly the same amount of MSM reported testing for HIV more than once (50%). Unfortunately, a large number of MSM also reported never having tested for HIV, roughly 30% Lomé and Kara, respectively (Research to Prevention, 2014). Close to 10% of MSM in each city also reported being forced to have sex against their will at least with many other reports of verbal and physical harassment from the general population as well (Duvall et al., 2015; Research to Prevention, 2014).

Togo ratified ICCPR on May 24, 1984 and ratified the Optional Protocol on March 30, 1988 (Gerber, 2016). Despite these measures to protect the rights of their citizens, the Togolese *Penal Code of August 13, 1980* has frequently been used to criminalize homosexuality and punish MSM (see Figure 15) (Gerber, 2016). Penalties for consensual same-sex relations, described as “impudent acts” and “crimes against nature” in Togolese law, can include imprisonment up to three years and fines up to 500,000 franc (Duvall et al., 2015; Gerber, 2016).

Article 88

“Impudent acts or crimes against nature with an individual of the same sex are punished with imprisonment from one to three years and 100,000-500,000 franc in fine.”

Figure . Togo's *Penal Code of August 13, 1980 - Article 88*

Although Togo has historically criminalized homosexuality, Togolese MSM experience policy hurdles that are similar to those experienced by MSM in Burkina Faso, a state that does not have overt laws criminalizing homosexuality (Duvall et al., 2015). For instance, Togo also lacks policies that mandate the collection and reporting of MSM data, Togo also lacks policies mandating that a portion of state HIV funding be allocated to MSM-specific programming, and Togo also lacks policies that allow MSM to participate in policy and program development, implementation, and evaluation (Duvall et al., 2015).

Like Burkina Faso, policies exist to protect the rights of “all” Togolese citizens, including rights to sexual and reproductive health. However, many MSM in Togo report similar difficulties accessing free and low-cost HIV prevention and treatment resources (e.g. condoms, WBL, HIV testing, and ART) including financial barriers, stock outages, denial of services, and even sabotage (e.g. shipments of condoms and lube intentionally not distributed and left to expire) (Duvall et al., 2015).

Similarly, Togolese MSM also reported a substantial amount of stigma and discrimination from health professionals, law enforcement professionals, and the general population (Duvall et al. 2015; Research to Practice, 2014). For instance, law enforcement officials are known to harass, blackmail, and arrest MSM under false pretenses and use prison policies that are nearly 85 years old to deny detained MSM rights to HIV prevention and treatment (Duvall et al., 2015). MSM also report health professionals not following standard guidelines for HIV and STI screenings (e.g. conducting HIV testing without gaining consent). Health professionals have also used Togolese public health laws to examine and treat MSM for STI without consent, and in some cases, to detain MSM for “medical supervision” (Duvall et al., 2015). Conversely, although there are recommendations in place for oral and rectal STI screening, MSM usually do not receive these services because health professionals do not receive proper training and/or the appropriate supplies are not available (Duvall et al., 2015). For these reasons and likely many others, 17% of MSM in Lomé and 7.3% of MSM in Kara alone reported difficulties accessing healthcare and significant concerns about disclosing their HIV status and same-sex relations (Research to Prevention, 2014).

### Intraregional Analysis of West African Countries

All of the West African countries cited in this review have concentrated HIV epidemics, with MSM in respective countries demonstrating significantly higher rates of HIV than the general population. Additionally, MSM reported a variety of HIV risk behaviors, which vary by country, but include lack of information and misinformation about HIV, low perceptions of risk, multiple, concurrent sexual relationships with men and women (ranging from 30% in Gambia to 77% in Senegal), large variance in transactional sex (5% paid men in Cameroon vs. 44.5% paid and 61.7% were paid in Nigeria), low rates of condom and WBL use (especially in Nigeria where MSM also reported high rates of condom breakage and slippage), higher rates of HIV testing than MSM in North Africa (but still generally low), and high rates of bacterial STIs (ranging from 34.6% in Cameroon to 49.2% in Senegal).

This review found research on human rights violations experienced by MSM in eight West African countries, only five of which had quantifiable data and two of which are countries that do not criminalize homosexuality. However, anecdotal reports of verbal, physical, and sexual abuse as well as discrimination in healthcare settings, actively being denied healthcare and legal services, and blackmail were not uncommon in all the West African countries included in this review.

Higher rates of verbal, physical, and sexual abuse as well as high rates of avoiding healthcare and fear of disclosing same-sex relations were reported by MSM in the two West African countries that do not criminalize homosexuality (i.e. Burkina Faso and Côte d’Ivoire) than all the other countries that do criminalize homosexuality. However, Nigerian, Senegalese, and Togolese MSM all reported high rates of being afraid to seek healthcare (ranging from 7.3% in Togo to 38% in Nigeria), actively avoiding healthcare (28% in Nigeria), being stigmatized in healthcare settings (4.10% in Senegal), and being denied healthcare services (4.10% in Nigeria).

Literature from all of these West African countries indicate a trend towards experiencing human rights violations, being unable to or afraid to access HIV prevention and treatment services, and increased HIV risk behaviors, which may provide insight into why MSM in these countries have higher HIV prevalence than adults of similar reproductive age. However, Hakim et al. (2015) actually found a direct correlation between experiencing human rights violations, specifically physical abuse (aOR = 3.66; 95% CI: 1.45-9.23) or sexual abuse (aOR = 2.54; 95% CI: 1.31-4.93), and HIV infection among MSM in Abidjan, Côte d’Ivoire. If these results have been discovered in a country that does not criminalize homosexuality, it is highly probable for MSM who report similar human violations in West African countries that do criminalize homosexuality as well.

## East Africa

### Kenya

Previous literature indicates that the national prevalence of HIV in Kenya among adults (ages 14-65) is roughly 6-7% (van der Elst, Gichuru, et al., 2013). While the Kenyan HIV epidemic is considered “generalized,” key populations such as MSM are disproportionately burdened and contribute significantly to new HIV infections each year (MSM contribute 15%) (Bhattacharjee et al., 2015). Recent literature suggests that the prevalence of HIV among Kenyan MSM is nearly 2-3 times higher and varies from region to region (e.g. 18.9% in Nairobi and 11.2% in Kisumu) (Okall et al., 2014).

Biobehavioral surveys of MSM in Kenya reveal a variety of risk factors that could explain in part why the prevalence of HIV is so high among Kenyan MSM. For instance, a national survey assessing behavioral health risks conducted in 2014 by Bhattacharjee et al. (2015) found that although 90% of 1,308 MSM knew HIV could be transmitted via anal sex and 95% of MSM knew condoms could prevent HIV transmission, 30% of MSM overall reported not using condoms the last time they had sex with a male partner, with nearly 33% of these MSM citing unavailability of condoms at the time of sex as the reason they did not use condoms. Of the MSM who reported using condoms, nearly 20% reported experiencing condom breaks or slipping during sex (Bhattacherjee et al., 2015). Geibel (2012) found that many Kenyan MSM reported using oil-based lubricants and that only 75% of MSM knew oil-based lubricants were incompatible with latex condoms. Geibel (2012) also found that MSM believed WBL were generally unavailable and costlier. Additionally, Geibel (2012) found that it was not uncommon for MSM in Kenya, specifically Nairobi, to have multiple male partners (47% reported in the last month) and to be bisexually active (5% reported in the last month). Multiple studies, including Taegtmeyer et al. (2013) and Geibel (2012), suggest that MSM in Kenya have high rates of transactional sex (e.g. 52% of MSM in Geibel (2012) reported being paid for sex in the last year). Bhattacherjee et al. (2015) also found that despite high rates of ever being tested for HIV (92%), 25% reported not being tested in the last three months. Lastly, studies have found high rates of STIs among MSM, with 17% of participants being diagnosed with an STI during the study and 46% reporting being treated for an STI within the last three months (Bhattacherjee et al., 2015). All of these studies indicate that criminalization of homosexuality has created environments that make it acceptable to stigmatize, discriminate, and even harm MSM in Kenya, which ultimately discourages MSM from seeking HIV-related prevention and treatment services (Bhattacherjee et al., 2015; Geibel, 2012; Micheni et al, 2017; Okall et al., 2014; Taegtmeyer et al., 2013; van der Elst, Gichuru, et al., 2013).

Kenya ratified ICCPR on May 1, 1996, but has not ratified the Optional Protocol to ICCPR (Gerber, 2016). Despite these measures to protect the rights of their citizens, Kenya’s *Penal Code* is often used to criminalize homosexuality and punish MSM (see Figure 16) (Gerber, 2016; Geibel, 2012). The penalty for consensual same-sex relations, referred to as “carnal knowledge against the order of nature” in Kenyan laws, is imprisonment up to fourteen years (Gerber, 2016; Geibel, 2012).

Section 162: Unnatural Offences

“Any person who –

a) Has carnal knowledge of any person against the order of nature; or

b) Has carnal knowledge of an animal; or

c) Permits a male person to have carnal knowledge of him or her against the order of nature; Is guilty of a felony and is liable to imprisonment for fourteen years.

The offender shall be liable to imprisonment for twenty-one years if:

a) The offence was committed without the consent of the person who was carnally known; or

b) The offence was committed with that person’s consent but the consent was obtained by force or by means of threats or intimidation of some kind, or by fear of bodily harm, or by means of false representations as to the nature of the act.”

Section 163: Attempt to Commit Unnatural Offences

“Any person who attempts to commit any of the offences specified in section 162 is guilty of a felony and is liable to imprisonment for seven years.”

Section 165: Indecent Practice Between Males

“Any male person who, whether in public or private, commits any act of gross indecency with another male person, or procures another male person to commit any act of gross indecency with him, or attempts to procure the commission of any such act by any male person with himself or another male person, whether in public or private, is guilty of a felony and is liable to imprisonment for five years.”

Figure . Kenya' s *Penal Code* - Amended by Act 5 of 2003

Because of these laws, Kenyan MSM experience high levels of stigma and discrimination from healthcare providers, law enforcement, and the general public as well as a variety of human rights violations including verbal, physical, and sexual abuse, denial of healthcare, and denial of legal protection. For instance, the national survey conducted by Bhattacherjee et al. (2015) found that 16.7% of MSM in Kenya have experienced some form of physical or sexual violence in the last six months and another 24% reported being arrested or beaten by police in the last six months. Furthermore, Micheni et al. (2015) assessed sociodemographic and behavioral data of 726 MSM in coastal Kenya between 2005 and 2014 and found that the incidence rates of reported verbal assault, physical assault, and rape were 30.9 per 100 person-years, 12.9 per 100 person-years, and 3.9 per 100 person-years, respectively. Moreover, Micheni et al. (2015) found that 6.5% of MSM in their sample reported being raped within 12 months of enrolling in the study. Human rights violations, especially at these magnitudes, are extremely concerning because, as multiple studies have shown, these overt acts of violence towards MSM are directly and indirectly correlated with HIV infection (Micheni et al., 2015).

Several studies have been conducted to determine Kenyan healthcare workers’ attitudes towards and experiences with providing HIV-related services to MSM, which provide further evidence for why MSM actively avoid seeking prevention and treatment services. For instance, van der Elst et al. (2015) conducted focus groups with 74 healthcare providers from 49 ART-providing health facilities in Kenya and found that many allowed their personal and social prejudices towards MSM to get in the way of providing respectful, high quality services to MSM (e.g. distancing themselves from MSM when working with them, gossiping about MSM to coworkers, and other clients and/or intentionally denying MSM services). The following is a quote from one healthcare provider for context:

*“When they seek medical assistance in our facilities, the same providers will shout, ‘Look at him, he is telling me he is having an anal STI; can you leave my room.’ Instead of treating them with respect, they end up drawing their colleagues’ attention.”*

van der Elst et al. (2013) found that many providers also acknowledged lacking formal, MSM-specific education, which impairs their ability to provide relevant, nonjudgmental risk reduction counseling and to properly diagnose infections, especially rectal STIs. In later studies, however, van der Elst et al. (2013) were able to provide and assess the efficacy of an online, self-administered sensitivity training to teach healthcare providers about MSM and their specific health concerns. van der Elst et al. found that, post-intervention, healthcare workers felt more compelled to treat MSM with respect and to provide appropriate services/counseling and were more knowledgeable about how to address social and behavioral factors that increase HIV risk among MSM (van der Elst et al., 2015; van der Elst, Mbogua, et al., 2013; van der Elst, Smith, et al., 2013). Some healthcare workers even returned to their facilities and educated their colleagues based on the information they learned in their sensitivity trainings. However, in follow up studies, many healthcare workers reported experiencing secondary stigma (i.e. stigma/discrimination from colleagues, friends, and family for associating with or empathizing with MSM), which ultimately influences their decision to continue providing MSM-friendly services (van der Elst et al., 2015; van der Elst, Mbogua, et al., 2013; van der Elst, Smith, et al., 2013).

Ultimately, these prejudices and human rights violations experienced by MSM in Kenya provide more insight into why so many MSM report being uncomfortable seeking healthcare services (e.g. nearly 63% of MSM in Okall et al. (2014)), which may help explain why HIV risk factors such as inconsistent condom and WBL use as well as inconsistent HIV testing are so high among Kenyan MSM. While sensitivity trainings are a step in the right direction for increasing access and engagement in HIV prevention and treatment services, secondary stigma and persistent fear of being persecuted for being MSM continue to be significant barriers to reducing incident HIV among MSM in Kenya.

### Tanzania

Previous literature indicates that the prevalence of HIV in Tanzania is roughly 6% in the general population, however, it is estimated to be at least four times higher among Tanzanian MSM (e.g. upwards of 22% in Dar es Salaam) (Agnarson et al., 2010; Anderson, Ross, Nyoni, & McCurdy, 2015; Larsson, Mohamed Shio, Ross, & Agardh, 2017; Magesa et al., 2014; Ross et al., 2014). Low perceptions of sexual risk, low rates of consistent condom and WBL use, low uptake of HIV testing, high rates of STIs, high rates of transactional sex, and multiple concurrent male and female sexual partners are the most common HIV/STI risk factors reported by MSM in Tanzania, which may in part explain such high rates of HIV infection (Larsson et al., 2017; Ross et al., 2014).

Ross et al. (2014) were the first to conduct a biobehavioral surveillance survey among MSM in Tanzania in 2012. In their sample of 200 MSM from Dar es Salaam and 100 MSM from Tanga, Ross et al. (2014) found that roughly 30% and 11% of MSM were HIV-positive, with more than 90% of MSM in Dar es Salaam being newly diagnosed at the time of the study. In Dar es Salaam, 2.5% of MSM had a history of syphilis and 21.4% were diagnosed with a curable STI. In Tanga, no MSM participants had a history of syphilis, but 4.4% had been diagnosed with a curable STI (Ross et al, 2014). Additionally, 30% of HIV-negative MSM had never been tested prior to the study. Moreover, 16.7% of HIV-negative MSM and 28.3% of HIV-positive MSM reported paying for sex, while 87.2% and 88.5% reported being paid for sex, respectively (Ross et al., 2014). Nearly 80% of MSM reported having only or mostly male partners while roughly 20% reported having only or mostly female partners in the last five years, which suggests that bisexual activity is not uncommon among MSM in Tanzania (Ross et al., 2014). Lastly, only 30.7% of HIV-negative MSM and 63.9% of HIV-positive MSM reported ever using WBL (Ross et al., 2014). Since this study, a few additional articles have provided evidence of stigma, discrimination, and violence towards Tanzanian MSM, which may help to explain why they are so burdened by HIV infection (Agnarson et al., 2010; Anderson et al., 2015; Larsson, 2017; Magesa et al., 2014).

Tanzania ratified ICCPR on June 11, 1976, but has not ratified the Optional Protocol to ICCPR (Gerber, 2016). Despite these measures to protect the rights of their citizens, Tanzania’s *Penal Code of 1945* is frequently used to criminalize homosexuality and punish MSM (see Figure 17) (Gerber, 2016). Penalties for consensual same-sex relations, referred to as “carnal knowledge” and “gross indecency” in Tanzanian laws can include a fine of 100,00-300,000 shillings, corporal punishment, and even imprisonment for life (Gerber, 2016). In addition to criminalization of MSM, the Tanzanian government has enacted multiple policies that condemn MSM drop-in centers, outreach programs to MSM, and the distribution of lube in 2016 as an HIV intervention (Larsson et al., 2017).

“Any person who –

a) Has carnal knowledge of any person against the order of nature; or

b) Has carnal knowledge of an animal; or

c) Permits a male person to have carnal knowledge of him or her against the order of nature, commits an offence, and is liable to imprisonment for life and in any case to imprisonment for a term of not less than thirty years.

d) If the offence were committed to a child under the age of ten the offender shall be sentenced to life imprisonment.”

The offender shall be liable to imprisonment for twenty-one years if:

a) The offence was committed without the consent of the person who was carnally known; or

b) The offence was committed with that person’s consent but the consent was obtained by force or by means of threats or intimidation of some kind, or by fear of bodily harm, or by means of false representations as to the nature of the act.”

Section 154: Unnatural Offences

Section 155: Attempt to Commit Unnatural Offences

“Any person who attempts to commit any the offences specified under section 154 commits an offence and shall on conviction be sentenced to imprisonment for a term of not less than twenty years.”

Section 138A: Gross Indecency

“Any person, who in public or private commits, or is party to the commission of, or procures or attempts to procure the commission by any person of, any act of gross indecency with another person, commits an offence and is liable on conviction to imprisonment for a term of not less than one year and not exceeding five years or to a fine not less than 100,000 shillings and not exceeding 300,000 shillings; save that where the offence is committed by a person of 18 years of age or more in respect to any person under 18 years of age, a pupil of a primary school or a student of a secondary school the offender shall be liable on conviction to imprisonment for a term not less than ten years, with corporal punishment, and shall also be ordered to pay compensation of an amount determined by the court to the person in respect of whom the offence was committed for any injuries caused to that person.”

Figure . Tanzania's *Penal Code of 1945* - Amended by the S*exual Offences Special Provisions Act of 1998*

In comparison to previous African countries in this review, there is substantially more qualitative research documenting perceived and enacted stigma, discrimination, and overt acts of violence experienced by MSM in Tanzania (Agnarson et al., 2010; Larsson et al., 2017; Magesa et al., 2014). For instance, Magesa et al. (2014) conducted 50 in-depth interviews and five focus groups with MSM and other key informants in Dar es Salaam in 2012 to determine the effect that stigma and discrimination have on MSM’s HIV-related health-seeking behavior. Most MSM reported not only being denied services due to personal and religious beliefs after disclosing their sexual identity, but being criticized and condemned by health professionals and having their same-sex relations broadcasted to other health professionals and patients. The following quotes from this study provide more context (Magesa et al., 2014):

*“The first time I went to test for HIV I disclosed my sexual orientation. I did not get the services as I was supposed to. The counselor walked out of the room and was very angry. He started talking to the nurses saying that he could not test for HIV people like us (gays) and we are not allowed even to enter the hospital premises. While he was telling this to the nurses I overheard everything. I just stood up and left.”*

*“When I went there I disclosed my sexual orientation to the doctor who then started to tell me that homosexuality is sinful and I will go to hell. He was very angry and refused to provide me services I was looking for.”*

*“[…] When you leave the health facility they [nurses] start pointing fingers at you and tell the other patients that you are disgusting because you are gay.”*

These experiences leave Tanzanian MSM with long-lasting negative impressions of health professionals, which ultimately discourage MSM from seeking HIV-related healthcare services in the future due to concerns of confidentiality and privacy.

Larsson et al. (2017) conducted a similar study of MSM in Tanga in 2013, in which MSM recounted equally negative experiences with health professionals ranging from being ignored and never receiving the services they came for to being kicked out after disclosing their same-sex relations. In studies conducted by Magesa et al. (2014) and Larsson et al. (2017), MSM also reported actively avoiding HIV-related healthcare services out of fear that health professionals would “out” them in front of other patients, which is possible due to overcrowding, especially in public health centers. Agnarson et al. (2010) found that some health professionals refer to HIV-positive MSM, even those on ART, as “the dead to be” and recommend they start writing their last will and testament. As a result, many Tanzanian MSM resort to self-medicating to avoid the stigma and discrimination that await them in healthcare settings (Larsson et al., 2017; Magesa et al., 2014). Proper self-medication requires that an individual has all the medication and technologies they need to monitor their health and are fully cognizant of their condition(s), which is unlikely here given that many MSM lack basic HIV/STI knowledge and access to basic HIV-related services. Moreover, HCW miss out on opportunity to provide imperative health information and risk reduction strategies when patients start self-medicating. Therefore, while self-medication may be an effective coping strategy to avoid dual stigma, it likely is not the most effective strategy for maintaining physical health, especially MSM do not know they are HIV-positive or have an STI.

A variety of other human rights violations are reported by Tanzania MSM outside of healthcare settings as well. For instance, in addition to the 67.7% of MSM who reported being stigmatized by doctors and nurses in Ross et al. (2014), 76.8% of MSM reported being stigmatized by the general population. This might explain why a substantial proportion of MSM in Tanzania report being bisexually active. The following quote from one MSM in Larsson et al. (2017) provides further evidence for this theory:

*“I like male sexual partners more but in most cases I keep girlfriends around so that people I know won’t find out that I am gay. I like to walk with them in the streets to show off so that people see me dating a woman. This helps me hide my true identity.”*

These statistics and qualitative data suggest that many Tanzanian MSM cope with stigma from the larger society by developing relations with women as well. Anderson et al. (2015) found that the ones who do not “pass” as well are subjected to significant levels of verbal abuse (48.5%), moral abuse (i.e. being discriminate against or humiliated) (32.5%), and physical abuse (29.5%) from strangers as well as neighbors. Roughly 30% of the 200 MSM in their study also reported sexual abuse, mostly from partners (Anderson et al., 2015). Laws criminalizing homosexuality in Tanzania create an environment that promotes stigmatizing, discriminating against, and abusing MSM in various ways, which clearly deter MSM from accessing HIV-related healthcare services.

### Uganda

Previous literature indicates that the HIV epidemic in Uganda is generalized with an HIV prevalence of roughly 7% among the general population. However, like all other African countries, the prevalence of HIV among MSM in Uganda is higher, with estimates being nearly 14%, double that of the general population’s HIV prevalence (Hladik et al., 2012; Musinguzi et al., 2015; Wanyenze et al., 2016). Biobehavioral surveillance surveys of Ugandan MSM reveal HIV risk factors that are similar to other African MSM as well including: limited basic knowledge of HIV, low rates of condom and condom-compatible lube use, low rates of HIV testing, elevated rates of STIs, multiple concurrent male and female partners, and transactional sex (Hladik et al., 2012; King et al., 2013; Wanyenze et al., 2016). Hladik et al. (2012) were among the first to investigate these risk factors among 300 MSM in Kampala, Uganda between May 2008 and February 2009. Roughly 54.9% of MSM in their study had never tested for HIV before, however, 14% of MSM tested positive with 50% of MSM being newly diagnosed. Nearly 15% of MSM also reported being diagnosed with an STI previously. Half of the MSM in their study reported having 10 or fewer sexual partners in the last six months, with an additional 20% reporting 11-24 sexual partners, and 31.4% reporting having 25+ partners. More than 75% of MSM also reported having female sexual partners.

Additional biobehavioral surveillance studies looking at MSM in multiple districts in Uganda have found similar results and reported low rates of condom use during last sexual acts (61.2% with 6.2% reporting never using condoms), low rates of lube use (25% of MSM haven’t used lube in the last year for sex), and large proportions of transactional sex (37.5% have paid for sex before and 68.8% were paid to have sex before) (King et al., 2013; Wanyenze et al., 2016). While these risk factors likely play a significant part in explaining such high rates of HIV infection, criminalization of homosexuality, perceived and enacted stigma, discrimination, and overt acts of violence towards MSM in Uganda are thought to facilitate these risk behaviors by impeding access to HIV prevention and treatment services (Hladik et al., 2012; King et al., 2013; Musinguzi et al., 2015; Obermeyer et al., 2013; Semugoma, Beyrer, & Baral, 2012; Wanyenze et al., 2016).

Uganda ratified ICCPR on June 21, 1995 and ratified the Optional Protocol to ICCPR on November 14, 1995 (Gerber, 2016). Despite these measures to protect the rights of all citizens, Uganda’s *Penal Code Act* of 1950, specifically Chapter 120, is frequently used to criminalize homosexuality and punish MSM (see Figure 18) (Gerber, 2016). The penalty for consensual same-sex relations, referred to as “carnal knowledge against the order of nature” and “indecent practices” in Ugandan laws, is imprisonment ranging from seven years to life (Gerber, 2016). Additional anti-homosexuality bills, like the one introduced in 2013, have further criminalized MSM by increasing punishments for same-sex relations, requiring family, friends, and healthcare workers to report MSM; mandating HIV testing; pushing for the death penalty of any person who tests positive for HIV; promoting exclusion of MSM; and condemning any individuals and organizations that provide direct or indirect services and support to MSM (Semugoma, Beyrer, & Baral, 2012).

Section 145: Unnatural Offences

“Any person who –

a) Has carnal knowledge of any person against the order of nature;

b) Has carnal knowledge of an animal; or

c) Permits a male person to have carnal knowledge of him or her against the order of nature, commits an offence and is liable to imprisonment for life.”

Section 146: Attempt to Commit Unnatural Offences

“Any person who attempts to commit any offences specified in section 145 commits a felony and is liable to imprisonment for seven years.”

Section 148: Indecent Practices

“Any person who, whether in public or in private, commits any act of gross indecency with another person or procures another person to commit any act of gross indecency with him or her or attempts to procure the commission of any such act by any person with himself or herself or with another person, whether in public or in private, commits an offence and is liable to imprisonment for seven years.”

Figure . Uganda's Penal Code Act of 1950 - Chapter 120

As a result of these laws, many Ugandan MSM report experiencing stigma, discrimination, overt acts of violence, and a variety of other human rights violations that negatively influence their motivation and ability to access HIV prevention and treatment services, all of which has been documented in qualitative research. For instance, in a qualitative study of 16 MSM in Kampala, King et al. (2013) found that many MSM cited perceived and enacted stigma in healthcare settings as a deterrent to accessing even the most basic HIV prevention tool, condoms, which may explain why rates of inconsistent condom use are so high among Ugandan MSM. This quote provides further context (King et al., 2013):

*“I always go to hospitals and they easily tell that I am gay. I ask for condoms but usually a health worker will tell you to sit down and wait. Then he calls his co-workers, they peep through a window and laugh/mock you. This makes me feel very bad. So, I find it easier to use my friends to pick up condoms for me. Sometimes, I just go straight and buy them instead of getting them for free from hospitals” (King et al., 2013).*

In addition to having trouble accessing condoms, not knowing how to use condoms correctly, and technical difficulties and pain associated with using condoms (e.g. frequent condom breakages due to limited use and access to affordable, high quality condoms and lube), Musinguzi et al. (2015) have found that some MSM report not using condoms because they are afraid condoms will get stuck in the rectum, forcing them to seek health services and inherently reveal their sexual practices, which will lead to stigma. This quote provides further context (Musinguzi, et al., 2015):

*“…and when you are taken for treatment, what will you say? They [health workers] will ask you, “How has it [condom] entered? What have you been doing?”*

In their qualitative study of 85 MSM across 12 districts in Uganda, Wanyenze et al. (2016) found that nearly 72.9% of MSM were uncomfortable disclosing their sexual identities to health professionals and an additional 81.1% believed health professionals were disrespectful to MSM. This disrespect came in the form of offensive questions such as “Why are you doing this? Why do you have sex with other men? Don’t you want to have children? and “When will you stop?” Other MSM reported overhearing health professionals gossiping about them and simply refusing to provide services. Some even reported being afraid that health professionals would broadcast their personal information to other patients, or worse, call the police to have them arrested. This has particularly concerning consequences for HIV-positive MSM as some MSM reported being denied ART medication while incarcerated (Wanyenze et al., 2016). Some MSM, not necessarily those who are HIV-positive, also reported being “molested” by police officers (King et al., 2013). All-in-all, Wanyenze et al. (2016) found that nearly 52% of MSM had trouble accessing much needed health services. As a result, many resorted to self-medicating, which as previously mentioned for Tanzanian MSM, is an effective coping strategy, but is not necessarily a safe or effective treatment strategy for HIV and other STIs (Wanyenze et al., 2016).

Lastly, many Ugandan MSM also reported experiencing stigma, discrimination, and overt acts of violence outside of healthcare settings as well, which negatively influence access to HIV prevention and treatment services. For instance, Hladik et al. (2012) found that nearly 40% of the 300 MSM in Kampala in their study had experienced some form of homophobic abuse (i.e. verbal, moral – isolation/exclusion, physical, or sexual abuse as well as blackmail). More specifically, 33.2% reported verbal abuse, 18.2% reported moral abuse, 15.5% reported physical abuse or mistreatment, and 22% reported sexual abuse. MSM reported that a family member was the perpetrator in 25.4% of cases, a sexual partner was the perpetrator in 24.2% of cases, and a friend or acquaintances was the perpetrator in 24.1% of the cases (Hladik et al., 2012). Most importantly to this review, Hladik et al. (2012) found that Ugandan MSM with a history of homophobic abuse had 5.38 times higher odds of being HIV-positive (95% CI: 1.95-14.79), which suggests a strong correlation between enacted stigma, discrimination, overt acts of violence and HIV infection. Ultimately, laws criminalizing Ugandan MSM create an environment that promotes stigma, discrimination, overt acts of violence, and other human rights violations, which constrain access to HIV prevention and treatment services among MSM and put them at greater risk for HIV infection, which helps to explains why HIV risk factors and HIV prevalence among MSM in Uganda are so extreme (Hladik et al., 2012).

### Intraregional Analysis of East African Countries

All of the East African countries referenced in this review have generalized HIV epidemics, with reports of notably higher HIV prevalence among MSM in these countries than the general population. East African MSM exhibit a variety of HIV risk behaviors, which vary by country, but include high rates of bisexuality and concurrent sexual partnerships, high rates of transactional sex (e.g. 16.7% of MSM in Tanzania, 52% in Kenya, and 68.8% in Uganda were paid for sex), low rates of condom and WBL use (especially in Uganda where 61.2% reported inconsistent condom use, 6.2% reported never using condoms, and only 25% reported using lube), high rates of condom breakage and slippage (e.g. 20% in Kenya), large variance in ever being tested for HIV (92% in Kenya vs. 70% in Tanzania vs. 46% in Uganda), and high rates of curable STIs (ranging from 15% in Uganda to 46% in Kenya).

This review found anecdotal reports and research on a variety of human rights violations experienced by MSM in three East African countries, all of which reported quantifiable data (albeit inconsistently), and all of which criminalize homosexuality.

Overall, a higher percentage of Tanzanian MSM reported verbal, moral, physical, and sexual abuse than did Kenyan and Ugandan MSM (which were roughly similar). However, a higher percentage of Ugandan MSM reported experiencing stigma and/or discrimination in a healthcare setting than did Tanzanian MSM, with 63% of Kenyan MSM also reporting being afraid to seek healthcare. Many Tanzanian and Ugandan MSM also reported actively avoiding healthcare, being afraid to seek healthcare, or being afraid to disclose their sexuality and sexual practices to HCW, which could be out of fear that HCW will turn them over to the police. Though no quantifiable data were found, in this review, on police brutality among MSM in Tanzania or Uganda, 24% of MSM in Kenya reported being arrested or beaten by police, which may explain why they were more likely to report being afraid to seek healthcare services. Lastly, MSM in every East African country reported being denied healthcare services at some point in the past due to being men who have sex with men.

Literature from these East African countries demonstrate a trend towards experiencing human rights violations, being unable to or afraid to access HIV prevention and treatment services, and increased HIV risk behaviors, which may justify why MSM in Kenya, Tanzania, and Uganda have higher than average HIV prevalence in their respective countries. However, Hladik et al. (2012) found a direct association between experiencing homophobic abuse (aOR = 5.38; 95% CI: 1.95-14.79), defined as verbal, moral, physical, or sexual abuse, or blackmail in their study, and HIV infection among MSM in Uganda. Collectively, these findings suggest that homophobic attacks on MSM, which are incited by laws criminalizing homosexuality, facilitate the spread of HIV among MSM in East Africa by deterring them from accessing HIV prevention and treatment services.

## Central Africa

### Intraregional Analysis of Central African Countries

None of the countries in Central Africa – Central African Republic, Republic of the Congo, Democratic Republic of the Congo, Equatorial Guinea, Gabon, or Sao Tome + Principe – have laws criminalizing homosexuality or same-sex practices, which may explain why no literature relevant to this topic in Central African countries was identified in this review’s PubMed search. It is important to remember that even in the absence of laws criminalizing homosexuality, MSM (e.g. in Burkina Faso and Côte d’Ivoire) still reported experiencing stigma, discrimination, overt acts of violence, and other human rights violations based on their sexuality and/or same-sex practices. Therefore, more research is needed in Central African countries to quantify human rights violations experienced by MSM and characterize the extent to which these human rights violations impact their HIV prevalence and access to HIV prevention and treatment services.

## Southern Africa

### Angola

Angola is one of the countries in Southern Africa with the lowest national HIV prevalence, which is estimated to 1.9% among adults ages 15-49 (Kendall et al., 2014). The first biobehavioral surveillance study of MSM, which was conducted in Luanda in 2011, however, found that the prevalence of HIV among MSM is at least twice as high (3.8%) and possibly five and a half times higher (10.5%) than the national average (Kendall et al., 2014). Kendall et al. (2014) identified a variety of HIV risk factors, which could partially explain elevated HIV prevalence among MSM in Angola. These factors included misinformation about HIV transmission, low perceptions of HIV risk, low rates of condom use, low uptake of HIV testing, multiple and concurrent sexual partners, and high rates of transactional sex. For instance, Kendall et al. (2014) found that although many MSM were knowledgeable about the main modes of HIV transmission, many believed they could be infected via mosquito bite and/or sharing a bathroom with someone who is HIV-positive.

The number of sexual partners MSM reported in the last six months varied tremendously with some MSM reporting one sexual partner and some reporting upwards of 280 in the last six months (Kendall et al., 2014). Roughly 36.6% of MSM reported commercial sex (i.e. paying for or being paid for sex), which may help to explain why the number of sexual partners reported is so high for some MSM in Angola (Kendall et al., 2014). Despite multiple and concurrent partnerships, Kendall et al. (2014) found that very few MSM reported always using condoms, with only 11.5% of MSM reporting consistent condom use for vaginal and anal sex with trans and female individuals and only 36.1% for anal sex with male partners. Furthermore, despite inconsistent condom use and multiple sexual partners, 38.7% and 13.2% of MSM in Luanda felt they were at little to no risk of acquiring HIV, respectively. This may explain why 61.8% of MSM in Luanda reported never testing for HIV (Kendall et al., 2014). As previously mentioned, these behavioral risks likely only partially explain the elevated HIV prevalence among MSM in Angola.

Angola ratified ICCPR and its Optional Protocol on January 10, 1992. Despite its vow to protect the rights of all citizens, the Angolan *Penal Code of September 16, 1886*, which was inherited during Portuguese colonial era, is frequently used to criminalize homosexuality and to punish MSM (see Figure 19) (Gerber, 2016). Angolan laws do not use vague terminology to describe homosexuality, like “carnal knowledge against the order of nature” or “indecent acts.” Instead Angolan laws specifically state that “everyone guilty of homosexuality” can be penalized with a fine of up to 2,000 Angolan DA and imprisonment up to two years (Gerber, 2016).

Article 70 & 71(4)

“Everyone guilty of an act of homosexuality shall be punished by imprisonment of two months to two years and a fine of five hundred to 2,000 DA.”

Figure . Angola's Penal Code of September 16, 1886 - Amended in 1954

MSM in Angola report a multitude of human rights violations (e.g. stigma, discrimination, and overt violence due to sexual orientation), which are promoted by laws criminalizing homosexuality (Kendall et al., 2014). For instance, Kendall et al., 2014 found that 70.4% of MSM in Luanda experienced at least one episode of homophobia at some point in their lifetime. Additionally, 46.2% of MSM reported experiencing some form of violence, with 44.7% reporting being cursed, humiliated, or made to feel bad about themselves due to their sexual identity, 10% reporting being physically attacked due to their sexual identity, and 25% reporting being forced to have sex against their will (Kendall et al., 2014). Furthermore, 40.1% of MSM reported being discriminated against multiple times in the past 12 months in their workplaces, schools, businesses, and/or recreational areas (Kendall et al., 2014). Roughly 3% of MSM also reported being arrested as a result of having sex with other men (Kendall et al., 2014). Most importantly, Kendall et al. (2014) found that MSM who reported experiencing episodes of homophobia had nearly 13 times higher odds of being HIV-positive (OR= 12.97; 95% CI: 3.2-49.6). Therefore, these human rights violations, which are spurred by laws criminalizing homosexuality, may contribute significantly to elevated HIV prevalence and risk behaviors among MSM in Angola by discouraging them from accessing HIV-related healthcare services (e.g. free condoms, HIV testing and risk reduction counseling, etc.) out of fear of social, legal, and even physical repercussions.

### Botswana

Existing research estimates that there are upwards of 300,000 PLWH in Botswana and an HIV prevalence of 21.9% among adults ages 15-49 (Fay et al., 2011; UNAIDS, 2016). Though Botswana’s HIV epidemic is generalized, studies conducted by Baral et al. (2009), Fay et al. (2011), and Zahn et al. (2016) suggest that certain populations, like MSM, are disproportionately burdened, with estimated HIV prevalence as low as 19.66% and as high as 43% in some samples. Various HIV risk factors have been identified that contribute to such high rates of HIV among MSM in Botswana including gaps in knowledge about HIV transmission and status, limited uptake of HIV testing, high rates of STIs, having multiple, concurrent male and female sex partners, and engaging in transactional sex (Baral et al., 2009; Fay et al., 2011; Zahn et al., 2016).

Baral et al. (2009) were the first to conduct a biobehavioral survey of MSM in Botswana, specifically in Gaborone, and to report on HIV behavioral risks. They found that although MSM were knowledgeable about HIV transmission, they were less aware of the fact that HIV could be transmitted during anal sex with men (93.1%) than during vaginal sex with women (99.2%). In their sample of 177 MSM, roughly 17% of MSM in their sample had never tested for HIV before. HIV testing revealed that 19.66% were HIV-positive, with 17.4% being newly diagnosed. Approximately 10% of this sample also reported having been diagnosed with an STI in the past.

Baral et al. (2009) found that roughly 34.6% of their MSM were bisexually active in the past six months. They reported an average of 2.8 male partners (range 0-24) and 0.7 female partners (range 0-7) in the past six months. Nearly 13% of MSM also reported having five or more male partners in this timeframe. Lastly, approximately 30% of MSM reported engaging in transactional sex. These HIV risk behaviors, which may in part explain elevated HIV prevalence among MSM in Botswana, are echoed in the work of Fay et al. (2011) and Zahn et al. (2016). These studies recognize that structural and community-level factors such as laws criminalizing homosexuality and stigma and discrimination from healthcare workers, law enforcement, and the general public also play a significant role in deterring Botswanan MSM from utilizing HIV education, testing, and other prevention and treatment services.

Botswana ratified ICCPR on September 8, 2000, but has not ratified the Optional Protocol to ICCPR. Despite these measures to protect the rights of all their citizens, Botswana’s *Penal Code,* specifically *Volume II, Chapter 08:01*, is frequently used to criminalize homosexuality and punish MSM (see Figure 20) (Gerber, 2016). Like in other countries, Botswana’s laws refer to consensual same-sex relations as “carnal knowledge against the order of nature,” “unnatural offences,” and “gross indecent practices” (Gerber, 2016; Zahn et al., 2016). MSM in Botswana who are charged with these “offences” can be imprisoned for up to seven years (Gerber, 2016).

Section 164: Unnatural Offences

“Any person who –

a) Has carnal knowledge of any person against the order of nature;

b) Has carnal knowledge of an animal; or

c) Permits any other person to have carnal knowledge of him or her against the order of nature, is guilty of an offence and is liable to imprisonment for a term not exceeding seven years.”

Section 165: Attempts to Commit Unnatural Offences

“Any person who attempts to commit any of the offences specified in section 164 is guilty of an offence and is liable to imprisonment for a term not exceeding five years.”

Section 167: Indecent Practices Between Persons

“Any person who, whether in public or private, commits any act of gross indecency with another person, or procures another person to commit any act of gross indecency with him or her, or attempts to procure the commission of any such act by any person with himself or herself or with another person, whether in public or private, is guilty of an offence.”

Figure . Botswana's Penal Code - Volume II - Chapter 8:01 - Amended by The Penal Code Amendment Act of 1998

Botswanan laws criminalizing homosexuality create a social environment that substantiates stigma, discrimination, and even overt acts of violence towards MSM. Baral et al. (2009) were also the first to document these human rights violations among MSM and to correlate them with biological HIV outcomes in Africa. For instance, 1.7% of MSM in their sample reported being physically assaulted by government or police officials, 11.4% reported being raped, and 26.5% reported being blackmailed for being MSM. Given these acts of violence, it is unsurprising that nearly 30% of Botswanan MSM reported being afraid to walk freely in their communities. Additionally, although only 0.85% of MSM in their sample reported being denied healthcare services because of their sexuality, roughly 21% were afraid to seek these services, likely out of fear of having to disclose their sexuality, which could result in further stigma and discrimination and even being turned in to the police. And, in fact, Baral et al. (2009) found that MSM who reported disclosing their sexuality to healthcare workers had 4.2 times higher odds of reporting being denied healthcare services (OR = 4.2, 95% CI: 1.9-9.3). This may help to explain why only 24% of Botswanan MSM reported disclosing their sexual practices to a healthcare worker, even though disclosure is pertinent to providing proper education and care.

Follow-up studies conducted by Fay et al. (2011) and Zahn et al. (2016) reported similar metrics on human rights violations perceived and experienced by Botswanan MSM, which impair MSM’s ability to access health services and contribute to HIV prevalence and risk behaviors. For instance, Fay et al. (2011) found that MSM who reported ever being afraid of seeking healthcare (OR = 0.22, 95% CI: 0.07-0.69) or who had been denied healthcare (OR = 0.09, 95% CI: 0.03-0.32) due to their sexuality were less likely to report fundamental knowledge of HIV transmission and risks. Additionally, MSM were more likely to report being afraid of seeking healthcare (OR = 2.8, 95% CI: 1.7-4.9) and/or being denied healthcare (OR = 7.3, 95% CI: 3.3-16.2) if they had ever been treated for an STI before. Lastly, Fay et al. (2011) found correlations between MSM being treated for HIV and being afraid to seeking healthcare (OR= 3.7, 95% CI: 1.6-8.6), being denied healthcare (OR= 46.1, 95% CI: 17.3-122.8), and being blackmailed (OR=5.4, 95% CI: 2.2-12.2), respectively. Collectively, these findings suggest that laws criminalizing homosexuality and punishing MSM in Botswana may deter them from utilizing HIV prevention and treatment services, which helps to explain why HIV risk behaviors and HIV infection are so prevalent in this population.

### Lesotho

When it comes to HIV infection, Lesotho is one of the most heavily burdened countries in the world, with an HIV prevalence of 23% among reproductive age adults (15-49 years old) (Baral, Adams, et al., 2011). Though Lesotho’s HIV epidemic is classified as highly generalized, MSM in Lesotho might be significantly more impacted by HIV, with estimated HIV prevalence ranging from 11.6% to 35.4% in some cohorts across Lesotho (Baral, Adams, et al., 2011).

Baral, Adams, et al. (2011) were the first to conduct a biobehavioral survey of MSM in Lesotho and to pair their results with perceived and experienced human rights violations. Their biobehavioral survey revealed a variety of HIV behavioral risks, which partially account for the disproportionate burden of HIV among MSM in Lesotho. For instance, in their sample of 252 MSM, HIV knowledge was generally low, with 58.9% of MSM believing vaginal, anal, and oral sex were equally risky behaviors, only 19% knowing that anal sex is risker than vaginal and oral sex, and only 16.3% reporting more specifically that receptive anal sex is the highest sexual risk behavior (Baral, Adams, et al., 2011). Furthermore, only 45% of MSM in their sample knew that WBL is safest to use with latex condoms for anal sex, with another 30.6% reporting that petroleum-based lubes were safest.

In addition to limited HIV knowledge, many MSM reported having multiple, concurrent partnerships with men and women in the past 6-12 months (Baral, Adams, et al, 2011). For instance, 28.4% of MSM reported having five or more male partners in the last 12 months while 20.2% reported having three or more female partners in the past 12 months. An additional 41% of MSM in Lesotho also reported having both male and female non-regular sexual partners. Despite these multiple and concurrent relations, MSM in Lesotho reported low rates of condom use, with 45.4% reporting no condom use the last time they had sex with a man (59.8% with last non-regular partner) and 32.8% reporting no condom use with their last female partner. Roughly 36% of the sample also reported engaging in transactional sex, with 22% reporting being paid for anal sex and 28% paying for anal sex with other men (Baral, Adams, et al., 2011). Lastly, MSM in Lesotho reported low uptake of HIV testing, with 45% of MSM not having been tested for HIV in the last year. These behavioral risks provide some explanation for why MSM in Lesotho may have elevated HIV prevalence in compared to the general population. However, Baral, Adams et al. (2011) and Stahlman, Bechtold, et al. (2015) suggest that stigma, discrimination, and violence towards MSM in Lesotho hinder MSM from accessing HIV-related healthcare, in which they would receive HIV testing, risk reduction counseling, and other prevention and treatment tools like condoms, lube, and ART.

Lesotho is one of a few African countries with existing laws protecting the rights of gay, bisexual, and other MSM (Stahlman, Bechtold, et al., 2015; Zahn et al., 2016). For instance, Lesotho ratified ICCPR on September 9, 1992 and ratified the Optional Protocol to ICCPR on September 6, 2000 (Gerber, 2016). Under Lesotho’s *Penal Code Act of 2010*, homosexuality is not recognized as a crime (Gerber, 2016). And, although, common laws in Lesotho recognize sodomy as a criminal offence, these laws are not enforced (Gerber, 2016). Moreover, in 2012, Lesotho passed legislation providing freedom from discrimination based on sexual orientation (Stahlman, Bechtold, et al., 2015; Zahn et al., 2016). In theory, these protective laws should encourage MSM in Lesotho to access HIV prevention and treatment services more readily and with less fear of social and legal recourse than in other countries that enforce criminal laws against homosexual behavior.

In light of these legal protections, many MSM in Lesotho report experiencing human rights violations at magnitudes similar to those reported by MSM in African countries that openly criminalize same-sex behaviors and identities (Baral, Adams, et al., 2011). For instance, Baral, Adams, et al. (2011) found that approximately 76% of MSM in their Lesotho sample experienced one or more human rights violations, with 59.8% of MSM reporting verbal or physical harassment, 18.9% being beaten, 9.8% being raped, 16.4% experiencing police discrimination, and 21.3% being blackmailed in the last three years due to their sexual identities and/or practices. Of these MSM, 22% also reported being afraid to seek healthcare and 75% reported never having disclosed being MSM to healthcare workers. These reports are understandable given that MSM in Lesotho also reported overhearing healthcare workers gossip about them (16.1%) and/or having been denied healthcare services in the past (3.2%) (Baral, Adams, et al. (2011).

In-depth interviews and focus groups with MSM in Maseru and Maputsoe, conducted by Stahlman, Bechtold, et al. (2015), provide more context to explain just how stifling verbal insults (e.g. being told it is more acceptable to have sex with an animal than another man and/or seeing reactions and whispers from community members) and physical violence (e.g. having stones thrown at them, having dogs purposely let loose to chase them, and/or being sexually assaulted) can be to the mental well-being of MSM and ultimately their sexual health as it deters them from seeking out and utilizing HIV prevention and treatment services:

*“Such things make use lose hope about our future because we are forced to hide our true identity.”*

*“Not a good feeling because you end up feeling insecure all the time and wondering what people are saying about you even when they are not discussing you.”*

*“Some MSM go to church and recall people reading the Bible at them to illustrate that homosexuality is a sin…”*

*“There are occasions when gay people do not collect their medication at the health centers because of fear that their status will become a subject of gossip in the community.”*

Collectively, these findings as well as many others highlight the structural barriers that even MSM living in countries that do not criminalize homosexuality experience on a day-to-day basis. However, it is important to note that some MSM in Lesotho believed general acceptance was increasing with greater visibility and discussion of same-sex relationships in the media (e.g. TV shows and radio talk shows) (Stahlman, Bechtold, et al., 2015). While some positive changes have occurred since the decriminalizing of homosexuality in Lesotho in 2012, perceived and enacted stigma and discrimination continue to deter MSM in Lesotho from accessing HIV prevention and treatment services, which may account for limited HIV knowledge, additional behavioral risks, and ultimately a substantial disparity in HIV prevalence.

### Malawi

Previous studies estimate that Malawi’s HIV epidemic is a generalized one with nearly 930,000 PLWH and roughly 8% prevalence among the general population (Fay et al., 2011; Wirtz et al., 2015). Like in most African countries, Malawian MSM are disproportionately burdened by HIV, with some studies estimating the prevalence of HIV among them to range from 12.5% to 21.4% (Baral et al., 2009; Fay et al.,2011; Zahn et al., 2016). Previous studies have identified a variety of behavioral risk factors that put them at greater risk for HIV infection such as misinformation about HIV transmission, inconsistent and/or incorrect use of condoms and lube, limited uptake of HIV testing, high rates of STIs, multiple, concurrent male and female sex partners, and engaging in transactional sex (Baral et al., 2009; Fay et al., 2011; Wirtz et al., 2014; Wirtz et al., 2015; Zahn et al., 2016).

Baral et al. (2009) were also the first to conduct a biobehavioral study of Malawian MSM, specifically in Blantyre and Lilongwe. Most MSM were aware that HIV could be transmitted during vaginal sex with a woman (98.5%) and during anal sex with a man (92.3%), however, there was a noticeable difference between these percentages. This discrepancy may stem from bias towards teaching about HIV/STI prevention in heterosexual relationships and not (or inadequately) teaching about HIV/STI prevention in same-sex relationships. Out of 202 MSM, Baral et al. (2009) found that only 35% of MSM in their sample had ever tested for HIV. HIV testing revealed that 21.4% were HIV-positive, with 95% of them being newly diagnosed during the study. Another 8.5% of their sample also reported having been diagnosed with an STI in the past.

Baral et al. (2009) found that nearly 65% of MSM in Malawi were bisexually active in the past six months. MSM reported an average of 3.9 male partners (range 0-52) and 1.5 female partners (range 0-12) in the past six months. Another 18% also reported having five or more male partners in this timeframe. Lastly, 62.6% of Malawian MSM reported engaging in transactional sex. Similar levels of HIV risk behaviors, which may in part explain elevated HIV prevalence among Malawian MSM were reported by Fay et al. (2011), Wirtz et al. (2014), Wirtz et al. (2015), and Zahn et al. (2016). In their own biobehavioral surveys of 103 MSM from Blantyre, Wirtz et al. (2014) also found that Malawian MSM have low rates of condom use, with only 50% reporting consistent (or almost consistent) condom use with casual partners. Wirtz et al. (2014) also discovered that many more MSM in Malawi reported using petroleum jelly or Vaseline (48.3%) rather than WBL (25.2%), and that 49.7% also believed petroleum jelly and Vaseline were the safest lube to use for anal sex. Collectively, these authors also identified anti-homosexuality laws, stigma, and discrimination as significant deterrents for Malawian MSM wanting to engage in HIV prevention and treatment services.

Malawi ratified ICCPR on December 22, 1993 and ratified the Optional Protocol to ICCPR on June 11, 1996 (Gerber, 2016). Despite these vows to protect the rights of all their citizens, Malawi’s *Penal Code*, specifically *Chapter 7:01 Laws of Malawi*, is frequently used to criminalize homosexuality and punish MSM (see Figure 21) (Gerber, 2016). The penalty for consensual same-sex relations, described as “carnal knowledge against the order of nature” in Malawi’s laws, is imprisonment up to fourteen years in addition to possible corporal punishment (i.e. physical punishment like caning and flogging) (Gerber, 2016; Zahn et al., 2016).

Section 153: Unnatural Offences

“Any person who –

a) Has carnal knowledge of any person against the order of nature;

b) Has carnal knowledge of an animal; or

c) Permits a male person to have carnal knowledge of him or her against the order of nature, shall be guilty of a felony and shall be liable to imprisonment for fourteen years, with or without corporal punishment.”

Section 154: Attempt to Commit Unnatural Offences

“Any person who attempts to commit any of the offences specified in the last preceding section shall be guilty of a felony and shall be liable to imprisonment for seven years, with or without corporal punishment.”

Section 156: Indecent Practices Between Males

“Any male person who, whether in public or private, commits any act of gross indecency with another male person, or procures another male person to commit any act of gross indecency with him, or attempts to procure the commission of any such act by any male person with himself or with another male person, whether in public or private, shall be guilty of a felony and shall be liable to imprisonment for five years, with or without corporal punishment.”

Figure . Malawi's *Penal Code* - Chapter 7:01 Laws of Malawi

Malawi’s laws criminalizing homosexuality promote stigma, discrimination, and overt acts of violence towards MSM. Similar to their findings in Botswana, Baral et al. (2009) have described correlations between these human rights violations and biological HIV outcomes for MSM in Malawi. For instance, 8% of MSM in Malawi reported being physically assaulted by government or police officials, 11.4% reported being raped, and 18% reported being blackmailed because of being MSM. These events may explain why nearly 15.5% of Malawian MSM reported being afraid to walk around in their communities. Like in Botswana, a small percentage of Malawian MSM reported being denied healthcare for being MSM (4.0%), but many more MSM reported being afraid to seek healthcare services (17.6%). Malawian MSM who reported disclosing their sexuality to healthcare workers also had higher odds of being denied healthcare services (OR = 4.2, 95% CI: 1.9-9.3), as they also found in Botswana. This provides insight into their finding that only 9.0% of MSM have ever disclosed being MSM to a healthcare worker in Malawi (Baral et al., 2009). This is concerning because open and honest conversations about sexual risk are necessary for determining HIV-related prevention and treatment needs.

Fay et al. (2011), Wirtz et al. (2013), and Zahn et al. (2016) reported similar levels of human rights violations in Malawi, which deter MSM from utilizing healthcare services and contribute HIV risk and prevalence. The follow quote from an in-depth interview with one Malawian MSM conducted by Wirtz et al. (2013) describes the extent to which some MSM are willing to avoid seeking healthcare when they need it to avoid further stigma and discrimination:

*“I have [known] individuals who have had sexually transmitted infections. For some time they may have it. They don’t seek treatment and they just walk around with it. Because they are afraid they don’t know how they are going to be treated when they go to a STI clinic. They are not aware that they can be treated as good as like other patients are treated. They think maybe they are going to inform the police, they are going to call the police, there may be stigma, and the health workers may be calling each other [to tell them there is a MSM in the clinic]… so they walk around when they have an untreated problem which is bad because it can get complicated.”*

HIV-positive MSM in Malawi experience significantly more stigma from the community and healthcare professionals as a result of being MSM and being HIV-positive, which may make them even less likely to engage in HIV-related health services. This quote from a healthcare worker in Wirtz et al. (2013) provides further context:

*“Most of the times they [MSM living with HIV] are not taken as people, because of their behaviors, they acquired it voluntarily. People regard them as those that are reaping what they sowed. Their bad behavior has led them to have the effects of the disease. It’s like blaming them, judging them to say that’s what they wanted.”*

Wirtz et al. (2013) discovered that many healthcare providers participate in stigmatizing Malawian MSM to avoid secondary stigma and even punishment associated with treating MSM. However, some healthcare workers also recognize the need to be trained and sensitized to provide MSM-specific healthcare. The follow quote from a healthcare worker in Wirtz et al. (2013) provides further context:

*“They [health providers] have their own fears… Knowing that MSM in Malawi are kind of criminalized and they said that if people know that we are treating them maybe we will be in trouble. But we have sensitized them and we have trained them. So they are familiar with the health problems that MSM face and they have to treat them and handle them and make them comfortable.”*

Like in Botswana, Fay et al. (2011) found that Malawian MSM who were afraid of seeking healthcare (OR=0.22, 95% CI: 0.07-0.69) or who were denied healthcare (OR= 0.09, 95% CI: 0.03-0.32) were less likely to have a complete understanding of HIV transmission and risks. Additionally, Malawian MSM were more likely to report being afraid of seeking healthcare (OR= 2.8, 95% CI: 1.7-4.9) and/or being denied healthcare services (OR=7.3, 95% CI: 3.3-16.2) if they were ever treated for an STI (Fay et al., 2011). Lastly, like in Botswana, Fay et al. (2011) found that fear of seeking healthcare services (OR=3.7, 95% CI: 1.6-8.6) and experiences with blackmail (OR=5.4, 95% CI: 2.2-12.2), and being denied healthcare services (OR=46.1, 95% CI: 17.3-122.8) were positively correlated with HIV treatment among MSM in Malawi. Malawi’s laws criminalizing homosexuality likely play a role in facilitating the stigma, discrimination, and overt acts of violence experienced by MSM in Malawi. As shown by these data, these human rights violations significantly deter MSM from utilizing HIV prevention and treatment services even when they know they need them, which may help to explain why HIV risk behaviors are frequently reported and why Malawian MSM are heavily burdened by HIV.

### Namibia

Previous research estimates that there are more than 200,000 PLWH in Namibia, and an HIV prevalence of 13.8% among adults 15-49 (Fay et al., 2011; UNAIDS, 2016). Studies conducted by Baral et al. 2009), Fay et al. (2011), and Zahn et al. (2016) estimate that the prevalence of HIV among MSM in Namibia ranges from 12.4% to 27%. Existing literature suggests that MSM in Namibia exhibit a variety of behavioral risk factors that could partially explain their high rates of HIV including incomplete knowledge regarding HIV transmission and status, limited uptake of HIV testing, high rates of STIs, multiple, concurrent male and female sex partners, and engaging in transactional sex (Baral et al., 2009; Fay et al., 2011; Zahn et al., 2016).

The first biobehavioral study of Botswanan and Malawian MSM conducted by Baral et al. in 2009 was also the first study to assess HIV risk behaviors among MSM in Namibia, specifically in Windhoek. Like in Botswana and Malawi, MSM were very knowledgeable about HIV transmission and were more aware that HIV could be transmitted during vaginal sex than during anal sex with men (94.3% vs 84.9%). In their sample of 218 MSM, roughly 40% of MSM in their sample had never been tested for HIV. HIV testing revealed that 12.4% were HIV-positive, with only 59.2% being aware of their HIV status. Another 19% of their sample also reported having been diagnosed with an STI in the past.

Baral et al. (2009) found that nearly half (50.7%) of Namibian MSM were bisexually active in the past six months. MSM reported an average of 2.9 male partners (range 0-50) and 1.2 female partners (range 0-12) in the past month. Roughly 15% also reported having five or more male partners in this timeframe. Lastly, approximately 38% of Namibian MSM reported engaging in transactional sex. These HIV risk behaviors, which may in part explain elevated HIV prevalence among MSM in Namibia, were similarly reported by Fay et al. (2011) and Zahn et al. (2016). These authors also specifically identified laws criminalizing homosexuality and stigma and discrimination from healthcare workers, law enforcement, and the general public as significant barriers to accessing HIV prevention and treatment services for Namibian MSM.

Namibia ratified ICCPR and its Optional Protocol on November 28, 1994 (Gerber, 2016). Despite these vows to protect the rights of all citizens, sodomy is still considered a criminal offence according to Roman-Dutch common law in Namibia, and therefore could be used to criminalize homosexuality and punish MSM (Gerber, 2016). However, as of 2017, UNAIDS reports that there is no specified penalty for homosexual behavior in Namibia (UNAIDS, 2017; Zahn et al., 2016).

Laws criminalizing homosexuality in Namibia, regardless of unspecified penalties, incite stigma, discrimination, and overt acts of violence towards MSM. Like they did in Botswana, Baral et al. (2009) described correlations between these human rights violations and biological HIV outcomes for MSM in Namibia. For instance, 21.7% of Namibian MSM reported being physically assaulted by government or police officials, 11.4% reported being raped, and 21.3% reported being blackmailed as a result of their sexuality. These events may explain why nearly 17% of Namibian MSM reported being afraid to walk openly in their communities. Like in Botswana and Malawi, although only a small portion of Namibian MSM reported being denied healthcare because of their sexuality (8.3%), many more MSM reported being afraid to seek healthcare services (18.3%). Namibian MSM who reported disclosing their sexuality to healthcare workers also had higher odds of being denied healthcare services (OR = 4.2, 95% CI: 1.9-9.3), as in Botswana and Malawi. This provides context to Baral et al. (2009)’s finding that only 21.6% of Namibian MSM have ever disclosed being MSM to a healthcare worker, even though disclosure is imperative to providing personalized HIV-related prevention and treatment services.

Fay et al. (2011) and Zahn et al. (2016) report similar statistics on human rights violations in Namibia, which deter MSM from utilizing healthcare services and contribute to HIV prevalence and risk behaviors. Like in Botswana and Malawi, Fay et al. (2011) found that MSM who were afraid of seeking healthcare (OR= 0.22, 95% CI: 0.07-0.69) or who were denied healthcare (OR= 0.09, 95% CI: 0.03-0.32) were less likely to have a complete understanding of HIV transmission and risks. Additionally, MSM were more likely to report being afraid of seeking healthcare (OR= 2.8, 95% CI: 1.7-4.9) and/or being denied healthcare (OR= 7.3, 95% CI: 3.3-16.2) if they were ever treated for an STI. Lastly, like in Botswana and Malawi, Fay et al. (2011) found that fear of seeking healthcare services (OR= 3.7, 95% CI: 1.6-8.6) and experiences with blackmail (OR= 5.4, 95% CI: 2.2-12.2) and being denied healthcare (OR= 46.1, 95% CI: 17.3-122.8) were positively correlated with treatment for HIV infection among Namibian MSM. Ultimately, laws criminalizing homosexuality in Namibia, despite not describing any specific punishment, appear to be equally as effective at creating hostile sociopolitical environments for MSM in Namibia. Human rights violations that occur as a result of these laws are detrimental to uptake of HIV prevention and treatment services among Namibian MSM, which may help to explain why HIV risk behaviors are commonly reported and why MSM in Namibia are disproportionately burdened by HIV.

### South Africa

South Africa’s HIV epidemic is classified as “generalized,” with an estimated HIV prevalence of 16.9% among adults ages fifteen and older (Baral, Burrell, et al., 2011). Like in all other African countries, MSM in South Africa are more heavily burdened by HIV than the general population. However, in comparison to most other African MSM, MSM in South Africa are

well-studied. Studies indicate that the prevalence of HIV among MSM in South Africa varies from city to city, with reports of prevalence as high as 13.2% in Soweto, 23.5% in Cape Town, 27.5% in Durban, and 49.5% in Johannesburg, all generally higher than the 10% HIV prevalence reported for heterosexual men of similar age in South Africa (Baral, Burrell, et al., 2011; Lane et al., 2014).

Biobehavioral studies of MSM in South Africa reveal a variety of HIV risk behaviors, which may partially account for their elevated HIV prevalence (Baral, Burrell, et al., 2011; Lane et al., 2008; Lane et al., 2014; Nel, Yi, Sandfort, & Rich, 2013). For instance, Baral, Burrell, et al. (2011) found that MSM in South Africa reported multiple, concurrent male and female sexual partners. In their sample of 200 MSM living in Cape Town, 17.7% reported being bisexually active in the last six months, with a mean of four male partners (range of 0-75, with 17.7% reported five or more) and a mean of 0.49 female partners. Interestingly, Baral, Burrell, et al. (2011) found that fewer MSM in South Africa reported being bisexually active than in other African countries, which they attribute to South Africa’s more accepting sociopolitical climate.

Additionally, 47.6% and 60.5% of MSM reported inconsistent condom use with male and female partners, respectively. Of those reporting commercial condom use, 98% reported using petroleum-based lube while only 1.9% reported using WBL. An additionally 18.6% and 3.5% reported using saliva and “no lube” for anal sex, respectively. Nearly 12% of MSM in their sample also reported receiving money for sex. Finally, Baral, Burrel, et al. (2011) found that 25.5% of their sample was HIV-positive, with only 6% being aware of their infection, which suggests low and/or inconsistent uptake of HIV testing. These behavioral risks likely provide some insight into the elevated HIV prevalence among MSM in South Africa, but do not completely explain this disparity.

South Africa was one of the first countries in Africa to establish laws protecting the rights of gay, bisexual, and other MSM (Stahlman, Bechtold, et al., 2015; Zahn et al., 2016). In 1994, South passed legislation providing freedom from discrimination based on sexual orientation (Zahn et al., 2016). In theory, these laws should facilitate access to HIV prevention and treatment services among MSM in South Africa. However, much of the literature indicates that MSM in South Africa experience human rights violations at similar magnitudes reported by MSM in African countries criminalizing same-sex behaviors and identities (Baral, Burrell, et al., 2011; Cloete et al., 2008; Lane et al., 2008; Lane et al., 2014; Nel, Yi, Sandfort, & Rich, 2013; Zahn et al., 2016).

In Baral, Burrell, et al. (2011), for example, 24.5% of MSM reported at least one human rights violation due to their sexuality, with 5% reporting being denied either housing or healthcare, 10% being blackmailed, 8% being beaten by police or other governmental officials, 11% being raped by another man, and 9.1% afraid to walk in their own communities. An additional 21% also reported being afraid to seek healthcare and only 50% of MSM who actually met with a healthcare worker disclosed their sexuality, which hinders their ability to receive appropriate HIV-related prevention and treatment services. Most importantly, this study revealed a significant association between HIV infection and having ever been blackmailed (aOR = 4.4, 95% CI: 1.6-20.2), which adds to growing evidence that human rights violations experienced by MSM may be associated with negative physical health outcomes (Baral, Burrell, et al., 2011).

With regard to low uptake of HIV testing mentioned previously, Nel, Yi, Sandfort, & Rich (2013) found that many MSM in South Africa cited perceptions of low risk and fear of being tested as major reasons for not getting tested for HIV (57% and 52% of MSM in their study, respectively). Additionally, 34% of MSM reported experiencing victimization at school or work and 21% reported experiencing poor services or being denied services due to their sexuality. Both of these outcomes were strongly correlated with fear of being tested for HIV (aOR= 2.34, 95% CI: 1.25-4.34 and aOR=5.05, 95% CI: 1.59-16.10, respectively). Nel, Yi, Sandfort, & Rich also found that individuals who reported experiencing poor service in healthcare settings (especially related to STIs) were less likely to perceive themselves to be at risk for HIV (aOR= 0.22, 95% CI: 0.05-0.99). Given previous stigma (while seeking STI treatment), low perceptions of risk may actually be a coping mechanism to avoid further stigma if they were to test positive for HIV. This claim is substantiated by Cloete et al. (2008), who were the first to examine stigma and discrimination among HIV-positive MSM in Cape Town. In short, Cloete et al. (2008) found that HIV-positive MSM in South Africa experienced high rates of social isolation and discrimination as a result of dual stigma and commonly concealed their HIV status from others as a coping mechanism. These MSM also reported substantial feelings of shame, self-blame, and low self-esteem. Therefore, it is possible that MSM avoid getting tested for HIV in order to avoid additional stigma related to being HIV-positive.

Lastly, in a comparative study of human rights violations related to HIV status and risk behavior for 737 MSM in South Africa, Malawi, Botswana, and Namibia, Wirtz et al. (2014) found that MSM in South Africa were more likely to talk to their families and healthcare providers about their sexuality, were less likely to be blackmailed, and were less afraid to walk in their communities. These results suggest that legal provisions for MSM in South Africa may have some benefits towards reducing perceived and enacted human rights violations, decreasing hostile sociopolitical environments, and increasing access to healthcare services, whereas in countries like Swaziland, Malawi, Botswana, and Namibia, limited legal provisions leave MSM vulnerable to blackmailers who can leverage anti-homosexuality without fear of legal recourse. It is important to remember, however, that many MSM in South Africa still report feeling vulnerable, stigmatized, and discriminated against, which suggests legal protection alone is not enough to ensure MSM in South Africa receive equal access to HIV prevention and treatment services.

### Swaziland

Previous HIV surveillance studies estimate that there are nearly 170,000 PLWH in Swaziland and that the prevalence of HIV among reproductive age adults (15-49) is roughly 26%, make it one of most significantly impacted countries in the world (Baral et al., 2013; Kennedy et al., 2013; Risher et al., 2013). Unlike other African countries, the prevalence of HIV among MSM in Swaziland, which is reported to be as high as 17.6%, is lower than that of its general population (Baral et al. 2013). This may be due to the fact that the HIV epidemic in Swaziland is highly generalized, however, underreporting of MSM in Swaziland related to laws criminalizing homosexuality may also contribute to this finding.

Baral et al. (2013) were among the first to conduct a biobehavioral survey of Swazi MSM, which revealed several HIV behavioral risk factors that may partially account for their HIV prevalence. In their sample of 324 Swazi MSM, many had limited knowledge of the hierarchy of HIV risk, with only 18.2% reporting anal sex with men as being the riskiest sexual behavior and 43.7% reporting vaginal sex being the riskiest. Additionally, 45% of Swazi MSM believed that insertive and receptive anal sex were equally risky behaviors. Nearly 65% also believed that non-WBL were safest to use during anal sex. Secondly, many Swazi MSM reported not being worried (31.8%) or not very worried (18.2%) about HIV. In addition to limited knowledge of HIV and low perceptions of risk, 35.7% reported being bisexually active in the past year, with 58% reporting having multiple male sex partners (17.2% had four or more) and 26.9% reporting having multiple female sex partners (11.8% had three or more).

Baral et al. (2013) also found that only half of Swazi MSM reported always using condoms, with an additional 11.5% reporting never or almost never using condoms in the last 12 months. Only 23.7% of MSM reported using WBL in the last 12 months as well. Lastly, Baral et al. (2013) found low uptake of STI testing (14%) and HIV testing (51%) in the last 12 months, with 7.8% of Swazi MSM being diagnosed with an STI in the last 12 months and 17.6% being HIV-positive (70.8% newly diagnosed during the study). These behavioral risks may partially explain why Swazi MSM have such high rates of HIV. However, reported sexual stigma, discrimination, and violence, which are facilitated by laws criminalizing homosexuality in Swaziland, may also play a significant role in that they discourage Swazi MSM from accessing necessary HIV-related prevention and treatment services (Baral et al., 2013; Kennedy et al., 2013; Risher et al., 2013).

Swaziland ratified ICCPR on March 26, 2004, but has not ratified the Optional Protocol to ICCPR (Gerber, 2016). Despite these measures to protect the rights of all their citizens, common laws in Swaziland are frequently used to criminalize homosexuality and punish MSM (Gerber, 2016). These laws recognize sodomy, defined as “sexual intercourse per anus between two human males,” as a prohibited, criminal offence, punishable by imprisonment up to fourteen years (Gerber, 2016).

Swaziland’s laws criminalizing homosexuality promote stigma, discrimination, and overt acts of violence towards MSM. For instance, in their sample of 324 Swazi MSM, Baral et al. (2014) found that 51% of MSM reported experiencing at least one human rights violation and 80% perceived themselves to be at-risk for experiencing a human rights violation because of being MSM. Risher et al. (2013) more specifically found that 8.6% of Swazi MSM had been physically assaulted, 3.2% had been falsely arrested, and 3% had been denied healthcare services due to their sexuality and/or sexual practices. These experiences likely explain why nearly 45% of Swazi MSM in Risher et al. (2013) reported being afraid to walk freely in public. Swazi MSM reported high rates of fear of seeking healthcare (62%) and very high rates of not disclosing sexual practices to health professionals (75%) (Baral et al., 2013; Risher et al., 2013). Moreover, Risher et al. (2013) discovered that fear of seeking healthcare was significantly associated with having experienced legal discrimination due to sexuality (aOR = 1.9, 95% CI: 1.1-3.4), having been raped (aOR = 11.0, 95% CI: 1.4-84.4), and difficulty negotiating condom use with male partners (aOR = 2.1, 95% CI: 1.0-4.1). There was also a positive, but statistically significant, trend towards being denied healthcare services due to sexuality and disclosing sexual orientation or sexual practices to a healthcare worker (OR= 3.2, 95% CI: 0.99-10.5) (Risher et al., 2013). These statistics underscore the combined effects of laws criminalizing homosexuality and sexual stigma not only on the ability of Swazi MSM to access HIV-related prevention and treatment services, but also their ability to seek legal protection, which results in experiences of physical assault, rape, false arrests, and likely many other human rights violations. As Kennedy et al. (2013) put it, MSM in Swazi often feel like they “have no recourse to bring incidents of discrimination or violence to the authorities.”

Baral et al. (2013) also found a strong association between ever being incarcerated and HIV infection (OR= 4.37, 95% CI: 1.38-13.84). This is important to note because the penalty for same-sex relations in Swaziland is imprisonment up to 14 years, during which time many MSM report being denied or having limited access to HIV prevention and treatment resources like condoms, lube, and ART.

As in other African countries, Swazi MSM living with HIV are particularly impacted by laws criminalizing homosexuality, stigma, discrimination, and various other human rights violations. In qualitative interviews with 20 HIV-positive Swazi MSM, Kennedy et al. (2013) discovered that these MSM are subjected to dual stigma related to being HIV-positive and being MSM, and as a result, they revert to selectively disclosing their sexuality and status. Ultimately, fear of stigma leads to lack of disclosure, which makes it difficult for them to access and adhere to ART (Kennedy et al., 2013). As indicated by the follow quote, the stigma and discrimination that HIV-positive Swazi MSM experience can be so overwhelming that they often must make inconvenient choices to cope with stress from members in their local community:

*“Even at that the hospital, they interviewed me, then there were changes and I could tell that they wanted me to reveal what type of person I am. Since then, I stopped fetching my drugs there. I now go to another clinic which is far away from home. I drive all the way to fetch my tablets instead of taking them locally.”*

Swaziland’s laws criminalizing homosexuality facilitate stigma, discrimination, and overt acts of violence towards Swazi MSM, which create a vicious cycle between fear of seeking HIV-related healthcare services, engaging in high risk sexual activities without the proper knowledge and prevention/treatment resources, and acquiring/transmitting HIV. Therefore, laws criminalizing homosexuality in Swaziland likely play a significant role in perpetuating HIV behavioral risks and increasing rates of HIV among Swazi MSM.

### Intraregional Analysis of Southern African Countries

This review found that all of the countries in Southern Africa have generalized HIV epidemics (except Angola), with MSM in each country being significantly more impacted by the HIV epidemic than the general population (except in Swaziland). Though they vary country-to-country, numerous HIV risk behaviors are reported by MSM in Southern Africa including gaps in HIV knowledge (e.g. fewer MSM in Botswana, Malawi, and Namibia knew that HIV could be transmitted during anal sex than during vaginal sex and very low rates of MSM knowing that anal sex is the riskiest sexual practice in Lesotho and Swaziland), low to no perceptions of HIV risk, high rates of concurrent partnerships and bisexual activity (ranging from 17.7% in South Africa to 65% in Malawi), engaging in transactional sex (12% paid in South Africa vs. 62% paid or were paid in Malawi), low rates of condom and WBL use across all countries, large variance in ever being tested for HIV (35% to 82.6%), and multiple countries indicating nearly 10% of MSM with a history of STIs.

This review found anecdotal reports and quantifiable research on a variety of human rights violations experienced by MSM in seven Southern African countries, two of which do not criminalize homosexuality. In terms of physical abuse, MSM in Angola, Malawi, and Swaziland reported similar rates to MSM in South Africa (8-10%) whereas MSM in Lesotho reported similarly higher rates to MSM in Namibia (18-21%). In terms of sexual abuse, Lesotho and South Africa, which do not criminalize homosexuality, reported similar rates to countries like Malawi, Namibia, and Botswana, that do (9.8-11.4%), with the exception of Angola at 25%. These results generally suggest that MSM in both countries with and without criminalization laws report similar rates of violence due to their sexuality, with a few exceptions.

While fear of seeking healthcare was similar across the board (~20%), except in Swaziland (62%), there was a notable discrepancy in fear of disclosing sexuality and sexual practices to a HCW, with fewer MSM in South Africa reporting this fear (50%) in comparison to other Southern African countries where upwards of 75% of MSM reported this fear (including MSM in Lesotho). Moreover, MSM in South Africa were significantly less likely to report being blackmailed or afraid to walk in their communities (Wirtz et al., 2014; Zahn et al., 2016). MSM in Lesotho, however, were not less likely to report being blackmailed than MSM in countries with criminalization laws. Lastly, there did not appear to be a substantial difference in the percentage of MSM reporting denial of healthcare in countries with or without criminalization laws. These results suggest that legal provisions for MSM in South Africa may have some benefits towards reducing stigma and discrimination, however, legal protection alone is not enough to ensure equal access to HIV-related healthcare. Overall, these data suggest a trend towards experiencing human rights violations, being unable to or afraid to access HIV resources, and increased risk behaviors among MSM in Southern Africa, which may explain their generally pronounced HIV prevalence.

Furthermore, there is direct evidence from research in at least four Southern African countries that MSM who experience stigma, discrimination, overt acts of violence, and other human rights violations are increasingly at risk for HIV infection. For instance, Kendall et al. (2014) found a direct correlation between experiencing one or more episodes of homophobia and HIV infection among MSM in Angola (OR= 12.7; 95% CI: 3.2-49.6). Fay et al. (2011) found that fear of seeking healthcare services (OR= 3.7, 95% CI: 1.6-8.6) and experiences with blackmail (OR= 5.4, 95% CI: 2.2-12.2) and being denied healthcare (OR= 46.1, 95% CI: 17.3-122.8) were correlated with HIV treatment among MSM in Botswana, Malawi, and Namibia. Baral et al. (2013) found a strong association between ever being incarcerated and HIV infection among MSM in Swaziland (OR=4.37, 95% CI: 1.38-13.84), which is important because convicted MSM can be sentenced to long periods of imprisonment for homosexual behavior and are often denied HIV prevention and treatment services while incarcerated. Lastly, Baral, Burrell, et al. (2011) found a significant association between HIV infection and having ever been blackmailed (aOR = 4.4, 95% CI: 1.6-20.2). Collectively, these findings suggest that not only do stigma, discrimination, and overt acts of violence, which are largely facilitated by laws criminalizing homosexuality, discourage MSM from accessing HIV prevention and treatment services, these human rights violations also put MSM in Southern Africa at risk for HIV infection.

## Interregional Analysis of African Countries

HIV epidemics in North and West Africa are typically concentrated in key populations, such as MSM, whereas HIV epidemics in East and Southern African are typically more generalized, but still significantly burden MSM (Tables 1 & 2). In accordance with current literature, this review found that MSM in Southern Africa have the highest HIV prevalence and MSM in North Africa have the lowest HIV prevalence, with the prevalence of HIV among MSM in East and West Africa falling somewhere in between (AVERT, 2017; Central Intelligence Agency, 2016).

This review also found that HIV knowledge and perceptions of HIV risk among African MSM vary by country and by region (Tables 1 & 2). For instance, general HIV knowledge was relatively low in countries like Libya (16.8%), Nigeria (30%), and Ghana (67%), but was higher in countries like Egypt (82%) and Kenya (90%). However, even in countries where MSM reported the highest general HIV knowledge, like Botswana, Malawi, and Namibia, there was a noticeable difference in MSM knowing that HIV could be transmitted during sex with men and women. In other countries like Côte d’Ivoire, Lesotho, and Swaziland, MSM reported similar discrepancies and misinformation about HIV transmission (Aho et al., 2014; Baral et al., 2013, Baral, Adams, et al., 2011; Hakim et al., 2015). Moreover, perceptions of HIV risk were generally slim to none among MSM in most regions of Africa, except those in East African countries (Tables 1 & 2).

Additionally, this review found that HIV behavioral risks among African MSM vary by country and by region (Tables 1 & 2). For instance, MSM in every region of Africa (excluding North and Central Africa where no data were uncovered for this review) reported generally high rates of bisexual activity and multiple concurrent partnerships. The highest percentage of MSM reporting bisexual activity were in East Africa (80%) followed closely by MSM in West Africa (range 30-77%) and MSM in Southern Africa (range 17.7-65%). MSM in Southern African countries that do not criminalize homosexuality like South Africa and Lesotho were less likely to report having both male and female partners; however, this did not hold true for MSM in West African countries like Burkina Faso, which also does not criminalize homosexuality. No data on this subject were reported for MSM in Côte d’Ivoire, the other country in this review that does not criminalize homosexuality (Tables 1 & 2).

Although the search criteria for this review intentionally attempted to eliminate data regarding African MSM who engage in sex work (in order to avoid confounding criminalized behaviors), transactional sex was reported by MSM in every region of Africa (excluding North and Central Africa) (Tables 1 & 2). Rates of transactional sex were as low as 5% of MSM paying for sex in Cameroon and 12% of MSM being paid in South Africa and as high as 25-63% of MSM reporting paying or being paid in other African countries. While the percentage of MSM engaging in transactional sex was among the lowest in South Africa, other countries lacking criminalization laws reported much higher percentages of transactional sex, which were similar to percentages in countries with criminalization laws (Tables 1 & 2).

Elevated rates of inconsistent condom and WBL use were also reported by MSM in all regions of Africa (Tables 1 & 2). MSM in some North, West, and East African countries (e.g. Egypt, Côte d’Ivoire, the Gambia, and Kenya) reported inconsistent use of condoms and WBL lube due to poor access. Roughly 12% of MSM in Libya also reported not knowing how to use condoms (Valadez et al., 2013). A substantial percentage of MSM in Southern African countries like Lesotho and Malawi also cited beliefs that petroleum-based lubes were safer to use than WBL (Baral, Adams, et al., 2011; Wirtz et al., 2013). Lack of knowledge, poor access to quality condoms and WBL, and being afraid to buy lube in public due to fears of being perceived as gay, which was cited by some MSM in Côte d’Ivoire (Aho et al., 2014), could explain why MSM in many African countries report high rates of using condom incompatible lubes and report high rates of condom slippage and breakage (e.g. 45% in Cameroon, 40-50% in Côte d’Ivoire, and 20% in Kenya) (Tables 1 & 2).

Lastly, percentages of ever having been tested for HIV vary by country and by region (Tables 1 & 2). For instance, having ever been tested for HIV was lowest in North African countries like Egypt (2-22%), West African countries like Burkina Faso (25%), and Southern African countries like Malawi (35%). However, rates of HIV testing were highest among MSM in West African countries like Cameroon (81.6%), Southern African countries like Botswana (82.6%), and East African countries like Kenya (92%). Overall, having ever been tested for HIV was highest among MSM in East Africa followed by MSM in West Africa, Southern Africa, and North Africa. This review found that MSM in every region of Africa also reported high rates of ever being diagnosed with an STI, ranging from 15% in Uganda (East Africa) to 19% in Namibia (Southern Africa) to 34.6% in Morocco (North Africa) to 49.2% in Senegal (West Africa) (Tables 1 & 2). Collectively, these results indicate that general HIV knowledge, perceptions of risk, and behavioral risks exhibited by African MSM vary by country and region, but may partially explain elevated HIV prevalence among these populations.

Most importantly, this review finds that MSM in nearly every country and region of Africa (excluding Central Africa where no data was found for this review), regardless of the presence or absence of laws criminalizing homosexuality, experienced stigma, discrimination, and overt acts of violence, which negatively impact their ability to access HIV prevention and treatment services, and in some countries, are related to increased odds of HIV infection (Tables 3 & 4). Interestingly, the percentage of MSM who experienced at least one human rights violation across all African regions was lowest (19%) in Malawi and highest (76%) in Lesotho, which is contrary to what one might expect given the presence and absence of laws criminalizing homosexuality in each country, respectively (Baral, Adams, et al., 2011; Baral, Burrell, et al., 2011). Lower percentages of experiencing any human rights violations were reported by MSM in West and East Africa, with MSM in Uganda and Côte d’Ivoire reporting similar percentages despite the presence and absence of laws criminalizing homosexuality (Tables 3 & 4).

Reports of specific human rights violations such as verbal, physical, and sexual abuse and blackmail experienced by MSM due to their sexuality and same-sex practices vary by region and country (Tables 3 & 4). For instance, verbal abuse was more frequently reported by MSM in Southern African countries, specifically Angola (44.7%) and Lesotho (59.8%), despite the fact that Lesotho does not criminalize homosexuality. Similar percentages of MSM in West and East Africa reported verbal abuse (33-48%), with MSM in the two countries that do not criminalize homosexuality in West Africa (Burkina Faso and Côte d’Ivoire) reporting more frequent verbal abuse than in Nigeria, which does criminalize homosexuality.

Physical abuse was generally more frequently reported by MSM in East Africa (ranging from 15.5-29.5%), however MSM in certain countries in West Africa (e.g. Burkina Faso and Nigeria) and South Africa (e.g. Lesotho and Namibia) reported similar percentages (Tables 3 & 4). MSM in Southern African countries were least likely to report physical abuse (8%), regardless of the presence or absence of laws criminalizing homosexuality (Baral et al., 2009; Baral, Burrell, et al., 2011; Fay et al., 2011; Wirtz et al., 2013; Zahn et al., 2016). Interestingly, the four countries that do not criminalize homosexuality in Africa were equally split between highest and lowest percentages of MSM reporting physical abuse (~30% in Burkina Faso and Lesotho vs. 8% in Côte d’Ivoire and South Africa). Although these percentages are low, they are comparable to those reported by MSM in countries with laws criminalizing homosexuality (Tables 3 & 4).

Sexual abuse and rape were also more frequently reported by MSM in East Africa (e.g. 30% in Tanzania and 22% in Uganda), though MSM in Angola (in Southern Africa) and Côte d’Ivoire (in West Africa) also reported similar rates. MSM in Southern Africa, specifically in Lesotho (9.8%), reported the least sexual abuse and rape (Baral, Adams, et al. (2011). Reports of sexual abuse and rape were similar, however, among MSM in South Africa, which doesn’t criminalize homosexuality, and among MSM in Malawi, Botswana, and Namibia, which do (Baral et al., 2009; Fay et al., 2011; Wirtz et al., 2013; Zahn et al., 2016).

Data on blackmail due to sexuality and sexual practices was only available among MSM in Southern Africa (Baral et al., 2009; Baral, Burrell, et al., 2011; Fay et al., 2011; Wirtz et al., 2013; Zahn et al., 2016). Encouragingly, MSM in South Africa were less likely to report being blackmailed (10%) than MSM in countries with criminalization laws (e.g. 26.5% in Botswana) (Wirtz et al., 2014; Zahn et al., 2016). However, MSM in Lesotho reported rates of blackmail similar to Botswana, Malawi, and Namibia, despite no criminalization laws (Tables 3 & 4).

Also, with respect to Southern Africa, MSM in South Africa were less likely to report being afraid to walk in their own communities (9.10%) in comparison to MSM in countries like Swaziland, where homosexuality is criminalized and 43% of MSM report fear of walking in their communities (Tables 3 & 4) (Wirtz et al., 2014; Zahn et al., 2016).

MSM in many African countries also reported fear of seeking healthcare services, actively avoiding healthcare, being afraid to or never having disclosed their sexuality to a HCW, experiencing stigma or discrimination from a HCW, and being denied healthcare. Fear of seeking healthcare ranged from as low as 7.3% in Togo to as high as 62% in Swaziland and 63% in Kenya (Tables 3 & 4). With the exception of Swaziland, a similar percentage of MSM in all Southern African countries reported this fear (17.59-22%), regardless of the presence or absence of criminalization laws. Interestingly, higher percentages of MSM in West African countries that do not criminalize homosexuality reported these fears than in MSM in West African countries that do (e.g. 55% of MSM in Côte d’Ivoire vs. 38% in Nigeria and 17% in Senegal) (Aho et al., 2014; Lyons et al., 2017; Schwartz, 2015).

Actively avoiding healthcare was greatest among MSM in Uganda (52%) in East Africa (Wanyeze et al., 2016). Similar percentages (15-28%) of MSM reported actively avoiding healthcare in Botswana (Southern Africa) and three West African countries (Côte d’Ivoire, Nigeria, and Senegal) (Tables 3 & 4). However, MSM in Côte d’Ivoire reported notably higher percentages (20-36%), despite not being criminalized (Aho et al., 2014).

Moreover, being afraid to disclose and/or never having disclosed their sexuality or sexual practices to a HCW was similarly high (75%) across West Africa and Southern Africa, with the exception of 91% of Malawian MSM and 50% of MSM in South Africa (Tables 3 &4). Interestingly, although neither Lesotho or South Africa criminalize homosexuality, there was a dramatic difference in the percentage of MSM reporting this fear and never having disclosed their sexuality to a HCW (Tables 3 & 4).

Furthermore, this review found a wide range in percentages of MSM who actually experienced stigma or discrimination in healthcare settings, ranging from 5.50% in Senegal (West Africa) to 67.7% and 81.1% in Tanzania and Uganda (East Africa) (Tables 3 & 4). Nearly 16% of MSM in Lesotho also reported experiencing stigma and discrimination from a HCW, despite not being criminalized (Baral, Adams, et al., 2011).

Lastly, a similar percentage of MSM in Southern Africa and West Africa reported being denied healthcare, regardless of the presence or absence of laws criminalizing homosexuality (range 3-8%) (Tables 3 & 4). Interestingly, MSM in Botswana (0.85%) and Senegal (1.30%) were least likely to report being denied healthcare services despite the fact that they are criminalized in these countries (Baral et al., 2009; Drame et al., 2013; Lyons et al., 2017).

Overall, these results suggest that MSM across the African continent are subjected to stigma, discrimination, overt acts of violence, and a variety of other human rights violations based on their sexuality and same-sex practices, but the extent to which they are subjected may vary by country, by region, and by presence or absence of laws criminalizing homosexuality (Tables 3 & 4). Interestingly, this review found that MSM in countries without laws criminalizing homosexuality often report similar or higher rates of human rights violations than MSM in countries with criminalization laws, but not always. It is possible that the findings presented in this review and in these studies are underestimates of the human rights violations experienced by MSM, especially in countries that criminalize homosexuality, where MSM may be less likely to engage in research or surveillance initiatives due to fear of social, physical, or legal consequences. Most importantly, this review presents multiples studies in West Africa, East Africa, and in Southern Africa that have found strong correlations between HIV infection and experiencing stigma, discrimination, overt acts of violence, and other human rights violations as well as fear or difficulty accessing HIV prevention and treatment services among African MSM (Aho et al., 2014; Baral et al., 2009; Baral et al., 2013; Baral, Burrell, et al., 2011; Fay et al., 2011; Hladik et al., 2012; Kendall et al., 2014; Nel, Yi, Sandfort, & Rich, 2013, Risher et al., 2013; Wirtz et al., 2014). Ultimately, these structural and community level barriers must be addressed in order to truly change the course of HIV epidemics affecting MSM across Africa.

# Discussion

## Key Findings & Barriers

The purpose of this review was to contextualize how human rights violations like stigma, discrimination, and overt acts of violence, which are incited by laws criminalizing homosexuality, influence HIV prevalence and access to HIV prevention and treatment services among MSM in all regions of Africa. While no relevant literature was identified for MSM in Central Africa, a thorough review of existing literature in North, West, East, and Southern African countries reveals a tremendous volume of human rights violations perceived and experienced by African MSM, which varies by country, by region, and occasionally by presence and absence of laws criminalizing homosexuality.

First, emerging from this literature is a trend towards having experienced human rights violations and being afraid to access or having difficulty accessing HIV prevention and treatment services, which may account for low general HIV knowledge, low perceptions of HIV risk, and numerous behavioral risks exhibited by MSM in every region of Africa. For instance, Fay et al. (2011) found that MSM in Botswana, Malawi, and Namibia, who reported ever being afraid of seeking healthcare (OR = 0.22, 95% CI: 0.07-0.69) or who had been denied healthcare (OR = 0.09, 95% CI: 0.03-0.32) due to their sexuality were less likely to report fundamental knowledge of HIV transmission and risks. Nel, Yi, Sandfort, & Rich (2013) found that MSM in South Africa who had ever been victimized (aOR = 2.34, 95% CI: 1.25-4.34) or experienced denial/poor healthcare services (aOR = 5.05, 95% CI: 1.59-16.10) due to their sexuality were more likely to report fear of HIV testing. Nel, Yi, Sandfort, & Rich also found that MSM who reported experiencing poor service in healthcare settings (especially related to STIs) were less likely to perceive themselves to be at risk for HIV (aOR= 0.22, 95% CI: 0.05-0.99. Similarly, Fay et al. (2011) found that MSM in Botswana, Malawi, and Namibia were more likely to report being afraid of seeking healthcare (OR = 2.8, 95% CI: 1.7-4.9) or being denied healthcare services (OR = 7.3, 95% CI: 3.3-16.2) if they had ever been treated for an STI. Moreover, Rischer et al. (2013) discovered that fear of seeking healthcare was not only significantly associated with experiencing legal discrimination due to sexuality (aOR = 1.9, 95% CI: 1.1-3.4), or having been raped (aOR = 11.0, 1.4-84.4), but also difficulty negotiating condom use with male partners (aOR = 2.1, 95% CI: 1.0-4.1) in Swaziland. Risher et al. (2013) also found a positive, but not statistically significant, trend towards disclosing sexuality or sexual practices to a HCW and being denied healthcare in Swaziland (OR= 3.2, 95% CI: 0.99-10.5). This trend is echoed in the work of Baral et al. (2009) among MSM in Botswana, Malawi, and Namibia, in which MSM had 4.2 times higher odds of being denied healthcare services if they disclosed their MSM-status (95% CI: 1.9-9.3). Conversely, Wirtz et al. (2014) found that MSM in South Africa were more likely to talk to HCW about their sexuality, were less likely to be blackmailed, and were less afraid to walk in their communities, which suggests that legal provisions for MSM in South Africa may have some benefits towards reducing human rights violations and increasing access to healthcare services. However, MSM in South Africa still frequently report feeling vulnerable, stigmatized, and discriminated against, which suggests legal protections alone are not enough to ensure equal access to HIV-related healthcare.

Second, emerging from this literature is evidence to suggest a strong correlation between HIV infection and experiencing stigma, discrimination, overt acts of violence, and other human rights violations due to sexuality and/or same-sex practices. For instance, Hakim et al. (2015) found that MSM in Côte d’Ivoire had significantly higher odds of being HIV-positive if they had reported physical abuse (aOR = 3.66, 95% CI: 1.31-4.93) or forced sex (aOR = 2.54, 95% CI: 1.45-9.23). Hladik et al. (2012) found that Ugandan MSM with a history of homophobic abuse (i.e. verbal, moral, physical, or sexual abuse or blackmail) had 5.38 times higher odds of being HIV-positive (95% CI: 1.95-14.79). Kendall et al. (2014) found that MSM in Angola who reported experiencing at least one episode of homophobia had nearly 13 times higher odds of being HIV-positive (95% CI: 3.2-49.6). Fay et al. (2011) found that fear of seeking healthcare services (OR= 3.7, 95% CI: 1.6-8.6) and experiences with blackmail (OR= 5.4, 95% CI: 2.2-12.2) and being denied healthcare services (OR= 46.1, 95% CI: 17.3-122.8) were positively associated with treatment for HIV infection among MSM in Botswana, Malawi, and Namibia. Baral, Burrell, et al. (2011) found a significant association between HIV infection and having ever been blackmailed (aOR = 4.4, 95% CI: 1.6-20.2) among MSM in South Africa. And lastly, Baral et al. (2013) found a strong association between ever being incarcerated and HIV infection (OR = 4.37, 95% CI: 1.38-13.84) among MSM in Swaziland, which is particularly concerning considering the punishment for same-sex relations in most African countries is imprisonment. Of course, correlation does not equal causation, however, in this case, there is growing evidence to suggest that MSM experiencing human rights violations are at increased risk for HIV infection.

Distrust in healthcare systems due to perceived and experienced human rights violations may account for the large percentages of undiagnosed and untreated HIV- and STI-positive MSM cited in this review. For instance, much of the literature reveals that MSM who experience human rights violations often are less likely to seek healthcare services, even when they suspect they have HIV/STIs, because they fear social, physical, and legal consequences. Some MSM choose to avoid healthcare services completely. Other MSM turn to self-medication, which requires that they know their statuses and follow recommended HIV/STI treatment guidelines. Given that MSM in Africa generally have low HIV/STI knowledge and that STIs often occur without symptoms, it is unlikely that self-medication is an effective treatment strategy and might increase biological risk for HIV infection among MSM. Therefore, as a result of human rights violations and larger distrust in and healthcare systems, the incidence of HIV/STIs among semi-closed networks of MSM in Africa, with similar risk factors and low access to or uptake of HIV/STI prevention services, is likely increasing due to unchecked HIV viremia and STI bacteremia.

Lastly, emerging from this literature is a variety of barriers, incited by laws criminalizing homosexuality, experienced by HCW and LGBT-serving organizations when trying to provide MSM with HIV prevention and treatment services. For instance, both MSM and HCW alike reported that HCW lack the knowledge and training they need to provide MSM-specific education and healthcare. Additionally, when HCW do partake in sensitivity trainings, like in Kenya, they often start experiencing secondary stigma from colleagues, friends, and family for associating with or empathizing with MSM, which ultimately negatively influences their decision to continue providing MSM-friendly services (van der Elst et al., 2015; van der Elst, Mbogua, et al., 2013; van der Elst, Smith, et al., 2013). In various countries, such as Senegal, HCW and outreach volunteers providing services are even accused of being homosexual and can be punished accordingly, which further deters outreach efforts to MSM (Drame et al., 2013). Therefore, fear of social, physical and legal consequences for offering healthcare to MSM in various African countries is a considerable barrier. LGBT-serving organizations that do provide services in hostile African climates often are forced to operate underground, which makes it even more difficult for them to reach hidden MSM communities. Lastly, due to laws criminalizing homosexuality, there is a general lack of social and political support, resources, and funding for MSM-specific research, surveillance, and interventions in many African countries.

## Limitations

This review is subject to multiple limitations. First, this review’s search methodology was restricted to relevant full-text articles, written in English, and available on PubMed. Therefore, all relevant literature may not have been included. Second, this review only examines the experiences of MSM in 21 out 54 African countries, which means these findings cannot be generalized to all MSM in Africa. Third, many of the countries included in this review (e.g. Egypt, Libya, Morocco, and Angola) only had a few articles relevant to the topic, whereas countries like South Africa, Nigeria, and Kenya had many more relevant articles from which to pull information. Additionally, few research articles, small sample sizes, and convenience-based sampling means many of these findings cannot even be generalized to MSM in an entire country, let alone a region of Africa. Fourth, intraregional and interregional analyses were based on percentages compared between unequal sizes of MSM, collected from a multitude of venues, and through various sampling methods in respective African countries. Finally, much of this literature is cross-sectional, which means it is difficult to distinguish temporality between MSM experiencing human rights violations and HIV infection. These limitations should be kept in mind for future studies and the development of future interventions.

## Recommendations And Future directions

Fortunately, there are many opportunities to reduce human rights violations and promote MSM-specific HIV interventions in Africa. First and foremost, we need to develop evidence-based and human rights-affirming approaches that will convince African countries criminalizing homosexuality to revoke these laws and allow for proper allocation of support and funding to MSM-specific HIV research, surveillance, and interventions. Second, we must start investing in existing community based- and non-governmental organizations who can assist in developing and implementing structural programs to reduce stigma, discrimination, and violence towards MSM at the community-level. For example, media outlets such posters, TV shows, and radio advertisements are being used in Lesotho to sensitize the community to same-sex identities and relationships and to shed light on structural issues MSM face(Stahlman, Bechtold, et al., 2015). Third, additional structural interventions, such as the sensitivity trainings conducted in Kenya, need to be implemented into systematic education (e.g. medical school and law enforcement trainings) so that all healthcare providers are equipped to provide sensitive and appropriate counseling and treatment services and so that MSM receive the legal protections for which they are entitled. Fourth, we must establish policies that enforce mandatory reporting and surveillance of African MSM as well as ensure engagement of MSM in relevant policymaking and program planning processes (Duvall et al., 2015). Finally, we must continue documenting human rights violations experienced by African MSM in order to increase awareness and advocate for change.

In addition to structural interventions, we need to scale-up outreach efforts in order to ensure MSM have the knowledge, skills, and resources they need to engage in safer sex (e.g. condoms and condom-compatible lube, PrEP, ART, etc.). During our outreach, we also must emphasize the importance of HIV/STI testing and treatment. One method to increase testing among MSM who are afraid of seeking healthcare and of disclosing their sexuality is to scale-up and promote HIV self-testing, which hopefully will empower MSM to take responsibility for their own health. In addition to educational outreach and increasing testing, we need to scale-up biobehavioral interventions such at male circumcision, PrEP for MSM who are uninfected but have high HIV behavioral risks, and ART/TasP for MSM who are currently living with HIV. These biobehavioral interventions are capable of changing the course of the HIV epidemic for MSM in Africa, however, currently laws criminalizing homosexuality make it challenging for MSM all across Africa to even access basic HIV prevention tools like condoms and WBL. Therefore, human rights-based interventions are imperative to creating the legal and social reforms needed to reduce stigma, discrimination, and overt acts of violence towards MSM in Africa and to increase their access to and uptake of HIV prevention and treatment services.

# Conclusion

This review showcases the detrimental impact that human rights violations, which are often incited by laws criminalizing homosexuality, have on the ability of African MSM to access HIV prevention and treatment services and ultimately their risk for HIV infection. Although stigma, discrimination, and overt acts of violence perceived and experienced by African MSM vary by country and by region, these human rights violations (and many more) are consistently cited as barriers to accessing and utilizing basic HIV prevention tools like HIV testing, condoms, and water-based lube, let alone more advanced biobehavioral HIV interventions like PrEP and TasP. Moreover, MSM in African countries that do not criminalize homosexuality often report similar, sometimes higher or lower, rates of human rights violations as MSM in countries that do, which suggests decriminalizing homosexuality is not enough to reduce sexual stigma and increase access to HIV-related healthcare. Rather, a combination of social and legal reforms as well as scale-up of MSM-specific HIV education, testing, outreach, and biobehavioral interventions are needed to effectively change the course of HIV epidemics disproportionately burdening MSM in Africa.

**APPENDIX A: FULL ELECTRONIC PUBMED SEARCH QUERY FOR THIS ESSAY**

Below is the full electronic PubMed Search Query conducted for this review. Of the 702 articles identified in the final PubMed search (#8), 298 articles were available in English and full text. The author independently read through all 298 article abstracts and identified 88 eligible primary research articles and reviews. An additional 34 articles were identified through references cited in these 88 articles.

|  |  |  |
| --- | --- | --- |
| Full Electronic PubMed Search Query | | |
| Search | Query | Items found |
| #9 | Select 88 document(s) | 88 |
| #8 | Search #6 NOT #7 | 702 |
| #7 | Search Sex work[ti] OR Sex worker[ti] OR Prostitution[ti] OR Female sex work[ti] OR Female sex workers[ti] Male sex work[ti] OR Male sex workers[ti] OR Men who sell sex[ti] OR Transactional sex[ti] OR Sex trading[ti] OR Women living with HIV[ti] OR HIV Positive Women[ti] OR Women at high risk for HIV[ti] OR Women who have sex with women[ti] OR Females living with HIV[ti] OR HIV-infected women[ti] OR Lesbian[ti] OR Bisexual women[ti] OR Sexual minority women[ti] OR Women‰Ûªs HIV Risk[ti] OR Married women[ti] OR Transgender women[ti] OR Trans feminine[ti] OR Transgender[ti] OR HIV-positive orphans[ti] OR Perinatal[ti] OR Pregnancy[ti] OR Fertility[ti] OR Pregnant women[ti] OR Injection Drug Use[ti] OR People who inject drugs[ti] OR Women from alcohol serving venues[ti] OR Women attending drinking venues[ti] OR Female patrons of drinking venues[ti] OR Drinking places[ti] OR Alcohol serving venues[ti] OR Child sexual abuse[ti] OR Heterosexual[ti] OR Youth living with HIV[ti] OR Adolescents living with HIV[ti] OR Street children[ti] OR Migrant[ti] OR Migrants[ti] OR Intoxicated[ti] OR Alcohol-Unprotected Sex[ti] | 227792 |
| #6 | Search #1 AND #2 AND #3 AND #4 AND #5 | 794 |
| #5 | Search Africa[ti] OR Human Rights[ti] OR Criminalization[ti] OR Homosexuality[ti] OR Stigma[ti] OR Discrimination[ti] OR Violence[ti] OR Men who have sex with men[ti] OR MSM[ti] OR Human Immunodeficiency Virus[ti] OR HIV[ti] | 280013 |
| #4 | Search HIV[mesh] OR HIV[tiab] OR HIV[ot] OR Human Immunodeficiency Virus[mesh] OR Human Immunodeficiency Virus[tiab] OR Human Immunodeficiency Virus[ot] OR HIV Prevention[mesh] OR HIV Prevention[tiab] OR HIV Prevention[ot] OR HIV Treatment[mesh] OR HIV Treatment[tiab] OR HIV Treatment[ot] OR HIV Services[mesh] OR HIV Services[tiab] OR HIV Services[ot] OR Access to HIV Services[mesh] OR Access to HIV Services[tiab] OR Access to HIV Services[ot] OR Barriers to HIV Services[mesh] OR Barriers to HIV Services[tiab] OR Barriers to HIV Services[ot] OR HIV Education[mesh] OR HIV Education[tiab] OR HIV Education[ot] OR HIV Outreach[mesh] OR HIV Outreach[tiab] OR HIV Outreach[ot] OR Antiretroviral Therapy[mesh] OR Antiretroviral Therapy[tiab] OR Antiretroviral Therapy[ot] OR ART[mesh] OR ART[tiab] OR ART[ot] OR Pre-exposure Prophylaxis[mesh] OR Pre-exposure Prophylaxis[tiab] OR Pre-exposure Prophylaxis[ot] OR PrEP[mesh] OR PrEP[tiab] OR PrEP[ot] OR Post-Exposure Prophylaxis[mesh] OR Post-Exposure Prophylaxis[tiab] OR Post-Exposure Prophylaxis[ot] OR PEP[mesh] OR PEP[tiab] OR PEP[ot] | 402739 |
| #3 | Search Gender identity[mesh] OR Gender identity[tiab] OR Gender identity[ot] OR Gender minority[mesh] OR Gender minority[tiab] OR Gender minority[ot] OR Sexual orientation[mesh] OR Sexual orientation[tiab] OR Sexual orientation[ot] OR Sexual identity[mesh] OR Sexual identity [tiab] OR Sexual identity[ot] OR Sexual minority[mesh] OR Sexual minority[tiab] OR Sexual minority[ot] OR Sexual preference[mesh] OR Sexual preference[tiab] OR Sexual preference[ot] OR Homosexual[mesh] OR Homosexual[tiab] OR Homosexual[ot] OR Gay[mesh] OR Gay[tiab] OR Gay[ot] OR Lesbian[mesh] OR Lesbian[tiab] OR Lesbian[ot] OR Bisexuality[mesh] OR Bisexuality[tiab] OR Bisexuality[ot] OR Transgender[mesh] OR Transgender[tiab] OR Transgender[ot] OR LGB[mesh] OR LGB[tiab] OR LGB[ot] OR LGBQ[mesh] OR LGBQ[tiab] OR LGBQ[ot] OR LGBT[mesh] OR LGBT[tiab] OR LGBT[ot] OR GLB[mesh] OR GLB[tiab] OR GLB[ot] OR GLBQ[mesh] OR GLBQ[tiab] OR GLBQ[ot] OR GLBT[mesh] OR GLBT[tiab] OR GLBT[ot] OR Men who have sex with men[mesh] OR Men who have sex with men[tiab] OR Men who have sex with men[ot] OR MSM[mesh] OR MSM[tiab] OR MSM[ot] OR Queer[mesh] OR Queer[tiab] OR Queer[ot] OR Genderqueer[mesh] OR Genderqueer[tiab] OR Genderqueer[ot] OR Same sex attraction[mesh] OR Same sex attraction[tiab] OR Same sex attraction[ot] OR Same sex couple[mesh] OR Same sex couple[tiab] OR Same sex couple[ot] OR Same sex relationship[mesh] OR Same sex relationship[tiab] OR Same sex relationship[ot] | 120232 |
| #2 | Search Human Rights[mesh] OR Human Rights[tiab] OR Human Rights[ot] OR Human Rights Abuses[mesh] OR Human Rights Abuses[tiab] OR Human Rights Abuses[ot] OR Human Rights Violations[mesh] OR Human Rights Violations[tiab] OR Human Rights Violations[ot] OR Social Justice[mesh] OR Social Justice[tiab] OR Social Justice[ot] OR Criminalization[mesh] OR Criminalization[tiab] OR Criminalization[ot] OR Anti-Homosexuality[mesh] OR Anti-Homosexuality[tiab] OR Anti-Homosexuality[ot] OR Stigma[mesh] OR Stigma[tiab] OR Stigma[ot] OR Discrimination[mesh] OR Discrimination[tiab] OR Discrimination[ot] OR Homophobia[mesh] OR Homophobia[tiab] OR Homophobia[ot] OR Violence[mesh] OR Violence[tiab] OR Violence[ot] OR Abuse[mesh] OR Abuse[tiab] OR Abuse[ot] | 626857 |
| #1 | Search Africa[mesh] OR Africa[tiab] OR Africa[ot] OR Central Africa[tiab] OR Cameroon[tiab] OR Central African Republic[tiab] OR Chad[tiab] OR Congo[tiab] OR Democratic Republic of the Congo[tiab] OR Equatorial Guinea[tiab] OR Gabon[tiab] OR Central Africa[ot] OR Cameroon[ot] OR Central African Republic[ot] OR Chad[ot] OR Congo[ot] OR Democratic Republic of the Congo[ot] OR Equatorial Guinea[ot] OR Gabon[ot] OR Eastern Africa[tiab] OR Burundi[tiab] OR Djibouti[tiab] OR Eritrea[tiab] OR Ethiopia[tiab] OR Kenya[tiab] OR Rwanda[tiab] OR Somalia[tiab] OR South Sudan[tiab] OR Sudan[tiab] OR Tanzania[tiab] OR Uganda[tiab] OR Eastern Africa[ot] OR Burundi[ot] OR Djibouti[ot] OR Eritrea[ot] OR Ethiopia[ot] OR Kenya[ot] OR Rwanda[ot] OR Somalia[ot] OR South Sudan[ot] OR Sudan[ot] OR Tanzania[ot] OR Uganda[ot] OR Southern Africa[tiab] OR Angola[tiab] OR Botswana[tiab] OR Lesotho[tiab] OR Malawi[tiab] OR Mozambique[tiab] OR Namibia[tiab] OR South Africa[tiab] OR Swaziland[tiab] OR Zambia[tiab] OR Zimbabwe[tiab] OR Southern Africa[ot] OR Angola[ot] OR Botswana[ot] OR Lesotho[ot] OR Malawi[ot] OR Mozambique[ot] OR Namibia[ot] OR South Africa[ot] OR Swaziland[ot] OR Zambia[ot] OR Zimbabwe[ot] OR Western Africa[tiab] OR Benin[tiab] OR Burkina Faso[tiab] OR Cape Verde[tiab] OR Côte d'Ivoire[tiab] OR Gambia[tiab] OR Ghana[tiab] OR Guinea[tiab] OR Guinea-Bissau[tiab] OR Liberia[tiab] OR Mali[tiab] OR Mauritania[tiab] OR Niger[tiab] OR Nigeria[tiab] OR Senegal[tiab] OR Sierra Leone[tiab] OR Togo[tiab] OR Western Africa[ot] OR Benin[ot] OR Burkina Faso[ot] OR Cape Verde[ot] OR Côte d'Ivoire[ot] OR Gambia[ot] OR Ghana[ot] OR Guinea[ot] OR Guinea-Bissau[ot] OR Liberia[ot] OR Mali[ot] OR Mauritania[ot] OR Niger[ot] OR Nigeria[ot] OR Senegal[ot] OR Sierra Leone[ot] OR Togo[ot] OR Northern Africa[tiab] OR Algeria[tiab] OR Egypt[tiab] OR Libya[tiab] OR Morocco[tiab] OR Tunisia[tiab] OR Northern Africa[ot] OR Algeria[ot] OR Egypt[ot] OR Libya[ot] OR Morocco[ot] OR Tunisia[ot] | 408907 |

**APPENDIX B: STATISTICS ON HIV PREVALENCE, BEHAVIORAL RISKS, & HUMAN RIGHTS VIOLATIONS BY COUNTRY & REGION**

Table . North African & Western African Country Information on HIV Prevalence, HIV Knowledge, & HIV Risk Behaviors

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | North African Countries | | | West African Countries | | | | | | | |
|  | **Egypt** | **Libya** | **Morocco** | **Burkina Faso** | **Cameroon** | **Côte d'Ivoire** | **Gambia** | **Ghana** | **Nigeria** | **Senegal** | **Togo** |
| HIV Prevalence |  |  |  |  |  |  |  |  |  |  |  |
| Among General Population or Adults of Similar Reproductive Age | <0.1%(UNAIDS, 2016) | 0.3% (IndexMundi, 2015) | 0.15%7,8 | 1%9 | 4.5%11,13 | 3.7%15,16 | 1.6%17 | 1.30% (Laar & DeBruin, 2017) | 4.1%19 | 0.5%23,24 | 2.9%25 |
| Among MSM | 6%1 | 3.1%6 | 11-14%7,8 | 4.8%9 | 18-37%13 | 18%15,16 | 9.8%17 | 17.5% (Larr & DeBruin, 2017) | 17.2%19 | 22-33%23,24 | 9.6%25 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| HIV Transmission Knowledge |  |  |  |  |  |  |  |  |  |  |  |
| General Awareness/  Knowledge | 50-82%1,2 | 16.8%6 |  |  |  |  |  | 67%18 | 30%19 |  |  |
| Believe Vaginal Sex is Higher Risk than Anal Sex |  |  |  |  |  |  |  |  |  |  |  |
| Believe Vaginal Sex is Equally as Risky  as Anal Sex |  |  |  |  |  | 63%15,16 |  |  |  |  |  |
| Knew Anal Sex was Riskiest |  |  |  |  |  | 60%15,16 | 90%17 |  |  |  |  |
| Knew Receptive Anal Sex was Riskiest |  |  |  |  |  |  |  |  |  |  |  |
| Believed HIV Risk Is Equal for Insertive & Receptive Partners  **Table 1 Continued** |  |  |  |  |  | 53%15,16 |  |  |  |  |  |
| Perceptions of HIV Risk | >47% No Risk1,2 | 5.7% High 19.5% Medium 15.4% Low 50% No Risk6 |  |  |  | 59-76% Low-to-No Risk15,16 |  |  |  |  |  |
| Knew Condoms Protect Against HIV/STIs | 14-51%1,2 | 95%6 |  |  |  |  |  |  |  |  |  |
| Knew How to Use Condoms |  | 12.1%6 |  |  |  |  |  |  |  |  |  |
| Knew WBL is Safest to Use with Condoms |  |  |  |  |  |  | 20%17 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| HIV Behavioral Risks |  |  |  |  |  |  |  |  |  |  |  |
| Bisexually Active - Male & Female Partners | 29.3%2 |  |  | >50%10 | 22.3-46.2%11,13 |  | 30%17 |  | 67%19 | 77%23 |  |
| Multiple Partners (in specific time frames) | # of sex partners per week: <3 (48.3%)3-4 (32.8%)2 |  |  | 70% 2+ Male10 | 32-37% 4+ Male13 | 30% 6+ Male16 30% 3+ Female16 |  | 93% 1+ Male (mean of 5) + mean 1 Female 18 | 28% 5+ Male & Female19  12% 5+ Male19  3% 5+ Female19 |  |  |
| Engaged in Transactional Sex |  |  |  |  | 5% Paid Man13 | 8-25% Any15,16 |  |  | 61.7% Were Paid by Man19  44.5% Paid Man19 | 50% Were Paid23  30% Paid23 |  |
| No/Inconsistent Condom Use With Sex Partners (in specific time frames)  **Table 1 Continued** | >75% (in general)1 | 21% (last anal sex partner)6 | 63% Non-Regular Male7  59% Regular Male7  71% Female7 | 40% Non-RegularMale10  50% Regular Male10  40%  Non-Regular Female10  50% Regular Female10 | 46.2% Non-Regular Male13  64% Regular Male13  46.2% Non-Regular Female13 | 70% Male16 60% Female16 | 90% (in general)17 | 50% Males 25% Female 18 | 47% Male19 | 34.8% (inconsist-ent condom & WBL use)23 |  |
| Experienced Condom Slippage/Breaking |  |  |  |  | 45%13 | 40-50%15,16 |  |  |  |  |  |
| Used lube |  | 54.3% Any 0.6% WBL6 |  |  | 90% Any 30% non-WBL13 | 90% WBL Inconsistently15,16 | 31% Never Used Lube for Anal Sex17 |  | 64% Always 36% WBL 33% body cream 17% Petroleum-based19 |  |  |
| Ever Been Tested for HIV | 2-22%1 |  |  | 25%10 | 81.6%13 | 66%16 |  | 66.7%18 |  | 88% (76% never got results)23 | 70%26 |
| Tested for HIV in the past 12 months |  | 45.6%6 |  |  | 54.3%13 | 32%15 |  |  |  |  |  |
| Ever Been Tested/Counseled for STIs |  |  |  |  |  |  |  |  |  | 46.2%23 |  |
| Reported Symptoms/Tested Positive/Treated for STI | 7.5% SYP 8.8% GC 8.8% CT1 |  | 32-56% SYP7 |  | 34.613 |  |  |  |  | 49.2%23 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Additional Information |  |  |  |  |  |  |  |  |  |  |  |
| Cited Trouble accessing condoms as Reason for Inconsistent Condom Use | 22%1,2 |  |  |  |  | 38% Convenience Store Was Closed15  32.4% Too Far Away15  21.2% Lube Too Expensive15  Other - Concerns of Being  Perceived as Gay15 | 30% Trouble Access-ing Condom17   82.5% No access to lube17 |  |  |  |  |

Note: Superscripted citations are linked to Appendix C

**Table 1 Continued**

Table . East African & Southern African Country Information on HIV Prevalence, HIV Knowledge, & HIV Risk Behaviors

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | East African Countries | | | Southern African Countries | | | | | | |
|  | **Kenya** | **Tanzania** | **Uganda** | **Angola** | **Botswana** | **Lesotho** | **Malawi** | **Namibia** | **South Africa** | **Swaziland** |
| HIV Prevalence |  |  |  |  |  |  |  |  |  |  |
| Among General Population or Adults of Similar Reproductive Age | 6-7%27 | 6%34-38 | 7%39-41 | 1.9%43 | 21.9%44  (UNAIDS, 2016) | 23%46 | 8%44,48 | 13.8%44  (UNAIDS, 2016) | 10-16.9%52 | 26%55-57 |
| Among MSM | 11.2-18.9%31 | 22%34-38 | 14%39-41 | 3.8-10.5%43 | 19.66-43%  44,45 | 11.6-35.4%46 | 12.5-21.4%  44,45,51 | 12.4-27%44,45 | 13.2-49.5%52 | 17.6%55 |
|  |  |  |  |  |  |  |  |  |  |  |
| HIV Transmission & Prevention Knowledge |  |  |  |  |  |  |  |  |  |  |
| General Awareness/  Knowledge | 90%30 |  |  |  | 93.1% Knew HIV could be Transmitted Via Sex with Men51  99.2% ...With Women51 |  | 92.3% Knew HIV could be Transmitted Via Sex with Men51  98.5% ...With Women51 | 94.3% Knew HIV could be Transmitted Via Sex with Men51  84.9% ...With Women51 |  |  |
| Believe Vaginal Sex is Higher Risk than Anal Sex |  |  |  |  |  |  | 52.8%50 |  |  | 43.7%55 |
| Believe Vaginal Sex is Equally as Risky  as Anal Sex |  |  |  |  |  | 58.9% Believed Vaginal, Anal, & Oral Sex were Equally Risky46 | 35.6%50 |  |  |  |
| Knew Anal Sex was Riskiest  **Table 2 Continued** |  |  |  |  |  | 19%46 | 15.4%50 |  |  | 18.20%55 |
| Knew Receptive Anal Sex was Riskiest |  |  |  |  |  | 16%46 | 38%50 |  |  |  |
| Believed HIV Risk Is Equal for Insertive & Receptive Partners |  |  |  |  |  |  | 46.7%50 |  |  | 45%55 |
| Perceptions of HIV Risk |  |  |  | 38.7% Low Risk 13.2% No Risk43 |  |  |  |  |  | 31.8% Not Worried55  18.2% Not Very Worried55 |
| Knew Condoms Protect Against HIV/STIs | 95%30 |  |  |  |  |  |  |  |  |  |
| Knew How to Use Condoms |  |  |  |  |  |  |  |  |  |  |
| Knew WBL is Safest to Use with Condoms | 75% (Geibel, 2012) |  |  |  |  | 45%46 30.6% Petroleum-based46 | 49.7% Petroleum Jelly or Vaseline49,50 |  |  | 35%55 |
|  |  |  |  |  |  |  |  |  |  |  |
| HIV Behavioral Risks |  |  |  |  |  |  |  |  |  |  |
| Bisexually Active - Male & Female Partners | 5-39%  (in the last month)  (Geibel, 2012) | 80% Mostly Male38  20% Mostly Female38 | 75% Male Partners  >1 Female Partner  39 | Male, Female, & Trans Partners 43 | 43.6%51 | 41% Non-Regular Male & Female Partners46 | 52-65%50,51 | 50.7%51 | 17.70%  52 | 35.7%55 |
| Multiple Partners (in specific time frames) | 47% Multiple Male Partners (in the last month)  (Geibel, 2012) |  | 50% 10 or less39  20% 11-2439  31.4% 25+39 | Range of  1-280  (in last 6 months)  43 | Average 2.8 Male (Range 0-24) 13% 5+ Male51  Average 0.7 Female (Range 0-7)51 | 28.4% 5+ Male46  20.2% 3+ Female46 | Average 3.9 Male (Range 0-52) 18% 5+ Male51  Average 1.5 Female (Range 0-12)51 | Average 2.9 Male (Range 0-50) 15% 5+ Male51  Average 1.2 Female (Range 0-12)  51 | Average 4 Male (Range 0-75) 17.7% 5+ Male52  Average 0.49 Female52 | 58% Multiple Male55 (17.2% 4+)  26.9% Multiple Female55 (11.8% 3+) |
| Engaged in Transactional Sex  **Table 2 Continued** | 52% Were Paid33  59% Any30  52-87% Were Paid (b/t last week & last year)  (Geibel, 2012) | 16.7% HIV- MSM &  28.3% HIV+ Were Paid38  87.2% HIV- MSM &  88.5% HIV+ Paid38 | 13.1- 68.8% Were Paid  39,41,42  10.6- 37.5% Paid  39,41,42 | 36.6% Were Paid or Paid43 | 30% Were Paid or Paid45,51 | 36% Any46  22% Were Paid46  28% Paid46 | 62.6% Were Paid or Paid45,51 | 37-38% Were Paid or Paid45,51 | 12-28% Were Paid52,54  28% Paid54  19.5% Any45 |  |
| No/Inconsistent Condom Use With Sex Partners (in specific time frames) | 30-75% (Last Male Partner)30;  (Geibel, 2012) |  | 33-61.2% Incon-sistent Con-dom Use40,41  6.2-26.4% Never  41,42 | 89.5% for Vaginal and Anal Sex with Trans & Female Partners  43  64.9% for Anal Sex with Men43 |  | 45.4% Last Regular Male46  59.8% Last Non- Regular Male46  32.8% Last Female46 | 50% Non- Regular Partners49  15.3; 18.4% Never/Almost Never with Main Male Partner50  15.6; 14% Never/Almost Never with Casual Male Partner  21.4% Sometimes50 |  | 47.6% Male52  60.5% Female52 | 50% Always55  11.5% (almost) Never55 |
| Experienced Condom Slippage/Breaking | 20%30 |  |  |  |  |  |  |  |  |  |
| Used lube  **Table 2 Continued** | \*Many used oil-based lubricant  (Geibel, 2012) | 30.7% HIV- MSM38  63.9% HIV+ ever used WBL38 | 25-75%  41,42  Never: 96.5% HIV- MSM; 3.5% HIV+39 |  |  |  | 48.3% Petroleum Jelly or Vaseline49  25.2% WBL49 |  | 98% Petroleum-based;  1.9% WBL; 18.6% Saliva; 3.5% None52 | 23.7% WBL55 |
| Ever Been Tested for HIV | 92%30 | 70-84% 35,37,38 | 46-89%  39,41 | 61.8%43 | 82.6%44,51 |  | 32-35%  44,50,51 | 60%44,51 |  |  |
| Tested for HIV in the past 12 months | 25% (in the last 3 months)30 |  |  |  |  | 55%46 | 22.9% Ever (>1 time)50 |  |  | 51% (last 12 months)55 |
| Ever Been Tested/Counseled for STIs |  |  |  |  |  |  |  |  |  | 14% (last 12 months)55 |
| Reported Symptoms/Tested Positive/Treated for STI | 17% diagnosed in study30  46% treated in the last 3 months30 | 0-2.5% SYP38  4.4-21.4% Other Curable STI38 | 15%39 |  | 10%44,51 |  | 8.5%44,51  4.4% SYP50 | 19%44,51 | 64%53,54 | 7.8%55 |
|  |  |  |  |  |  |  |  |  |  |  |
| Additional Information |  |  |  |  |  |  |  |  |  |  |
| Cited Trouble accessing condoms as Reason for Inconsistent Condom Use | 33% Said condoms not available when needed30  WBL not available or too costly  (Geibel, 2012)  Note: Superscripted citations are linked to Appendix C |  |  |  |  |  |  |  |  |  |

Table . North African & West African Country Information on Human Rights Violations & Associations with HIV Infection and Access to HIV Prevention & Treatment Services

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | North African Countries | | | West African Countries | | | | | | | |
|  | **Egypt** | **Libya** | **Morocco** | **Burkina Faso** | **Cameroon** | **Côte d'Ivoire** | **Gambia** | **Ghana** | **Nigeria** | **Senegal** | **Togo** |
| Does this Country Have Laws Criminalizing Homosexuality? | Yes1-5 | Yes6 | Yes7,8 | No9 | Yes11,14 | No15,16 | Yes17 | Yes18  (Larr & DeBruin, 2017) | Yes19-22 | Yes23,24 | Yes25,26 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Human Rights Violations\* |  |  |  |  |  |  |  |  |  |  |  |
| Experienced 1+ HRV/Homophobic Abuse |  |  |  |  |  | 40-45%15 |  |  | 33%21 |  |  |
| Verbal Abuse |  | 10%6 |  | <40%10 | X11,14 | 33%15 |  | X18 | 19.2%21 | X23,24 |  |
| Emotional Abuse |  |  |  |  |  | 6%15 |  |  | 20.3%21 |  |  |
| Moral Abuse | X3-5 |  |  |  | X11,14 |  |  |  |  |  |  |
| Physical Abuse | X3-5 | 0.8%6 |  | 25-40%10 | X11,14 | 8.5%15 |  |  | 17.9%21 | X23,24 |  |
| Sexual Abuse/Rape |  | 5.2%6 |  | 15%, >43% for HIV+10 |  | 20-25%15 |  |  | 16.8%21 |  | 10%25, 26 |
| Afraid to Seek Healthcare |  |  |  |  |  | 55%15 |  |  | 25-38%20 | 17.7%24 | 7.3-17%26 |
| Actively Avoid Healthcare |  |  |  | 20-36%10 |  |  |  |  | 20-28%20 | 15.3%24 |  |
| Afraid to/Have Not Disclosed MSM-Status to HCW |  |  |  |  |  |  |  |  |  |  |  |
| Denied Healthcare Services |  | 5.2%6 |  | X9,10 | X11,14 |  |  |  | 4.1%21 | 1.3%23 | X25,26 |
| Stigma/Discrimination from HCW | X3-5 |  |  | X9 | X11,14 | X15,16 |  | X18 |  | 5.5%24 | X25,26 |
| Afraid to Walk in Their Communities |  |  |  |  |  |  |  |  |  |  |  |
| Denied Legal Services | X3,4 | X6 |  |  | X11,14 | X15,16 |  | X18 |  |  | X25 |
| Blackmailed |  |  |  | X9 | X11,14 |  |  |  |  |  | X25 |
| Arrested | X3-5 | X6 |  | X9 | X11,14 |  |  |  |  | X23,24 | X25 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Significant Associations Between Human Rights Violations & HIV Infection (and/or Difficulty Assessing HIV Prevention & Treatment Services) |  |  |  |  |  | Physical Abuse & HIV Infection (aOR =3.66; 95% CI: 1.31-4.93)16  Forced Sex & HIV Infection (aOR =2.54; 95% CI: 1.45- 9.23)16 |  |  |  |  |  |

**Table 3 Continued**

\*All due to Sexuality and/or Sexual Practices

X – Anecdotal Reports of HRV Experienced by MSM in Respective Countries

Note: Statistics were provided when available.

Note: Superscripted citations are linked to Appendix C

Table . East African & Southern African Country Information on Human Rights Violations & Associations with HIV Infection and Access to HIV Prevention & Treatment Services

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | East African Countries | | | South African Countries | | | | | | |
|  | **Kenya** | **Tanzania** | **Uganda** | **Angola** | **Botswana** | **Lesotho** | **Malawi** | **Namibia** | **South Africa** | **Swaziland** |
| Does this Country Have Laws Criminalizing Homosexuality? | Yes27-33 | Yes34-38 | Yes39-42 | Yes43 | Yes44,45,51 | No45-47 | Yes44,45,48-51 | Yes44,45,51 | No45,52-54 | Yes55-57 |
|  |  |  |  |  |  |  |  |  |  |  |
| Human Rights Violations\* |  |  |  |  |  |  |  |  |  |  |
| Experienced 1+ HRV/  Homophobic Abuse |  |  | 35-40%39,42 | 70.4%43 | 27.4-59%  44,45,51 | 76%46;47 | 19-39%  44,45,51 | 24.7-52.13%  44,45, 51 | 24.50-42%  45,52 | 51% (80% Perceived)55 |
| Verbal Abuse | Incid-ence Rate (IR) = 30.9 per 100 person years32 | 48.5%35 | 33.2%39 | 44.7%43 |  | 59.8% (Verbal or Physical)46; 47 |  |  |  |  |
| Emotional Abuse |  |  |  |  |  |  |  |  |  |
| Moral Abuse |  | 32.5%35 | 18.2%39 |  |  |  |  |  |  |
| Physical Abuse | 16.7% Phys-ical or Sexual Viol-ence30  IR: 12.9 & 3.9 person years32 | 29.5%35 | 15.5%39 | 10%43 | 1.7% (By Govern-ment Official or Police)45,51 | 18.9% Beaten  46; 47 | 8-11% (By Govern-ment Official or Police)  50,51 | 22% (By Govern-ment Official or Police)  45,51 | 6-8% (By Government Official or Police)45,52 | 8.60%57 |
| Sexual Abuse/Rape | 30%35;38 | 22%39 | 25%43 | 7.7-11.4% 45,51 | 9.8%46; 47 | 7-11.4%  50,51 | 11.4-13.8%  45,51 | 11%45,52 |  |
| Afraid to Seek Healthcare  **Table 4 Continued** | 63%31 | X36,37 |  |  | 21%44,45,51 | 22%46 | 17.6-21.5% 44,45,50,51 | 18.3%  44,45,51 | 21%45,52 | 62%57; 55,56 |
| Actively Avoid Healthcare | X31 | X36,37 | 52%41 |  | X44,50,51 |  | X44,50,51 | X44,50,51 |  |  |
| Afraid to/Have Not Disclosed MSM-Status to HCW |  |  | 72.9%41;42 |  | 76%44,45,51 | 75%46 | 80-91%  44,45,50,51 | 75-79%  44,45,51 | 50-59%45,52,54 | 75%57; 55,56 |
| Denied Healthcare Services | X28 | X36,37 | X41,42 |  | 0.85%  44,45,51 | 3.2%46 | 4%  44,45,51 | 8.3%  44,45,51 | 5%45,52,53 | 3%57 |
| Stigma/Discrimination from HCW | X28 | 67.7%38  (34,36,37) | 81.1%41;42 |  | X  44,45,51 | 16.1%46 | X  44,45,50, 51 | X44,45,51 | 64%52,53,54 | X55-57 |
| Afraid to Walk in Their Communities |  |  |  |  | 29.1%45,51 | X46,47 | 15.5%  45, 51 | 17%45,51 | 9.1%45,52 | 45%57 |
| Denied Legal Services | X30 |  | X41 |  |  |  |  |  |  | X55-57 |
| Blackmailed |  |  |  |  | 26.5%  44,45,51 | 21.3%46 | 18%  44,45,51 | 21.3%  44,45,51 | 10%45,52 |  |
| Arrested | 24% Arrest or Beaten by Police 30 |  |  | 3%43 |  | 16.4% Police Discrim-ination46 |  |  |  | 3.2%57 |
|  |  |  |  |  |  |  |  |  |  |  |
| Significant Associations Between Human Rights Violations & HIV Infection (and/or Difficulty Assessing HIV Prevention & Treatment Services)  **Table 4 Continued** |  |  | History of Homopho-bic Abuse & HIV Infection (aOR=5.38; 95% CI: 1.95-14.79)39  Homopho-bic Abuse = Verbal, Moral, Physical, or Sexual, Abuse or Blackmail39 | 1+ Episode of Homopho-bia & HIV Infection (OR=12.7; 95% CI: 3.2-49.6)43 | Treatment for HIV Associated with Fear of Seeking Healthcare (OR= 3.7; 95% CI: 1.6-8.6), Denied Healthcare Services (OR= 46.1; 95% CI: 17.3-122.8), & Blackmail (OR= 5.4; 95% CI: 2.2-12.2)44  Disclosing Sexuality to HCW Associated with Denial of Services (OR=4.2; 95% CI: 1.9-9.3)51  Being Afraid of Seeking Healthcare (OR= 0.22; 95% CI: 0.07-0.69) & Being Denied Healthcare (OR = 0.09; 95% CI: 0.03-0.32) Associated with Lower HIV Knowledge44  Ever Treated for STI Associated with Fear of Seeking (OR=2.8; 95% CI: 1.7-4.9) & Being Denied Healthcare (OR=7.3; 95% CI: 3.3-16.2)44 |  | Same as Bots-wana  44,51 | Same as Bots-wana  44,51 | History of Blackmail & HIV Infection (aOR=4.4; 95% CI: 1.6-20.2)52  Experiencing victimization at school or work (aOR = 2.34; 95% CI: 1.25-4.34) & Experience Poor Services related to STI (aOR = 5.05; 95% CI: 1.59-16.10) Strongly Correlated with Fear of HIV Testing53  Experiencing Poor Service in Healthcare Setting (previous STI, aOR = 0.22; 95% CI: 0.05-0.99) Correlated with Lower Perception of HIV Risk53  Trend towards Experiencing Stigma and Not Disclosing HIV-status for those who are HIV+49 (Cloete et al., 2008) | Strong Association between Ever Being Incarcerated & HIV Infection (OR=4.37; 95% CI: 1.38-13.84)55  Fear of Seeking Healthcare Associated with Experiencing Legal Discrimination (OR=1.9; 95% CI: 1.1-3.4), History of Rape (OR=11.0; 95% CI: 1.4-84.4), & Difficulty Negotiating Condom Use (OR=2.1; 95% CI: 1.0-4.1)57  Trend towards Association between Denial of Healthcare and Disclosing Sexuality to HCW (OR = 3.2; 95% CI: 0.99-10.5)57 |

**Table 4 Continued**

\*All due to Sexuality and/or Sexual Practices

X – Anecdotal Reports of HRV Experienced by MSM in Respective Countries

Note: Statistics were provided when available.

Note: Superscripted citations are linked to Appendix C

**APPENDIX C: KEY FINDINGS FROM LITERATURE INCLUDED IN RESULTS & DISCUSSION**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Lead Author(s), Date | Location | Target Population | Sampling Strategy | MSM (n) | % Bisexually Active/  Identified | Age | Key Findings |
| G. Mumtaz et al. (2010)1 | Cairo, Alexandria, & Luxor, Egypt | MSM | SBS & RDS | 1,129 | 33-44% |  | Systematic review and data analysis of multiple papers. Data suggest that same-sex practices contributes up to 26% to new cases of HIV transmission each year in Egypt. Egypt’s case report notifications indicate that MSM have contributed cumulatively 13% to new HIV cases since the first HIV/AIDS diagnoses in Egypt. HIV prevalence among MSM communities in Egypt.  Low rates of condom use at last sex in generally in MENA, but were lowest among MSM in Egypt. General knowledge of condoms in MENA was high, but knowledge of their protective effects = low (31.1-50.7%). 22% of MSM in Egypt reported difficulty accessing condoms, and many more reported disliking condoms. 82.2-99.5% of MSM in Egypt had ever heard of HIV, but 46.6% believed themselves to be at no risk for HIV. There is considerable and growing research being conducted among MSM in MENA, but more is still needed. |
| El-Sayyed, Kabbash, & El-Gueniedy (2008)2 | Cairo, Egypt | MSM | Snowball Sampling | 73 | 38.40% | Majority (79.5%): 15-24  Range: 15-47 | 65.8% of MSM were sexually active by age 15. 65.8% acknowledged insertive and receptive anal sex. Frequency of sexual acts <1 per week (73.3% of MSM ages 25+), > 1 daily (25.9% of MSM <25). Heterosexual acts (73.3% older; 29.3% younger MSM). 19.2% always used condoms. Need to acknowledge existence of MSM in Egypt and to better understand their behavioral risks. |
| de Gruchy & Fish (2004)3 | Cairo; Egypt (generally) | MSM & HCW | Short Report re: Human Rights Watch report (2004) |  |  |  | MSM (and other men accused of same-sex practices) experience a variety of HRV in Egypt: arrest, torture, detainment, imprisonment, humiliation, and forensic anal examinations conducted by medical professionals to "prove debauchery" (i.e. anal sex). HRV are promoted by laws criminalizing homosexuality and societal stigma towards MSM. Need to protect the human rights of MSM to ensure access to healthcare, especially HIV-related services. |
| Human Rights Watch (2004)4 | Egypt (generally) | MSM |  | 179 reports cited |  |  | Human Rights Watch report documents 179 cases of MSM being prosecuted for "habitual practices of debauchery." MSM frequently recall humiliation, whipping/beating, being bound, suspended in painful positions, and tortured with electric shocks. Doctors from the Forensic Medical Authority (extension of Egypt's Ministry of Justice) involved in inflicting harm and conducting baseless anal examinations against a man's will. Report also documents police raids and efforts to lure MSM into public for capture and punishment. |
| Moszynski (2008)5 | Cairo; Egypt (generally) | MSM | Short Report re: Arrests and Forced Medical Examina-tions |  |  |  | Report documents additional crackdowns on MSM in Egypt. One such crackdown led to arrests and HIV testing (without MSM consent or knowledge). MSM who tested positive were chained to hospital beds for several months until released on a court order. These are examples of dual stigma experienced by MSM in Egypt that serve as deterrents from accessing healthcare services. |
| Valadez et al. (2013)6 | Tripoli, Libya | MSM & FSW | RDS | 227 | 69.50% | Majority (59.5%): 20-29  Range: 15-49 | (MSM only): HIV prevalence: 3.1%; HBV prevalence: 2.9%; HCV prevalence (7.3%). High levels of risk behaviors, poor HIV-related knowledge, high stigma, and lack of prevention programs. Need to implement effective National HIV Strategy. |
| Johnston et al. (2013)7 | Agadir & Marrakesh, Morocco | MSM | RDS | 323 in Agadir 346 in Marrakech | 67.3% in Agadir 69.8% in Marrakech | Less than 25: 78.2% in Agadir 75.6% in Marrakech | Most reported selling sex and having multiple unprotected male and female sex partners. HIV prevalence: 5.6% in Agadir, 2.8% in Marrakech Syphilis infection: 7.0% in Agadir, 10.8% in Marrakech HIV & Syphilis co-infection: 31.6% in Agadir, 56.4% in Marrakech Selling sex and sex with women = strategies to cope with MSM-stigma. Criminalization and discrimination of MSM in Morocco demonstrates need for long-term risk reduction through legal reform and promotion/protection of human rights. |
| G.R. Mumtaz et al. (2013)8 | Morocco (in general) | MSM, IDU, FSW, clients of FSW | Mode of Transmission Data from MENA HIV/  AIDS Synthesis Project | 44,573 |  |  | Incidence rate is predicted to be 1.04% per person-year among MSM. HIV prevalence may reach 13%. Transactional heterosexual sex is the leading driver of HIV in Morocco, however MSM and IDU contribute significantly. Men in Morocco exhibit the most risk behaviors. Need to expand HIV outreach to high-risk populations. Need to scale-up surveillance and research to fill gaps, especially in high-risk populations. |
| Duvall et al. (2015)9 | Burkina Faso & Togo (in general) | MSM & SW | Health Policy Project's Policy Assessment and Advocacy Decision Model method-ology to analyze policy & program develop-ment documents |  |  |  | Laws criminalizing MSM/SW (e.g. anti-solicitation laws) result in harassment and arrests which restrict MSM/SW from accessing services. Few MSM/SW-supportive policies and HIV prevention measures (e.g. lube not on essential medicines list). Needs of MSM/SW not met due to policies that restrict MSM/SW from participating in decision-making and scarce funding allocation for MSM/SW-specific programming. Misaligned policies (e.g. mismatched informed consent laws) and uneven policy implementation (e.g. stockouts of HIV/STI kits and ART) impede evidence-based practices and policies. Societal stigma and discrimination impede access to services despite supportive politicians and donors. |
| Research to Prevention (2014)10 | Ouagadougou & Bobo-Dioulasso, Burkina Faso | MSM, FSW, & Key Informants | RDS | 343 in Ouagadougou 330 in Bobo-Diou-lasso | 44% 39.2% |  | HIV prevalence (MSM): 4.7% in Ouagadougou and 4.9% in Bobo-Dioulasso with 58.2% and 80% being newly diagnosed, respectively. Higher proportion of MSM who were HIV-positive (compared to negative) reported being forced to have sex (43.8% in Ouagadougou, 20% in Bobo-Dioulasso). Barriers to uptake of healthcare services: confidentiality concerns, discrimination from HCW, short staff, travelling. 36.0% and 20.1% of MSM in Ouagadougou and Bobo-Dioulasso reported avoiding healthcare. Verbal harassment was common. 25% and 40% of MSM in each country reported physical aggression. Some also reported sexual violence. Overarching need for more affordable, sensitive, confidential care for MSM. |
| C. Holland et al. (2015)11 | Yaoundé & Douala, Cameroon | MSM | RDS | 239 in Yaoundé 272 in Douala | 28.5% in Yaoundé 20.0% in Douala | Yaoundé: Median: 25 Range: 21-28 Douala: Median: 23 Range (21-27) | Yaoundé: MSM more likely to have accessed NGO/CBO or to have received outreach services in the last year if they had STI symptoms or if they had a large MSM social network. Douala: MSM more likely to have accessed NGO/CBO or to have received outreach services in the last year if they were living with HIV or if they had higher numbers of male sexual partners. More funding and resources are needed to ensure CBOs can provide MSM-specific HIV prevention and treatment services.  Engaging MSM through their social networks could be an effective way to recruit and engage large numbers of MSM into HIV interventions. |
| C. E. Holland et al. (2015)12 | Yaoundé, Douala, Bamenda, Bertoua, Bafoussam, Ngaoundere, Kribi, Cameroon | MSM & FSW LWH | Peer referral & PLACE Venue-based sampling | 1,335 |  | 15-49 | ART coverage among MSM and FSW varies 0-25% by city in Cameroon. The general population is more frequently provided ART than MSM and FSW (56.5% vs. 13.2%). Majority of MSM and FSW LWH in Cameroon are not connected to care. |
| Park et al. (2013)13 | Yaoundé & Douala, Cameroon | MSM | RDS | 239 in Yaoundé 272 in Douala | 62% | Median: 24 Range (18-51) | RDS-weighted HIV prevalence: 25.5% in Douala, 44.4% in Yaoundé. Active syphilis prevalence (total): 0.4%. Behavioral risks: Inconsistent condom use with regular male partner (64.1%), with casual male and female partners (48.5%); Inconsistent use of CCL (26.3%). Preferring a receptive sexual role associated with prevalent HIV infection in Douala. MSM LWH more likely to have ever accessed a health service targeting MSM in Douala. MSM LWH more likely to use CCL in Yaoundé. Need to build capacity and scale-up services offered by CBO to engage of MSM in HIV care. |
| Park et al. (2014)14 | Yaoundé & Douala, Cameroon | MSM | RDS | 239 in Yaoundé 272 in Douala | 62% | Median: 24 Range (18-51) | 81.6% reported ever being tested for HIV, but only 95.4% received their results. 63.3% of MSM in Douala reported testing in the last year vs. 55.9% in Yaoundé. Median testing frequency in Douala vs. Yaoundé (18 months vs. 2 years). Correlated with ever testing for HIV in Douala: > secondary ed, ever accessing community-based HIV service for MSM, having 4+ male sex partners in the last year. Correlated with ever testing for HIV in Yaoundé: > secondary education. Need to build capacity of organizations that provide services to MSM and to mainstream affordable, integrated, confidential, MSM-sensitive care to increase engagement of MSM in HIV care, especially to better support regular HIV testing & condom/lube use. Perhaps should target younger, less financially stable, and less connected young MSM. Need to increase provision and uptake of ART among MSM in Cameroon. |
| Aho et al. (2014)15 | Abidjan, Cote d'Ivoire | MSM | RDS | 601 | 57.60% | Median: 23  Range (18-51) | Frequent reports of low condom/WBL use, high numbers of male and female partners, and sex work. Inconsistent condom use during anal sex with male partner in the last year (66%) correlated with history of forced sex, alcohol consumption, having a regular partner and a casual partner, having bought sex, and self-perception of low HIV risk. Frequent reports of verbal, physical, and sexual abuse. Combination of individual and structural level interventions are need to combat stigma, homophobia, and violence. |
| Hakim et al. (2015)16 | Abidjan, Cote d'Ivoire | MSM | RDS | 601 | 57.60% | Median: 23  Range (18-51) | HIV infection associated with unprotected sex at last sex with a woman, more than 2 male partners in the last 12 months, inconsistent condom use with male partners, self-perceived risk of HIV, history of forced sex (aOR = 2.54), history of physical abuse (aOR = 3.66) due to MSM status, and not receiving last HIV test results. Greater access to HIV services is needed for MSM, especially since most positive MSM do not know status. |
| Mason et al. (2013)17 | Gambia (generally) | MSM | Snowball Sampling | 207 | 27.10% | Median: 20 Range (15-48) | <10% reported always using condoms with male partners. 33.8% reported no access to condoms; 82.5% reported no access to CCL. Only 3.5% knew that receptive anal sex was the highest risk sexual practice and CCL were safest. MSM in Gambia are a high-risk population and underserved with regard to HIV prevention and treatment. |
| Nelson et al. (2015)18 | Accra, Kumasi, & Manya Krobo, Ghana | MSM | Non-probability Sampling; Secondary data from KAPPA study | 137 |  | Majority (55%): 21-25 Range (18-55) | Knowledge of HIV and STDs was low, while HIV stigma was high with no difference by age. Young MSM (<25) were less likely to use condoms. Knowledge and stigma not associated with condom use for anal/vaginal sex. Data suggest need to increase knowledge and reduce HIV stigma in Ghana. |
| Stromdahl et al. (2012)19 | Abuja, Nigeria | MSM | Peer referral & Venue-based sampling | 297 | 63.20% | Median 26.05 Range (18-45) | Independent associations with consistent condom use with male partners in the last 6 months: Knowledge of at least 1 STI, ever testing for HIV. More likely to use condoms consistently if HIV tested at least once. STI knowledge associated with consistent condom use. Need more research to determine best practices for operationalizing combination HIV prevention and treatment given stigmatized nature of same-sex practices in Nigeria. |
| Schwartz et al. (2015)20 | Abuja, Nigeria | MSM | RDS | 707 | 65% | Majority (59%): <25 | History of fear of seeking healthcare significantly higher in postlaw vs. prelaw visits (38% vs. 25%). Avoiding healthcare also statistically higher (28% vs. 20%). Paper provides real-time prospective data for health-related effects as a result of newly enacted legislations that criminalize homosexuality. Need to combat these laws to engage more MSM and decrease time to HIV diagnosis and treatment. |
| Sekoni, Ayoola, & Somefun (2015)21 | Lagos State, Nigeria | MSM | Snowball Sampling | 291 | 48% | Mean age: 25.3 | Most commonly reported human rights violations: 25.7% aggression, 29.9% alienation, 19.2% verbal abuse, 17.9% physical abuse, 16.8% rape by a man, 20.3% psychological abuse. Predictors of HRV: level of education (aOR = 2.3) and sexual orientation (aOR = 1.9). Need to document and quantify these occurrences to inform advocacy and policy reform. |
| Baral et al. (2015)22 | Abuja, Nigeria | MSM LWH | RDS | 722 | 66% | Majority (38.1%): 20-24 Range (16-35+) | MSM more likely to report testing for HIV in early waves. HIV prevalence (biologically confirmed) decreased from earliest to latest waves of study. However, more MSM correctly reported their status in earlier waves. % of MSM reporting being on ART decreased from 50% to 22.2% in later waves. RDS is an effective method to recruit MSM LWH in Nigeria and to engage them in HIV care |
| Drame, Crawford, Diouf, Beyrer, & Baral (2013)23 | Dakar, Senegal | MSM | Randomly selected from Community groups serving MSM | 119 |  | Mean: 28 Majority (23-32) | Baseline HIV prevalence: 36%, cumulative HIV prevalence: 47.2%, Annual incidence rate: 16%. Men able to confide in someone about health, emotional distress, and sex were less likely to be HIV-positive. High HIV prevalence/incidence and mortality among young MSM in Senegal calls for immediate intervention and support. CBO are feasible conduits for this work. |
| Lyons et al. (2017)24 | Dakar, Mbour, & Theis, Senegal | MSM & FSW | RDS + Purposive Sampling | 724 |  | Majority (65%): Below 25 | HIV prevalence (MSM): 30.2%. Fear of seeking health services (MSM): 17.7% at baseline, 10.5% at month 3, 9.8% at month 6. 63.9% of 97 MSM said that intervention (i.e. integrated stigma mitigation intervention) was effective at addressing stigma, but there was a very high loss of follow-up among MSM (41.1%) as well. Data underscore need for combination intervention: stigma reduction, linkage/retention in care. |
| Duvall et al. (2015)25 | Burkina Faso & Togo (in general) | MSM & SW | Health Policy Project's Policy Assessment and Advocacy Decision Model methodology to analyze policy & program development documents |  |  |  | Laws criminalizing MSM/SW (e.g. anti-solicitation laws) result in harassment and arrests which restrict MSM/SW from accessing services. Few MSM/SW-supportive policies and HIV prevention measures (e.g. lube not on essential medicines list). Needs of MSM/SW not met due to policies that restrict MSM/SW from participating in decision-making and scarce funding allocation for MSM/SW-specific programming. Misaligned policies (e.g. mismatched informed consent laws) and uneven policy implementation (e.g. stockouts of HIV/STI kits and ART) impede evidence-based practices and policies. Societal stigma and discrimination impede access to services despite supportive politicians and donors, |
| Research to Prevention (2014)26 | Ouagadougou & Bobo-Dioulasso, Burkina Faso; Lomé and Kara, Togo; 7 cities in Cameroon | MSM, FSW, & Key Informants | RDS | 343 in Ouagadougou 330 in Bobo-Diou-lasso 354 in Lomé 329 in Kara 1,606 in Camer-oon | 44% 39.2% 34.9% 31.3% 62.5% | Range: 15-49 Range: 15-49 28.7% >25 46.8% >25 Majority b/t 21-29 | HIV Prevalence (MSM): 18.5% in Lomé and 0.6% in Kara; Half tested for HIV at least once, 30% in both cities never tested before. HRV: 7.1% and 8.2% of MSM in Lomé and Kara forced to have sex, many reported being verbally harassed, blackmailed, or physically assaulted. 17.0% in Lomé and 7.3% in Kara reported difficulty accessing healthcare, with additional MSM reporting hiding sexuality from HCW due to fear of stigma/discrimination.  HIV Prevalence (MSM): 7% across all Cameroon sites. Roughly half never disclosed status to partners, 25% never disclosed sexuality to HCW. |
| van der Elst, Gichuru, et al. (2013)27 | Coastal Kenya: Kilifi, Kilindini, Malindi, & Mombasa, Kenya | 74 HCW from 49 ART-providing health facilities | Purposive Sampling |  |  | Mean: 34 | HCW participated in two-day MSM sensitivity training. Prior to training, HCW cited secondary stigma, lack of professional MSM-specific education, and personal/social prejudices as barriers to providing care to MSM. After, HCW expressed greater desire to provide high quality, tailored care to MSM. Similar efforts and trainings are needed to improve health seeking and outcomes among MSM. |
| van der Elst et al. (2015)28 | Kilifi & Mombasa, Kenya | HCW & MSM |  | 31 |  | Mean (MSM): 26 | Since completion of sensitivity training, HCW reported improved ability to provide culturally-sensitive care to MSM and were more comfortable doing so well. Four additional recommendations for improving provision of healthcare: increasing the number of HCW trained by incorporating these trainings into medical school curricula, creation of policies to manage anal STIs, social/legal reforms to promote holistic care giving to MSM, and increased reporting of MSM-specific national data. Two-years post-sensitivity training, HCW reported positive results in providing MSM-specific healthcare and reduced stigma, but call for more policies and guidelines to promote delivery of supportive, holistic care. |
| van der Elst, Smith, et al. (2013)29 | Coastal Kenya: Kilifi, Kilindini, Malindi, & Mombasa, Kenya | 74 HCW from 49 ART-providing health facilities |  |  |  | Mean: 32  Range (23-53) | Baseline: Few HCW reported any training on MSM anal sex practices and most had limited knowledge of MSM-specific needs. Homophobic attitudes most pronounced among HCW who were male, <30yo, and working in clinical roles/government facilities. 3 months post-sensitivity training: Significant increase in knowledge, most notably among HCW in clinical or administrative roles and government facilities. Homophobic attitudes decreased significantly, notably among HCW with highest homophobia scores at baseline. Trend towards increased knowledge and decreased homophobic attitudes. |
| Bhattacharjee et al. (2015)30 | Nairobi, Mombasa, Nakuru, Nyeri, Thika, Kisumu, & Eldoret, Kenya | FSW, MSM, IDU | Two-stage, stratified cluster sampling of national polling booth survey participants | 1,308 |  | Majority (65.4%): 18-25 Range (18->40) | Condom use low among all key populations with regular sexual partners, but higher with paying clients. Many reported that condoms/clean injection equipment were unavailable. Variable exposure to or uptake of HIV prevention services among key populations. High rate of HIV testing in past three months (75% of all key populations). High levels of physical and sexual violence from partners/clients in all key populations as well as arrests and violence enacted by law enforcement. |
| Okall et al. (2014)31 | Kisumu, Kenya | MSM | Peer contact/Sno-wball Sampling | 15 inter-viewed 51 surveyed | 47% interviewed 39% surveyed | Majority: 60% (21-23 interviewed), 39% (18-20 surveyed) Range: 18-34 | >60% surveyed were not comfortable seeking healthcare services from a public hospital. 96.1% reported being willing to participate in future HIV research studies. Need to increase efforts to provide safe, confidential health services to MSM and to engage MSM in HIV prevention policymaking and program planning. |
| Micheni et al. (2017)32 | Mombasa, Malindi, Kilifi, & Mtwapa, Kenya | 29 HCW experienced in providing HIV care to MSM | Identified through HCW and local community MSM leader networks |  |  | Mean: 39 | HCW identified adherence challenges of MSM that are similar to general population (e.g. HIV-related stigma and lack of disclosure) as well as some that were unique to MSM (e.g. lack of access to MSM-friendly health services, economic and social challenges due to stigma, difficult relationships with care providers, and discrimination at the clinic/in community). HCW recommended sensitivity trainings, MSM peer navigators, and interventions to reduce community-level stigma to increase MSM adherence and health outcomes. Notably, these recommendations stem from providers in a country that criminalizes homosexuality. |
| Taegtmeyer et al. (2013)33 | Mombasa, Kenya | HCW (13 counselors and 3 clinicians) providing HIV services to MSM at clinic | All counselors and clinicians involved in conducting HIV counseling/ testing, risk assessment, screening or treatment of STIs |  |  |  | Despite growing experience, HCW wanted more specific training to provide more tailored healthcare to MSM as well as more education surrounding "root causes" of MSM risk-taking in Kenya including poverty, sex work, substance abuse and misconceptions about sex and sexuality. |
| Agnarson et al. (2010)34 | Rufiji district, Tanzania | 118 HCW, community members, ART patients, religious leaders, & social workers | Recruit-ment via Field supervisors from the RDSS or village Executive Secretaries; Purposive Sampling |  |  |  | Widespread negative attitudes and perceptions towards ART care, HIV testing, and existing ART programs, distrust in existing programs, and lack of community and HCW involvement in planning and treatment. HIV-positive individuals reported risky behaviors with the intention to harm others, making them feared by community members. Large need to scale-up ART and reduce stigma surrounding HIV. |
| Anderson, Ross, Nyoni, & McCurdy (2015)35 | Dar es Salaam, Tanzania | MSM | RDS | 200 | 32% | Median: 23 Range (18-59) | 48.5% reported verbal abuse, 32.5% reported moral abuse; mostly from people in the street or neighbors. 30% reported sexual abuse; mostly from partners. 29.5% reported physical violence; mostly from people in the street. Experiencing high levels of violence correlated with higher number of sexual partners, depression, internalized homophobia. Internalized homophobia predicted HIV infection and verbal abuse predicted internalized homophobia. |
| Larsson, Mohamed Shio, Ross, & Agardh (2017)36 | Tanga, Tanzania | MSM | Randomly selected every 10th participant in larger study recruited via RDS | 10 |  | 18+ | MSM perceived their sexual and healthcare choices as limited due to sexual stigma and fear of potential discrimination. Caused difficulty re: romantic/sexual relationship building, condom negotiation, engaging in open conversations with family, and accessing healthcare. Creation of safe cyber networks may provide opportunity to reach hidden populations with tailored sexual health messages. |
| Magesa et al. (2014)37 | Dar es Salaam, Tanzania | MSM attending HIV-related health services | Snowball Sampling | 50 | 56% | Majority (62%): 18-24 | Majority of participants access HIV-related health services when they need to. Frequent reports of stigma and discrimination, lack of confidentiality/privacy, little to no MSM-friendly services, monetary challenges, poor practices and attitudes from HCW, fear, and lack of HIV knowledge deter them from access these services. Need to overcome perceived and experienced barriers in order to improve uptake of HIV-related services. |
| Ross et al. (2014)38 | Dar es Salaam & Tanga, Tanzania | MSM | RDS | 200 in Dar es Salaam 100 in Tanga | 32% in Dar es Salaam 44% in Tanga | Mean: 24.61 in Dar es Salaam Mean: 24.91 in Tanga | Dar es Salaam: 30.2% were HIV-positive (>90% new infections), 2.5% were exposed to syphilis, 0 HBV, 21.4% had curable STI (90% of Gonorrhea/Chlamydia = rectal). Tanga: 11.1% were HIV-positive, 0 syphilis, 8% HBV, 4.4% had curable STI. Predictors of HIV infection: # of MSM known, city, identifying as gay, first sex with a man. Predictors of STIs: recent unprotected receptive anal sex, # of MSM seen in last month. No significant association b/t HIV and STI infection. Due to stigma, MSM often do not report homosexuality and often rectal STIs go untreated.  Increased need to scale-up HIV and STI screening and treatment. |
| Hladik et al. (2012)39 | Kampala, Uganda | MSM | RDS | 300 | 75% | Median: 25 Majority (~50%): 18-24 | HIV prevalence: 13.7%, higher among MSM >24yo (22.4% vs. 3.9% MSM 18-24). MSM >24 (aOR = 4.32) and ever reporting exposure to homophobic abuse (verbal, moral, sexual, or physical abuse) (aOR = 5.38) were significantly associated with HIV infection. |
| Musinguzi et al. (2015)40 | Kampala, Mukono, Rakai, Busia, Iganga, Mbale, Soroti, Gulu, Mbarara, Hoima, & Bushenyi, Uganda | MSM (who acknowledge not using condoms at last sexual encounter) | Purposive Sampling; Secondary study from larger study previously conducted | 33 | 17% | Range: 18-40 | Six major barriers to condom use among MSM: Difficulty using condoms, difficulty accessing condoms, lack of knowledge or misinformation about condom use, issues related to partners or relationships, socio-economic vulnerability and financial incentives not to use condoms, alcohol consumption. |
| Wanyenze et al. (2016)41 | Kampala, Mukono, Rakai, Busia, Iganga, Mbale, Soroti, Lira, Gulu, Mbarara, Hoima, & Bushenyi, Uganda | MSM & Key Informants (e.g. HIV service providers & policy makers) | Snowball Sampling | 85 | 16.50% | Mean: 24.2 Majority (69.4%): <25 | 72.9% of MSM felt uncomfortable disclosing sexuality to HCW & 81.1% felt HCW did not respect MSM. 51.8% of MSM experienced difficulties accessing health services; 9 major barriers: hostile HCW behavior, HCW with limited skill/knowledge, negative societal perceptions towards MSM, fear of being exposed as MSM, limited access to MSM-specific services, high mobility of MSM, lack of guidelines for providing MSM-specific services, hostile legal climate, HIV-related stigma. 66% were engaged in MSM social networks, with 86% of these MSM receiving support from networks to overcome these barriers, which is encouraging, however. |
| King et al. (2013)42 | Kampala, Uganda | MSM | Purposive Sampling (from pool of 295 MSM recruited in a previous study via RDS) | 16 | 31.30% | 50% 18-24; 50% 25+ | All MSM reported conflicting feelings related to their sexuality and environments that do not accept same-sex practices or non-heteronormative gender presentations. Condom use influenced by: trust in partner & fear of HIV infection. All MSM reported personal or secondary stories of stigma, discrimination, and violence due to same-sex identities or practices. |
| Kendall et al. (2014)43 | Luanda, Angola | MSM | RDS | 351 | 17.7% (male and female partners only) 10.7% (male, female, and trans-women only) | 18+ | Estimated population size based on sample: 6,236 MSM in Luanda. Adjusted HIV prevalence (3.7%); With imputation 3.8-10.5%. Being older than 25 (OR = 10.8) and having suffered episodes of homophobia (OR = 12.7) were significantly associated with increased risk for HIV infection. |
| Fay et al. (2011)44 | Blantyre & Lilongwe, Malawi; Windhoek, Namibia; Gaborone, Botswana | MSM | Snowball Sampling | 202 in Malawi 218 in Namibia 117 in Botswana | 53% 29.2% 29.1% | Mean: 25.7 Mean: 24.9 Mean: 24.6 | 93% knew that HIV is transmitted through anal sex with men, but only 67% received information on how to prevent HIV transmission during sex with men. Only 17% reported ever disclosing same-sex practices to HCW, 19% ever afraid to seek healthcare. 5% reported being denied healthcare & 21% blackmailed due to their sexuality. Strong correlation b/t experiencing discrimination and fear of seeking healthcare. |
| Zahn et al. (2016)45 | Blantyre & Lilongwe, Malawi; Windhoek, Namibia; Gaborone, Botswana; peri-urban Cape Town, South Africa | MSM | Snowball Sampling (in Malawi, Namibia, & Botswana)  Venue-based sampling w/ peer referral (in South Africa) | 202 in Malawi 218 in Namibia 117 in Botswana 200 in South Africa | 53% 29.2% 29.1% 18% | Mean: 26 Mean: 24 Mean: 25 Mean: 26 | MSM in Cape Town more likely to disclose their sexuality to family/HCW and less likely to be blackmailed or feel afraid to walk in their communities than MSM in the other countries that criminalize homosexuality. However, MSM in Cape Town not less likely to experience human rights violations than MSM in other countries. Legal reforms are not enough to ensure safety and health. A multifactorial approach complete with interventions at every level is needed to create legal and social changes that promote safety and health of MSM. |
| Baral, Adams, et al. (2011)46 | Lesotho (in general) | MSM | Snowball Sampling | 252 | 28.60% | Mean 26.3  Range: 18-56 | Only 54.5% reported testing for HIV in the last year.  HIV knowledge = low with only 3.7% knowing that receptive anal sex is the highest risk for HIV and that WBL is safest to use with condoms. Wearing condoms during last sexual encounter with another man was associated with: easy access to condoms, being older than 26, knowing that receptive anal sex is riskier than insertive anal sex, wearing condoms with female sexual partners, using WBL, being less likely to report STI diagnosis, and having tested for HIV in the last year. HRV: 76.2% report 1+, 9.8% rape, 21.3% blackmail, 22.2% fear of seeking healthcare, 16.4% police discrimination, 59.8% verbal/physical harassment, 18.9% beaten. |
| Stahlman, Bechtold, et al. (2015)47 | Maseru & Maputsoe, Lesotho | MSM |  | 29 |  | 18+ | Qualitative data from 23 in-depth interviews and 6 focus group participants. Major themes: Verbal abuse from broader community = major challenge, Disclosing sexuality = greater stigma, but more self-sufficiency and higher confidence, MSM relationships are commonly secretive, MSM-serving organizations are powerful conduits for providing social and emotional support. |
| Wirtz et al. (2015)48 | Blantyre, Malawi | MSM | Recruited from previously conducted larger study that used RDS | 103 | 30.10% | 18-26 | Looked at effects of peer-based, combination HIV prevention intervention (CHPI) program to target individual, social, and structural HIV risks. Condom use at last sex increased in 3rd follow-up after intervention with main partners (62.5% to 77%) and with casual male partners (70.7% to 86.3%). Disclosure of same-sex identities/practices to family increased (25% to 55%) . High retention of MSM in study, which merits the use of a CBO especially in stigmatized settings. CHPI may be an effective model to increase provision of HIV prevention and treatment services to MSM. |
| Wirtz et al. (2014)49 | Blantyre, Malawi | MSM & 5 Service providers from hospitals, local HIV/STI clinics, and HIV prevention service organizat-ion | Purposive Sampling; Peer/key informant recruitment | 8 |  | 18+ | Qualitative data demonstrate large fear of disclosing sexual practices to HCW. General lack of knowledge around HIV and prevention strategies in community. Also, lack of awareness and self-efficacy to provide care on the part of HCW. Additional fear of secondary stigma and repercussions for providing MSM with services. Need to implement trainings for HCW to increase quality of services provided to MSM and increased outreach to MSM. Additional need to address criminalization and stigmatization of homosexuality to increase MSM safety and uptake of HIV-related healthcare services. |
| Wirtz et al. (2013)50 | Blantyre, Malawi | MSM | RDS | 338 | 36.30% | Median: 25.1 Range: 18-49 | Crude HIV and syphilis estimates: 12.5% and 4.4% with 90% of HIV cases being new diagnoses. ~50% of MSM reported always/almost always using condoms with casual male partners. Prevalence of perceived and experienced stigma >20%, 11.4% experienced physical violence, 7% were raped. Associations with HIV infection: >25yo, single, age at first sex with man <16. Need to increase provision of HIV services and to encourage/empower MSM to increase condom use/testing and reduce other risk behaviors. Additional need to address stigma from multiple levels. |
| Baral et al. (2009)51 | Blantyre & Lilongwe, Malawi; Windhoek, Namibia; Gaborone, Botswana | MSM | Non-probability Sampling | 202 in Malawi 218 in Namibia 117 in Botswana | 53% 29.1% 29.1% | Mean: 25.6 Mean: 24.4 Mean: 25.8 | HIV prevalence among MSM (18-23): 8.3%, among MSM (24-29): 20.0%, among those >30yo: 35.7%. Overall HIV prevalence: 17.4%. Associations with HIV infection: >25yo, not always wearing condoms. 16.6% of MSM had concurrency sexual relations with men and women; 53.7% reported male and female partners in the last 6 months. UPAI common and use of petroleum-based lube also common with condoms. 42.1% of MSM reported at least one HRV, including blackmail and denial of housing/healthcare. |
| Baral, Burrell, et al. (2011)52 | Peri-urban Cape Town, South Africa | MSM | Venue-based sampling with peer referral | 200 | 17.10% | Mean: 26.1 Median: 24 Range: 18-58 | Overall HIV prevalence: 25.5%, with 94% being newly diagnosed. 0% reported always having safe sex (condoms and WBL). Associations with HIV infection: inconsistent condom use with male partners, being blackmailed (aOR = 4.4), >26yo, being unemployed, and rural origin. HRV common: 10.5% reported blackmail, 21% reported fear of seeking healthcare. |
| Nel, Yi, Sandfort, & Rich (2013)53 | Gauteng, KwaZulu-Natal, & Western Cape, South Africa | MSM | Community-based needs assessment, Purposive Sampling | 1,045 | 12.90% | Mean: 26.7 Range: 16-74 | Perceptions of not being at risk for HIV negatively associated with: being black, coloured, or Indian, being sexually active, knowing PLWH, and a history of STI (aOR = 0.22). Fear of being tested for HIV positively associated with: being black, coloured, or Indian, preferred gender expression as feminine, being sexually active, history of STIs (aOR = 5.05) and experience of victimization on the basis of sexuality (aOR = 2.34). Need to better integrate STI testing/treatment into HIV care and to address social exclusion due to race and sexuality. |
| Cloete et al. (2008)54 | Cape Town, South Africa | HIV-positive MSM & MSW only | Venue-based sampling | 92 MSM 330 MSW only |  | 18-46 | Many men experienced internalized stigma; 56% of men reported concealing their HIV status from others. MSM reported greater social isolation and discrimination, though not statistically significant. Need for mental health interventions and structural interventions to create needed social/legal changes that would increase provision/uptake of HIV-related services. |
| Baral et al. (2013)55 | Swaziland (in general) | MSM | RDS | 324 | ~33% | Mean: 23.1 | Overall HIV prevalence: 17.6%, with 70.8% being newly diagnosed. Only 1.3% reported condom use with all sexual partners and CCL use with men. Burden of HIV among MSM is understudied and provision of HIV prevention and treatment services to MSM is low. Need to provide MSM-specific services to address disproportionate burden. |
| Kennedy et al. (2013)56 | Swaziland (in general) | HIV-positive MSM, 16 Key Informants, MSM community members | Purposive/Venue-based sampling | 20 HIV-positive for in-depth interviews  20 more for focus groups |  |  | Overarching theme: Multiple forms of stigma experienced by MSM LWH, which encourages selective disclose of sexuality and HIV-status, leading to limited social, medical, and psychological support. Perceived sexual stigma from HCW discourages timely visits for healthcare and encourages traveling further away to seek healthcare. MSM reported experiences of violence and lack of police protection. |
| Risher et al. (2013)57 | Swaziland (in general | MSM | RDS | 323 | 34.80% | Mean: 23.1 Median: 22 | 61.7% reported fear of seeking healthcare, 44.1% reported experiencing some form of stigma, 73.9% reported perceived social stigma from family and friends. Fear of seeking healthcare due to sexuality correlated with: experiences of legal discrimination (aOR = 1.9), suicidality, rape (aOR = 11.0), difficulty negotiating condom use (aOR = 2.1). Disclosure of same-sex practices to HCW associated with: > secondary education, used condom with last casual male partner, and suicidality. Need to address structural barriers such as stigma and discrimination that deter MSM from seeking healthcare services and disclosing their sexual practices in order to provide best care. |

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