

University at Albany, State University of New York

## Scholars Archive

---

Public Health Undergraduate Program

Honors College

---

5-2017

# HIV in New York City: An Overview of Cultural and Social Factors Contributing to an Individual's Decision to Disclose Their Disease Status

Lindsey Riback

*University at Albany, State University of New York*

Follow this and additional works at: [https://scholarsarchive.library.albany.edu/honorscollege\\_ph](https://scholarsarchive.library.albany.edu/honorscollege_ph)



Part of the [Public Health Commons](#)

---

### Recommended Citation

Riback, Lindsey, "HIV in New York City: An Overview of Cultural and Social Factors Contributing to an Individual's Decision to Disclose Their Disease Status" (2017). *Public Health Undergraduate Program*. 4. [https://scholarsarchive.library.albany.edu/honorscollege\\_ph/4](https://scholarsarchive.library.albany.edu/honorscollege_ph/4)

This Honors Thesis is brought to you for free and open access by the Honors College at Scholars Archive. It has been accepted for inclusion in Public Health Undergraduate Program by an authorized administrator of Scholars Archive. For more information, please contact [scholarsarchive@albany.edu](mailto:scholarsarchive@albany.edu).

**HIV in New York City:  
An overview of cultural and social factors  
contributing to an individual's decision to  
disclose their disease status**

An honors thesis present to the  
School of Public Health  
University at Albany, State University of New York  
In partial fulfillment of the requirements for gradation with Honors in Public Health  
and graduation from the Honors College

Lindsey Riback  
Thesis: Dr. Kamiar Alaei  
May 2017

## **ABSTRACT**

By focusing on the HIV positive homosexual male population in New York City, this paper will examine what effect cultural norms surrounding race and sexual orientation, as well as four specific social factors (alcohol use during sex, injection drug use, social support and the importance of religion) have on whether an HIV positive individual, specifically an urban homosexual male, chooses to disclose their disease status. This paper will discuss those cultural norms and social factors through the AIDS Risk Reduction Model, available literature, and the data collected by the National Institute of Mental Health for the Positive Connections intervention trial.

The data for this paper were pulled from the larger study, and only the 171 HIV positive men from New York City were included in this study sample. Of those included in this sample population, 73.8 percent of whom identified as homosexual. The average age of these men, none of whom were Caucasian, was 42.1 years old.

Of those surveyed, 38 percent were intoxicated during anal intercourse, 17 percent have injected drugs, roughly 60 percent had at least some social support, and for 66.1 percent religion plays at least some role in their lives. In total, 42 percent had disclosed their disease status to their primary partner.

Data regarding various social factors contributing to disclosure can guide interventionists in adequately targeting the population they are trying to help, such as through social and religious networks. It is expected that increasing awareness of HIV and how to prevent it, will lead HIV positive individuals to openly discuss their disease status with their sexual partners and potentially their family and friends. Additionally, studying the rate of HIV disclosure in a city such as New York City, can provide insight into the cultural dynamic surrounding HIV in other large American cities, such as Los Angeles, Chicago, and Houston and Philadelphia.

## **KEYWORDS**

Human immunodeficiency virus (HIV), Acquired Immunodeficiency Syndrome (AIDS), persons living with HIV/AIDS (PLWHA), anti-retroviral therapy (ART), men who have sex with men (MSM), sexually transmitted disease (STD), Injection drug use (IDU)

## ACKNOWLEDGEMENTS

I must first thank my mentors at the Global Institute for Health and Human Rights, Drs. Arash and Kamiar Alaei who have taught me the importance of understanding health rights in the context of human rights. They have also taught me the importance of evoking cultural competency in every project we have worked on. To Kamiar and Professor Erin Bell who have advised me through the process of this thesis, from the literature reviews to analyzing data and editing my work. Further thanks must go to Dr. Simon Rosser from the University of Minnesota's School of Public Health, Division of Epidemiology and Community who provided us with data from his Positive Connections trial, funded by the National Institute of Mental Health which surveyed individuals living with HIV to identify their behaviors, medical needs and health status. Also, thank you to Shao-Chiu Juan from the Global Institute for Health and Human Rights who helped me analyze the data. A final thank you to my family and friends who have supported me throughout my undergraduate career.

## Table of Contents

<b>Abstract</b> .....	2
Keywords.....	2
<b>Acknowledgments</b> .....	3
<b>Introduction</b> .....	5
Pathology of HIV .....	5
Treatment of HIV .....	6
Prevalence of HIV.....	7
<b>HIV in New York City</b> .....	10
Historical Context of HIV.....	10
Social Context of HIV.....	11
Current HIV Laws.....	12
AIDS Risk Reduction Model.....	13
<b>Study</b> .....	13
<i>Disclosure</i> .....	13
<i>Social Networks</i> .....	14
<i>Religious Factors</i> .....	16
<i>Alcohol use during sex</i> .....	18
<i>Injection Drug Use</i> .....	18
Methods.....	19
Population Demographics.....	19
Results.....	20
<b>Discussion</b> .....	22
Limitations .....	23
Suggestions for Improvement.....	24
Conclusion.....	27
<b>References</b> .....	29
<b>Appendix</b> .....	33

## **INTRODUCTION**

As the Human Immunodeficiency Virus, HIV, continues to remain prevalent throughout the world, the examination of specific city centers and their legal statutes can offer a unique look into how cultural and legal practices can indirectly facilitate or deter the spread of disease. According to the U.S. Census, as of July 2015, an estimated 8,550,405 people were living in New York City.<sup>1</sup> At that same point in time, an estimated 120,571 persons living with HIV/AIDS, PWLHA, resided in NY, accounting for 1.4 percent of the population.<sup>2</sup> As a major city center, New York City has a relatively diverse population compared to the rest of the country. To be able to understand HIV disclosure rates in the context of New York City, one must be able to understand not only the prevalence of the disease, but the pathology of it as well.

### **Pathology of HIV**

HIV is a retrovirus which uses RNA instead of DNA and attacks the cells of the immune system; if left untreated, HIV can lead to Acquired Immunodeficiency Syndrome, AIDS.<sup>3</sup> This disease enters the blood through the bloodstream of a previously uninfected individual when they come into contact with infected blood, an infected needle, the placenta of an infected mother or by swallowing the virus via bodily fluids or breast milk.<sup>3, 4</sup> The most common transmission of HIV occurs through unprotected sexual intercourse and the sharing of needles, particularly among injection drug users.<sup>3, 5, 6</sup> The HIV virus attacks and reduces the number of white blood cells known as CD4/T-Cells which assist the body in fighting off infection. Although HIV currently cannot be cured, it can be treated and controlled through the use of antiretroviral therapy, ART, which has allowed those with HIV to live longer and healthier lives than they would have had the chance for decades earlier. If left untreated, HIV will typically progress into AIDS, severely weakening the immune system and allowing for opportunistic infections or

cancers to develop. The CD4 count for a person who is not infected with HIV/AIDS is usually between 500 and 1,500 cells/mm<sup>3</sup> and when the count drops to below 200 cells/mm<sup>3</sup> this indicates that the patient's disease has progressed into AIDS, however, a diagnosis of AIDS can also be made regardless of CD4 count if the individual has developed one or more opportunistic infections.<sup>3-7</sup> Opportunistic infections are defined as those that take advantage of the individual's weakened immune system resulting in a life-threatening illness; they can include Kaposi's sarcoma, tuberculosis, pneumonia, toxoplasmosis of the brain, lymphoma and invasive cervical cancer.<sup>3</sup>

### **Treatment of HIV**

While science has not yet found a way to cure an individual of HIV, modern medicine has found effective methods of treatment. Pre-exposure prophylaxis, PrEP, was first introduced in 2012 as a preventative method for individuals who are at an increased risk for contracting HIV, such as men who have sex with men (MSM). PrEP, also known as Truvada, is a daily pill combination of tenofovir and emtricitabin that work within the body to prevent HIV from establishing a permanent infection and has resulted in a 44 percent reduction in HIV incidence.<sup>8</sup> After HIV contraction, the virus can be treated and controlled through the use of ART which is also used to prevent the development of AIDS. Zidovudine, an ART, should be taken in combination with at least two other anti-HIV drugs to suppress HIV in the blood to very low levels, this will also prevent the body from building resistance to the drug.<sup>10</sup> Similarly, Highly Active Antiretroviral Therapy, HAART, acts as a daily combination of three drugs to suppress viral load. This will also prevent the body from developing resistance to the drug which will prevent the virus from progressing into AIDS.<sup>11</sup>

## Prevalence of HIV

UNAIDS has estimated that in 2015 there were 36.7 million people in the world living with HIV and there were 2.1 million new infections.<sup>12</sup> While on a global scale, the highest concentration of HIV cases can be found in sub-Saharan Africa, followed by Eastern Europe (Map 1),<sup>13</sup> HIV can affect anyone. In that same year, the Centers for Disease Control and Prevention reported that in the United States there were 1.2 million individuals living with HIV, accounting for roughly 30 percent of the disease's global prevalence.<sup>14,15</sup>

While men who have sex with men, MSM, only represent 2-4 percent of the general population, an estimated 63 percent of the HIV positive population in the United States are homosexual.<sup>7,16</sup> Just as when HIV first became prevalent in society, there is still a high proportion of disease prevalence within the MSM community, which offers insight into why HIV is commonly associated with homosexuals.<sup>3</sup>

Once considered to be a disease confined to the homosexual community, it has been proven through research and a change in rhetoric that anyone can contract HIV, regardless of age, gender, race or sexual orientation. However, homosexuals, specifically MSM, are at a much greater risk for contracting HIV due to both social and biological factors. In a social context, MSM are less likely to use a condom when engaging in oral or anal sex than their heterosexual counterparts engaging in oral, anal or vaginal sex who use condoms to prevent pregnancy.<sup>17</sup> Biologically, in a heterosexual relationship with vaginal intercourse, the female is at greater risk for contracting sexually transmitted diseases (STDs) than her male counterpart because it is common to experience minute tearing in her vaginal lining, while the male will not receive any tears on the penis. In contrast, in a homosexual relationship, both individuals are likely to be on the receiving end of intercourse and biologically both are susceptible to more tears in their anus

than a female would be during vaginal intercourse.<sup>17</sup> For example, it is common for a man who is on the bottom, or receiving end of the intercourse, to request the individual on top to use a condom, however if the individual was on top, or on the penetrative end, they were more likely to let the man on the bottom decide whether they use a condom or not, rather than asserting that they do.<sup>17,18</sup> The increased opportunity for tearing can lead to an increased risk of spreading or contracting a sexually transmitted disease, STD, specifically HIV. In addition to their increased physiological susceptibility, MSM are less likely to seek health care resources like routine checkups and STD screenings for fear of discrimination by fellow patients and their healthcare professional.<sup>19</sup>

In the United States, there are several risk factors for developing HIV. Regionally, the HIV epidemic has affected the southern states in greater numbers than other regions and higher rates of the virus are more likely to be found in the city centers of a state rather than in the outskirts or smaller towns.<sup>7</sup> For example, the Gay Men's Health Crisis, a non-profit organization based in New York City, estimates that in New York City, 68 percent of new HIV diagnoses were among the MSM population, five percentage points higher than the national average of 63 percent.<sup>20</sup> In research-based studies, findings have shown that the roughly 53 percent of new HIV diagnoses were within the MSM population.<sup>14, 16</sup> Additionally, the greatest burden of disease can be found among racial and ethnic minorities.<sup>3,7,9, 14, 16,21</sup> For example, between 2001 and 2006, among young MSM, new HIV infections increased 126% in Blacks and 81% in Latinos.<sup>14</sup> Similarly, in 2011 the CDC found that African Americans experience the highest burden of disease, having represented 41% of people living with HIV.<sup>15</sup>

In regards to sexual orientation, the largest prevalence of infection can be found among MSM of all races as opposed to their heterosexual counterparts.<sup>15</sup> However, the racial divide

continues, as high rates of disease are especially evident when looking at the MSM population of minority groups.<sup>3, 7</sup> Just like the rest of the country, these higher rates can also be found in New York City.

Throughout New York, the Department of Health found that the majority of new HIV cases within the MSM population between the years of 2010 and 2014, the largest number of new diagnoses were found among Hispanic, roughly 700 cases, followed by Black non-Hispanic MSM, with the Asian/Pacific Islander MSM population remaining below 100 cases for the entire time period observed. The rates for New York City were slightly lower than that of the state rate; between 550 and 600 new cases were Hispanics, followed by the number of Black non-Hispanic falling just around 500 cases and Asian Pacific Islander still having the lowest incidence of roughly 50 cases per year during the 2010-2014 time period.<sup>22</sup>

Similarly, in 2015, the New York City Department of Health and Mental Hygiene found that there were 2,011 new HIV diagnoses among males, and among those, 73.7 percent, or 1483, were MSM, and there were also 578 new AIDS diagnoses among MSM.<sup>23</sup> Regarding the new HIV diagnoses among MSM, 523 were Latino, 392 were Black, 287 were white and 64 were Asian/ Pacific Islander.

According to a cross-sectional study that evaluated trends in HIV among MSM in New York City, “New York City remains an epicenter of the HIV epidemic in the United States,” and by the end of 2011 there was just under 40,000 MSM living in New York City.<sup>24</sup> The CDC-sponsored study was conducted in three rounds; 2004-2005, 2008 and 2011 and was able to identify three major covariates relate to HIV, among the MSM population in New York City; sexual risk, drug use, and HIV testing behaviors over time. The study revealed that although the

rate of unprotected anal intercourse remained constant, there was an increase in HIV testing and a decline in the prevalence of HIV non-disclosure and those unaware of their disease.<sup>24</sup>

## **HIV IN NEW YORK CITY**

### **Historical Context of HIV**

The first reported case of HIV-1 was found in Leopoldville, later renamed Kinshasa, in the Democratic Republic of Congo in 1959.<sup>25</sup> In 1971, New York City's Department of Health and Mental Hygiene began providing free male condoms in STD clinics throughout the city, roughly 10 years before the first cases of HIV were reported in the city.<sup>26</sup> In 1981, five homosexual men in Los Angeles were reported to have *Pneumocystis carinii* pneumonia which was later linked to the presence of HIV, this prompted similar reports from New York City, although these cases involved Kaposi's sarcoma.<sup>27</sup> Just 10 years after these cases, free condoms were made available in all of New York City's high schools and in 1998, free female condoms were added to the now established New York City Condom Availability Program, proving the city's dedication to preventing the spread of HIV and other STDs.<sup>26</sup>

These discoveries led to the association of HIV with homosexuality, at first it was proposed to call the disease gay-related immune deficiency, GRID. Also in the 1980s, Haitian immigrants in New York City labeled as "AIDS carriers" were forbidden from donating blood by the Food and Drug Administration. This stigmatization led those who were Haitian and HIV-positive to not disclose their disease status to their family members out of fear that they would not only be isolated by the general community, but their family as well.<sup>28</sup>

## **Social Context of HIV**

Historically, PWLHA have been the outcasts of society, experiencing both legal discrimination as well as social stigmatization due to their presence of disease. This leaves PWLHA with two options; be open about their disease status and potentially become isolated by their loved ones and peers, or hide their status and maintain their relationships.<sup>28</sup> This not only puts their loved ones at risk for potentially contracting the disease, but it can also put the individual at risk both physiologically and mentally. A major contributing factor for an individual's decision to disclose is based on how well they believe their loved ones will receive the information. The downfall to this is that by choosing not to disclose, PLWHA may feel uncomfortable seeking social support and medical help for disease management and they may even forgo taking their medications out of fear that their family will find out.<sup>28,29</sup>

Despite these barriers to disclosing, recently there has been a declining incidence rate of HIV transmission due to a greater public acknowledgement of the disease and an increased discussion of measures that can be taken to reduce disease transmission. For example, on Valentine's Day in 2007, the NYC Condom campaign under the guidance of the New York City Department of Health and Mental Hygiene was revamped. The program which distributes free male and female condoms and lubricant throughout the city, presented the "NYC Condom," the first municipally-based condom. Within the first month of the launch, a total of 5 million male condoms were distributed followed by 3.7 million in the second month.<sup>26</sup> Since its inauguration, the program has developed a smartphone platform to allow users to locate venues that distribute the free condoms as well as distributing condoms with the LifeStyles® logo to ensure users that the condom quality is the same as the one they could purchase in stores. Additionally, the NYC

“KYNG” Condom was launched which is an extra-large LifeStyles® condom. Within two years of the smartphone application’s introduction it had been downloaded over 32,000 times.<sup>26</sup>

### **Current HIV Laws**

In the United States, there are currently 33 states which have enacted HIV-specific criminal laws, many of which are located in the Midwest and Southeast regions of the country. In regards to HIV-specific laws, there are eight states, including the federal district of Washington, D.C., where there are no specific laws currently codified for informed consent or counseling.

New York City does not have its own set of HIV specific laws, however, the state of New York does have laws that vary from other states in the country. In New York State, under Public Health Law Article 27-f, anyone taking a voluntary HIV test must give informed consent. Oral consent is acceptable for a rapid HIV test, but a signed consent form is necessary for a non-rapid HIV test.<sup>30</sup> An individual of any age can consent to an HIV test, if they are aware of what the test and what the results mean, if they do not have the capacity to consent, a parent or legally appointed guardian can consent. If the individual tests positive they must be provided with the following information: how to prevent further infection, a follow-up appointment and they must be made aware that they are required to cooperate with partner notification efforts and that their case must be reported to the Department of Health. Information can only be disclosed if they sign an approved HIV release form, “Authorization for Release of Medical Information and Confidential HIV Related Information.”<sup>31</sup> HIV status may be disclosed without an approved HIV release form if it is necessary for medical treatment or to monitor health and disease prevention.

In early 2017, two bills were introduced in the New York State Assembly and Senate to amend current laws regarding HIV. The first, if passed, would amend social services law to

provide PLWHA with access to benefits and services in local social services departments.<sup>32</sup> The second proposes an amendment to preexisting penal, criminal procedure and corrections law to prosecute PLWHA who recklessly transmit HIV/AIDS. This amendment, if passed, would also require individuals who are alleged sex offenders or are in a corrections facility to be tested for HIV.<sup>33</sup>

### **AIDS RISK REDUCTION MODEL**

According to the AIDS Risk Reduction Model, ARRM, a behavior change that would result in a decreased risk for contracting HIV/AIDS occurs in three stages.<sup>34</sup><sup>35</sup> First, the individual must recognize there is a problem; they must perceive that they are at risk for contracting HIV. In the next stage, development of commitment to change behaviors, the individual must make a commitment to changing their behaviors, specifically in regards to reducing their risk of contracting HIV. In the final state of behavior change, they actually change their behavior. In this case they would consistently use condoms when engaging in sexual intercourse or disinfecting needles when injecting drugs.<sup>34</sup>

### **STUDY**

#### *Disclosure and condom use*

In a cross-sectional study of young homosexual migrants conducted by the New York City Department of Health, it was found that the discussion of HIV typically stemmed from fear rather than a desire to engage in effective communication about disease prevention with their sexual partner. Those partaking in intercourse typically felt more sexually-confined if they had a conversation about HIV and STDs with their partner, having that on the forefront of their mind during the physical interaction. However, after having the conversation those individuals were

more likely to engage in safer sex.<sup>18</sup> Among the men surveyed, it was found that they were more likely to request a condom be used if they were on the bottom, or receiving end of the intercourse, and if they were on top they typically only used a condom if the person on the bottom requested they do so. Additionally, the hook-up culture characteristic of larger cities, especially that of New York City, contributes to the engagement in casual sex and typically a lack of conversation about sexual history and the presence or lack thereof of STDs, as found by both Kobrak et al. and a study conducted in 2013 by Grov, Agyemang, Ventuneac & Breslow. Both studies found that the use of the internet to meet others has increased the opportunity for casual sex, consequently leading to an increased risk for the potential transmission of HIV or other STDs.<sup>18,21</sup> Among those surveyed by Grov, 25 percent were very unlikely to discuss HIV with their partner because they felt uncomfortable about the topic and for 21.4 percent of those who did discuss HIV, it was only because they were certain they were to engage in intercourse.<sup>21</sup> Similar among those observed during Meyer-Balzburg et al.'s 1991 case-control study, nearly a third of the men were unaware of their partner's HIV status, demonstrating a lack of conversation about sexual behavior and disease presence.<sup>5</sup>

### ***Social Networks and Support***

Social networks and support are an important aspect to examine when assessing and identifying risk factors associated with HIV transmission as they refer not only to the support the individual receives, also their contacts since this can increase their chances of contracting HIV or catalyzing the disease's progression.

In regards to social networks that can contribute to risky behaviors, it is important to look at how MSM are meeting their partners whether they are casual or long-term. For example, Kobrak et al. found that many MSM migrated from less urbanized areas with smaller

homosexual communities to New York City so that they could explore their sexuality.<sup>18</sup> A characteristic of the dating scene in New York City which is similar to that of other urban centers is the increased reliance on meeting hookups online through sites like craigslist and grindr, rather than at bars or through their friends.<sup>18,36</sup> The Kobra et al. study also revealed that unlike in their hometown, the new arrivals found that the MSM population in New York City was more interested in hookups and casual sex rather than dating and a more long-term or committed relationship.<sup>18</sup> Similarly, MSM may be more likely to attend private sex parties than their heterosexual counterparts, since these parties include both HIV-positive and negative MSM, potentially facilitating the transmission of HIV or other STDs. Some of these parties have the theme of bare-backing, anal intercourse without a condom, or urophilia, the fetishism of the smell, sound or taste of urine.<sup>5, 14</sup> Both of these further increase an individual's chance of contracting HIV or other STDs. In a cross-sectional study conducted by Solomon et. al in 2011, it was found that of the 540 homosexual men surveyed, 8.7 percent had participated in sex parties and of those who participated, 63.3 percent had indicated that the parties were "safe sex parties," requiring all participants to use a condom. Additionally, a third of those who attended the parties reported that both HIV-positive and negative men had participated.<sup>14</sup> The study found that participating in a sex party increased one's chance of contracting HIV and other STDs, through risk factors associated with contraction such as drug use, forgoing the use of a condom during intercourse and having multiple partners.

When it comes to PLWHA and those who are considered at risk, research has found that the presence of a support system, including friends or family, can have a positive impact, encourage individuals to seek medical care, openly disclose their disease status and partake in testing measures. In regards to the MSM population in New York City, it has been found that

individuals who have close familial relations were less likely to exhibit risky sexual behaviors, which in turn decreases their chances of contracting STDs and HIV.<sup>16</sup> This is especially important in large cities such as New York City where a large portion of the MSM population are either minorities or not native to New York City and therefore may have a language and/or cultural language barrier with the general population.<sup>16,18</sup> Additionally, MSM who have other gay friends are more likely to get tested regularly as opposed to their counterparts who may not be as open about their sexuality.<sup>37</sup> When it comes to disclosing a positive disease status, PLWHA are also less likely to disclose to their friends and family if their social support systems are unaware of their sexual orientation, out of fear that they will not only find out about their disease status but their sexual preference as well.<sup>28</sup>

These findings suggest that if the individual is open about their sexuality with both their family and peers they are less likely to engage in risky behaviors, however if they have not yet come out to their family and friends about their sexual orientation, they are less likely to get tested for HIV and other STDs for fear that their family and larger community will find out.<sup>37</sup> In the long-run this decreases the likelihood that they will be aware that they have HIV, which if they do leads to a decreased chance of seeking treatment, then increasing the chance that HIV will progress into AIDS.

### ***Religious factors***

Religion can have both a positive and negative impact when it comes to risky behaviors and disclosure rates. Coming from a more religious background, a heterosexual individual is less likely to engage in risky behaviors such as having multiple partners, however, as most religions do not condone homosexuality, MSM who identify as being religious may be more likely to engage in risky behaviors or at the very least be less likely to test for HIV and other STDs out of

fear that individuals in their community will automatically associate being tested with being gay.<sup>37</sup> Most literature regarding the influence of religion on the openness of sexuality has been focused on the black church and while this may not be representative of the overall MSM population who self-reports as being religious, it does provide insight into the influence that the church has on the black MSM population, a subsection of the MSM population that is largely affected by HIV.<sup>14,22, 38-39</sup> Research has also found that even among those who do not self-report as being religious, they still report religious imagery as being important to them, which has a positive correlation with overall life satisfaction and empowerment, especially within the black community.<sup>40</sup>

Since HIV/AIDS first became prevalent in New York City and even till today, the church has been a major source of homophobia and discrimination against the HIV-positive community, since homosexuality is seen as immoral, as is premarital sex, and HIV has been traditionally associated with the MSM community.<sup>39</sup> Due to this perceived immorality, research has found that when addressing HIV/AIDS within the black church, an emphasis must be placed on changing sexual behavior, but not necessarily on abstinence. Recently through a push led by public health professionals, it has also been found that preachers and avid members of the church community can be rallied to provide parishioners with faith-based intervention methods. These intervention methods can include working to reduce stigma, as well as serving as a site for community-based sexual education and pastoral counselling.<sup>38,39</sup> Additionally, some churches exhibit a “don’t ask, don’t tell” policy, something which the study conducted by Jefferies, Dodge and Sandfort, identified as a hindrance to creating an open dialogue within the church regarding HIV and homosexuality. Their research suggests that churches should adapt their sermons to

show support for all types of relationships and individuals rather, than just the socially acceptable monogamous heterosexual relationship.<sup>40</sup>

### ***Alcohol use during sexual intercourse***

Partaking in intercourse while intoxicated is identified as a form of risky sexual behavior as it puts both individuals at risk to either forgo using a condom or use it incorrectly, which increases their chances of contracting HIV or other STDs. Incorrect condom use includes unrolling the condom before it is applied or forgetting to leave space at the tip of the condom.<sup>41</sup> Solomon et al.'s study found that of those who attended sex parties, 48 percent reported being under the influence of alcohol while engaging in intercourse as opposed to the 38 percent of individuals who did not participate in sex parties who were also intoxicated while engaging in sex.<sup>14</sup> Similarly, a 2014 cohort study conducted by Silva, M. Greco, Fausto, D. Greco and Carniero found that for 33 percent of individuals studied, alcohol was regarded as an important stimulus for intercourse.<sup>42</sup> Due to the nature of how many casual sexual relationships start, at clubs or bars, it is important for individuals who are at risk as well as those who do have HIV to be aware of how alcohol can impair their judgment especially when engaging in sex. Intoxication while engaging in sex not only increases the risk of contraction for those who do not use a condom, but can also put those who do use one but use it incorrectly at risk as well.

### ***Injection Drug Use***

Injection drug use poses a two-fold problem for individuals when it comes to decreasing their chances of contracting HIV. This is classified as a risky behavior because being under the influence of drugs increase one's chances of making careless decisions when engaging intercourse just as alcohol does.<sup>3, 5, 6, 42, 43</sup> Additionally, IDU can potentially lead to the sharing of

needles which can increase an individual's chances of contracting HIV from another injecting drug user.<sup>44,45</sup>

## **Methods**

The data for this thesis was pulled from a study conducted by Rosser et al. between January 2005 and April 2006 and initially surveyed 888 men from Minneapolis, Chicago, Seattle, Washington, D.C., Boston, New York City, Los Angeles, and Houston. This population was sampled to include the 675 HIV-positive men for the Positive Connections intervention trial aimed at recruiting men of color and men who were having unprotected sexual intercourse.<sup>46</sup> For the purpose of this thesis, data collected from the New York City site was sampled from the larger population and sorted on the basis of five specific social factors. These include whether they have disclosed their disease status to their primary partner, alcohol use during sex, injection drug use (IDU), the presence of social support and the importance of religion. For each data set collected, averages were taken for each category with the total of 171 HIV-positive men from New York City as the common denominator to determine the overall average for each risk factor calculated. In some instances the study subjects failed to respond to every question, in this case the total responses was subtracted from the original total of 171 and the difference was factored into the average under the "no response" category.

## **Population Demographics**

Of the initial 205 New Yorkers surveyed during the pretest, the 171 individuals who tested positive for HIV were included in the study sample; 32 tested negative and 2 did not provide responses. This has resulted in the inclusion of 83.4 percent of the initial population in the study.

Among the men included, their ages ranged from 23 to 69, with two men failing to report their age, resulting in an average age of 42.1 for all participants. Just over half of these participants, a total of 93 men, were Black or African American, 19 were American Indian or Alaska Native American, 7 were Asian American and 52 were Native Hawaiian or Pacific Islander. None of the men were Caucasian (see Figure 1).

Regarding sexual orientation, 124 of the 171 respondents (72.5%) identified as gay and 87 out of the 171 (50.9%) men surveyed were very comfortable with their sexual orientation.

## **Results**

As previously mentioned, the data were stratified into five major categories; whether the individual had disclosed their disease status to their primary partner, the presence of social networks and support, the importance of religion, how often the individual had been intoxicated during sex in the past three months and whether they had ever injected drugs. For each of the five factors, the mean was calculated with the total of the 171 HIV-positive men from New York City as the common denominator to determine the overall average for each risk factor calculated. When the study subjects failed to respond to the question their lack of response was factored in under the category of “no response.”

Regarding HIV disclosure to their primary partner, more than half of those surveyed, 87 men chose to not respond to the question. In total, 72 men (42%) had disclosed their disease status to their primary partner, while 10 (6%) had chosen not to disclose, and only 2 (1%) could not recall if they had (see Figure 2). Of those who did respond, 85.7 percent or 72 out of 84 had disclosed their disease status.

The presence of social networks was stratified into two categories; having a friend they could share their joys and sorrows with and having a special someone with whom they could do that as well. In regards to friendship, 60 (35%) responded that they strongly agreed with that statement, 41 (24%) agreed, 23 (14%) neither agreed nor disagreed, 24 (14%) disagreed, and 16 (9%) strongly disagreed, with only 7 failing to answer the question (see Figure 3).

As for a special someone, 71 (48%) responded that they strongly agreed with that they have a special person they could share their joys and sorrows with, 32 (19%) agreed, 18 (11%) neither agreed nor disagreed, 22 (13%) disagreed, and 23 (13%) strongly disagreed, with only 6 failing to answer the question (see Figure 4).

Roughly 66% of participants stated that religion plays at least some positive impact on their lives. For 50 (29%) religion is very important, 42 (25%) stated religion is important, 21 (12%) reported that it is somewhat important, for 18 (11%) religion is slightly important and for 33 (19%) it is not at all important. Seven individuals did not respond to the question (see Figure 5).

The presence of risky behavior was assessed by intoxication during intercourse and having injected drugs. Of those surveyed 21 (12%) reported that in the last three months they had been intoxicated every time they engaged in intercourse, 45 (26%) were sometimes intoxicated, 20 (12%) were rarely intoxicated and 64 (38%) were never. In total, 21 men did not respond to the question (see Figure 6).

In regards to those who inject drugs, 29 (17%) of those surveyed reported having injected drugs at some point in their lives, 139 (81%) had never injected drugs and three did not respond

(see Figure 7). Of the 29 who said that they do inject drugs, 11 or 38 percent had disclosed their disease status to their primary partner (See Figure 8).

## DISCUSSION

The data collected from this cross-sectional study, much like the literature, indicates that social networks and support systems, including those that are religious in nature, are incredibly important when it comes to HIV disclosure and prevention.<sup>18,36</sup> Roughly 60% of participants stated that they had both friends and a special someone to share their joys and sorrows with, indicating a strong support network. Additionally, 66% reported that religion had at least some importance in their lives. As the literature indicates, these networks can be used to educate at risk individuals of precaution methods and a supportive network will increase the chances that the individual discloses their disease status to their friends, family and sexual partners, and that they receive medical treatment.<sup>16, 18,28, 36</sup> Unfortunately, only 42 percent of participants responded that they had disclosed their disease status to their primary partner, indicating a greater need for medical professionals to not only stress the importance of disclosure, but also provide patients with the resources necessary to have that conversation with their partner.<sup>28,29,37</sup> One reason for the large number of individuals who failed to respond could be due to the fact that they either do not have a primary sexual partner, are just not having sex at the time of the survey, or they did not fully understand what the question was asking them. However, a significant percent, 87.5 percent, of those who did answer this question responded that they had disclosed their disease status to their primary partner, indicating that there is an understanding within the HIV-positive community that it is important to disclose disease status to your primary partner.

The data also shows that almost 40% of those surveyed have engaged in risky behaviors which can increase one's chances of spreading and contracting HIV.<sup>5,14</sup> It was reported that 38%

of the men had been intoxicated during intercourse at least some of the time they had sex during the last three months and 17% reported having injected drugs at some point during their lives.

Of those who responded that they had injected drugs, only 38 percent had disclosed their disease status to their partner, which means there is still the perceived notion that disease disclosure is not necessary. This further increases ones risk for contracting HIV through participation in risky behaviors such as sharing needles.<sup>3, 5, 6, 34, 44, 45</sup> Additionally, since a significant proportion of those surveyed who do inject drugs have not disclosed their disease status to their primary partner, it is very likely that they also have not disclosed their HIV status to individuals they share needles with, putting them at an increased risk for contracting the disease as well.

### **Limitations**

Every study is subject to its limitations, and this one is not exempt. The main flaw in this study is that participants did not respond to every question. Although it is important for them to feel secure and free from bias when answering the questions, the project coordinators could have had surveyors to simply check at the end of the survey that each question had been answered without looking at each response.

Additionally, while this study does ask participants whether or not they have disclosed their disease status to their primary partners and asks as two separate questions about how open they are with their sexual orientation and disease status in general, it fails to pose a question specifically asking how comfortable they are as an HIV-positive homosexual male in public and their private lives. It also fails to ask whether they would disclose their status to a casual partner.

The first question is important to ask because if an individual does not feel comfortable with both their sexual orientation and their disease status, then it is unlikely that they would be comfortable discussing the disease with their partner(s), family and peers. This not only puts their sexual partners at risk, but potentially their family and friends who may accidentally come into contact with their blood. The second question is of equal importance as the literature shows that casual sex is common among the MSM population in New York City.

Another flaw in this study is that it only asked participants for race, not ethnicity, which fails to account for cultural differences surrounding sex and social networks. However, it does ask about the role religion plays, which is important because being a religious person may result in the individual delaying sexual intercourse, especially since many religions do not condone same sex relations.

The study's inability to secure a response to every question from every participant poses a final flaw to this study. As mentioned in the results section, 87 men failed to respond to the question regarding whether or not they had disclosed their HIV status to their primary partner. Upon further review to evaluate whether these men responded similarly to any of the other questions regarding the key risk factors, it was determined there were no outstanding characteristics that more than half of these 87 men shared.

### **Suggestions for improvement**

Studies looking at HIV transmission among MSM in urban centers must focus on the role that social support systems, the media and religion play. They must also identify effective intervention methods that target these networks while still making those who are perceived to be at risk feel like they have control over their lives.

The first step that those in the fight to end HIV transmission face, regardless of physical location in the world, is social acceptance and discussion. Despite a greater discussion and acknowledgement of HIV transmission and how to prevent it, PLWHA continue to be discriminated against due to the negative stigma surrounding HIV, particularly within its historical context. Oftentimes, PLWHA are assumed to be homosexual and presumed to have contracted the disease through carelessness. While we as society have come a long way since HIV first came under the radar in the United States in the 1980s, there is still quite a way to go. As previously mentioned, public health officials must work with the greater community, those who are homosexual, PLWHA, and educational institutions to encourage an open discussion of sexual activity and methods of prevention.

Another step, is for those who are teaching sexual education and doctors to emphasize the necessity of disclosing disease status to their partners and that if they choose not to disclose they should ensure consistent condom to prevent the spread of HIV and other STDs, instead of just as a way to prevent pregnancy. Additionally, they should be under ART to suppress their viral load to reduce the risk of transmission. ART coupled with consistent and correct condom use is an effective way to reduce transmission. They must also remind those whom they are educating that this applies to all individuals who are sexually active, not just those in a heterosexual relationship; that condoms should be used for vaginal and anal intercourse and that dental dams should be used during oral sex. Sexual education must also be framed in the context of both heterosexual and homosexual relationships, and more on prevention efforts rather than abstinence-only education, which has become commonplace in both public and private schools. It is also necessary to remind students and patients that an individual and their partner should get

tested when beginning a sexual relationship, and if one is or tests positive, it is necessary for them to disclose their status to their partner.

Along with education, educators and public health officials should work with communities to make free condoms readily accessible. Currently, free condoms are distributed throughout New York City through the NYC Condom campaign and can be found in the bathrooms of various bars and clubs in the East Village. While these resources are available, they may not be accessible or perceived as necessary. Some individuals choose to forgo condom use, especially in a homosexual relationship because there is no risk of pregnancy and also the perception that sex feels better without a condom.<sup>17</sup> Another opportunity to distribute condoms is through salons and barbershops which can also serve as sites for basic HIV and STD education.<sup>47,48</sup> Regardless of the ethnic community, customers form a relationship with the person cutting their hair. Those working in public health should educate barbers and stylists on HIV prevention so that they can serve as educators for their customers, who can then take what they learned home and implement safer sex techniques in their private lives.<sup>47,48</sup> Another community-based intervention is to target gay bars and clubs by putting out free condoms in the bathrooms for individuals to take at their own discretion, as well as placing flyers with tear-off tabs for those interested in prevention and treatment services to discretely pull off and place in their wallet.<sup>18, 21</sup> Health educators can also post advertisements for free testing sites and public service announcements regarding safe sex and correct condom use on online dating sites like Craigslist and Grindr.<sup>21</sup>

Another step to reduce the spread of HIV and other STDs is to actively discuss STD screenings at an individual's yearly check-up. This will eliminate the stigma that only those who engage in risky behaviors are at risk for contracting these diseases by providing individuals with

sexual health education which will give them the resources necessary to seek out testing services if necessary.

Finally, to effectively work to eradicate HIV, greater attention must be paid to HIV infection among injecting drug users and sex workers. Regarding the former, cities must increase accessibility to sites for clean needle exchange and encourage users to enter rehab. These sites are available but may not always be culturally acceptable or free from public discrimination, they also must be staffed with properly individuals trained in harm reduction with the ability to discuss these topics in a culturally sensitive manner. When it comes to sex workers, public health officials can recruit sex workers as peer educators to engage in outreach with their fellow sex workers and will be able to educate them on how to protect themselves from both violence and STDs. Additionally, law enforcement officials must receive trauma-informed trainings for when they are dealing with sex workers, as many are victims of on-going physical violence. Trauma-informed training educates law enforcement officials and others in power to steer away from the tendency to victim-blame, especially when it comes to prostitution and rape victims. As part of this training, officers should also be taught to inform sex workers who are brought in for either arrest or questioning of the services that are available to help them leave their work. As well as health services where they can receive HIV and STD screenings in addition to a basic check-up.

## **Conclusion**

In order to eradicate or severely diminish the persistence of HIV among other STDs, the culture surrounding it must change. Interventions that are put in place must be not only legally sound, but culturally sensitive as well.

In regards to the MSM population in New York City, programs that are to be implemented must not come from solely a policy-based approach, otherwise they will never work to their full potential. Public health officials, while they may know the information they want to relay to the public, must gather the help of trusted community members such as community leaders and leaders of faith-based organizations, so that these interventions are being implemented with an insider's assistance which can gain trust from community members. This community-based approach can also work to eliminate the stigma surrounding HIV as being a homosexual disease and one that stems from immoral activities. The interventions must also be targeted at social support systems and religious institutions to ensure those who are at risk that they have the support of their family and community, which will hopefully contribute to an increased disclosure rate.

## REFERENCES

- 1 U.S. Census Bureau. "Population Estimates, July 1, 2015, (V2015)." *U.S. Census Bureau*. N.p., n.d. Web. 21 Nov. 2016.
- 2 New York City Department of Health and Mental Hygiene. "HIV Surveillance Mid-Year Report, 2015." N.p., Apr. 2016. Web. 21 Nov. 2016.
- 3 Schneider, M. (2011). The Resurgence of Infectious Diseases. In *Introduction to public health* (3rd ed., pp. 151-172). Burlington, MA: Jones & Bartlett Learning.
- 4 Pizzo, P. A., & Wilfert, C. M. (1998). *Pediatric AIDS: the challenge of HIV infection in infants, children, and adolescents*. Philadelphia: Lippincott Williams & Wilkins.
- 5 Meyer- Bahlburg, H. F., Exner, T. M., Lorenz, G., Gruen, R. S., Gorman, J. M., & Ehrhardt, A. A. (1991). Sexual risk behavior, sexual functioning, and HIV- disease progression in gay men. *Journal of Sex Research*, 28(1), 3-27. doi:10.1080/00224499109551592
- 6 Wenz, B., Nielsen, S., Gassowski, M., Santos-Hövenner, C., Cai, W., Ross, R. S., . . . Zimmermann, R. (2016). High variability of HIV and HCV seroprevalence and risk behaviours among people who inject drugs: results from a cross-sectional study using respondent-driven sampling in eight German cities (2011–14). *BMC Public Health*, 16(1). doi:10.1186/s12889-016-3545-4
- 7 Forsyth, A. D., & Valdiserri, R. O. (2015). A State-Level Analysis of Social and Structural Factors and HIV Outcomes Among Men Who Have Sex With Men in the United States. *AIDS Education and Prevention*, 27(6), 493-504. doi:10.1521/aeap.2015.27.6.493
- 8 Golub, S. A., Gamarel, K. E., Rendina, H. J., Surace, A., & Lelutiu-Weinberger, C. L. (2013). From Efficacy to Effectiveness: Facilitators and Barriers to PrEP Acceptability and Motivations for Adherence Among MSM and Transgender Women in New York City. *AIDS Patient Care and STDs*, 27(4), 248-254. doi:10.1089/apc.2012.0419
- 9 Hergenrather, K. C., Emmanuel, D., Durant, S., & Rhodes, S. D. (2016). Enhancing HIV Prevention Among Young Men Who Have Sex With Men: A Systematic Review of HIV Behavioral Interventions for Young Gay and Bisexual Men. *AIDS Education and Prevention*, 28(3), 252-271. doi:10.1521/aeap.2016.28.3.252
- 10 AIDS Map. (n.d.). Zidovudine (AZT, Retrovir) - Effectiveness. Retrieved March 02, 2017, from <http://www.aidsmap.com/Effectiveness/page/1730905/>
- 11 World Health Organization. (n.d.). Antiretroviral therapy. Retrieved March 02, 2017, from [http://www.who.int/topics/antiretroviral\\_therapy/en/](http://www.who.int/topics/antiretroviral_therapy/en/)
- 12 UNAIDS. "Fact Sheet November 2016 | UNAIDS." *UNAIDS.org*. N.p., Nov. 2016. Web. 21 Nov. 2016.
- 13 UNAIDS. "HIV PREVALENCE MAP" Retrieved March 16, 2017, from [http://www.unaids.org/globalreport/HIV\\_prevalence\\_map.htm](http://www.unaids.org/globalreport/HIV_prevalence_map.htm)

- 
- 14 Solomon, Todd M., Perry N. Halkitis, Robert M. Moeller, Daniel E. Siconolfi, Mathew V. Kiang, and Staci C. Barton. (2011). Sex Parties among Young Gay, Bisexual, and Other Men Who Have Sex with Men in New York City: Attendance and Behavior. *Journal of Urban Health* 88.6 (2011): 1063-075.
  - 15 Centers for Disease Control and Prevention. "Morbidity and Mortality Weekly Report." *cdc.gov*. N.p., 1 June 2001. Web. 21 Nov. 2016.
  - 16 Tieu, H., Nandi, V., Hoover, D. R., Lucy, D., Stewart, K., Frye, V., . . . Koblin, B. A. (2016). Do Sexual Networks of Men Who Have Sex with Men in New York City Differ by Race/Ethnicity? *AIDS Patient Care and STDs*,30(1), 39-47. doi:10.1089/apc.2015.0237
  - 17 Beyrer, C., Baral, S., Van Griensven, F., Goodreau, S., Chariyalertsak, S., Wirtz, A., & Brookmeyer, R. (2012). Global epidemiology of HIV infection in men who have sex with men. *Lancet*, 367-377. doi: 10.1016/S0140-6736(12)60821-6
  - 18 Kobrak, P., Ponce, R., & Zielony, R. (2015). New Arrivals to New York City: Vulnerability to HIV among Urban Migrant Young Gay Men. *Archives of Sexual Behavior*,44(7), 2041-2053. doi:10.1007/s10508-015-0494-4
  - 19 Jenness, S. M., Myers, J. E., Neaigus, A., Lulek, J., Navejas, M., & Raj-Singh, S. (2012). Delayed entry into HIV medical care after HIV diagnosis: Risk factors and research methods. *AIDS Care*,24(10), 1240-1248. doi:10.1080/09540121.2012.656569
  - 20 "GMHC | Current HIV Statistics." N.p., n.d. Web. 19 Jan. 2017.
  - 21 Grov, C., Agyemang, L., Ventuneac, A., & Breslow, A. S. (2013). Navigating Condom Use and HIV Status Disclosure with Partners Met Online: A Qualitative Pilot Study with Gay and Bisexual Men from Craigslist.Org. *AIDS Education and Prevention*, 25(1), 72-85. doi:10.1521/aeap.2013.25.1.72
  - 22 New York State Department of Health. (Sept. 2016). *New York State HIV Epidemiological Profile*. Retrieved March 09, 2017, from [https://www.health.ny.gov/diseases/aids/general/statistics/epi/docs/epi\\_profile2016.pdf](https://www.health.ny.gov/diseases/aids/general/statistics/epi/docs/epi_profile2016.pdf)
  - 23 NYC Department of Health and Mental Hygiene, HIV Epidemiology and Field Services Program. (dec 2016). *HIV/AIDS Among Men Who Have Sex With Men(MSM) in NYC, 2015*.
  - 24 Reilly, K. H., Neaigus, A., Jenness, S. M., Wendel, T., Hagan, H., Marshall, D. M., . . . Koblin, B. A. (2014). Trends in HIV Prevalence and Risk Behavior Among Men Who Have Sex With Men in New York City, 2004–2011. *AIDS Education and Prevention*,26(2), 134-143. doi:10.1521/aeap.2014.26.2.134
  - 25 Vangroenweghe, D. (2001). The earliest cases of human immunodeficiency virus type 1 group M in Congo-Kinshasa, Rwanda and Burundi and the origin of acquired immune deficiency syndrome. *Philosophical Transactions of the Royal Society B: Biological Sciences*,356(1410), 923-925. doi:10.1098/rstb.2001.0876
  - 26 New York City Department of Health. (n.d.). A brief history of the New York City Condom Availability Program. Retrieved March 15, 2017, from

---

<https://www1.nyc.gov/assets/doh/downloads/pdf/condoms/condom-availability-timeline.pdf>

- 27 Centers for Disease Control. (1982, June 18). A Cluster of Kaposi's Sarcoma and Pneumocystis carinii Pneumonia among Homosexual Male Residents of Los Angeles and range Counties, California. Retrieved April 25, 2017, from <https://www.cdc.gov/mmwr/preview/mmwrhtml/00001114.htm>
- 28 Conserve, D. F., & King, G. (2014). An examination of the HIV serostatus disclosure process among Haitian immigrants in New York City. *AIDS Care*, 26(10), 1270-1274. doi:10.1080/09540121.2014.902422
- 29 Stutterheim, S. E., Shiripinda, I., Bos, A. E., Pryor, J. B., Bruin, M. D., Nellen, J. F., . . . Schaalma, H. P. (2011). HIV status disclosure among HIV-positive African and Afro-Caribbean people in the Netherlands. *AIDS Care*, 23(2), 195-205. doi:10.1080/09540121.2010.498873
- 30 N.Y. Public Health Law § 27-F (NYS DOH).
- 31 New York State Department of Health, AIDS Institute . (n.d.). *Authorization for Release of Health Information and Confidential HIV-Related Information*.
- 32 NY State Senate Bill S3449. (2017, March 07). Retrieved March 16, 2017, from <https://www.nysenate.gov/legislation/bills/2017/S3449>
- 33 NY State Senate Bill S844. (2017, March 07). Retrieved March 16, 2017, from <https://www.nysenate.gov/legislation/bills/2017/S844>
- 34 Brecht, M., Stein, J., Evans, E., Murphy, D. A., & Longshore, D. (2008). Predictors of Intention to Change HIV Sexual and Injection Risk Behaviors among Heterosexual Methamphetamine-Using Offenders in Drug Treatment: A Test of the AIDS Risk Reduction Model. *The Journal of Behavioral Health Services & Research*, 36(2), 247-266. doi:10.1007/s11414-007-9106-y
- 35 Salud, M. C., Marshak, H. H., Natto, Z. S., & Montgomery, S. (2013). Exploring HIV-testing intentions in young Asian/Pacific Islander (API) women as it relates to acculturation, theory of gender and power (TGP), and the AIDS risk reduction model (ARRM). *AIDS Care*, 26(5), 642-647. doi:10.1080/09540121.2013.841836
- 36 Burnham, K. E., Cruess, D. G., Kalichman, M. O., Grebler, T., Cherry, C., & Kalichman, S. C. (2015). Trauma symptoms, internalized stigma, social support, and sexual risk behavior among HIV-positive gay and bisexual MSM who have sought sex partners online. *AIDS Care*, 28(3), 347-353. doi:10.1080/09540121.2015.1096894 Centers for Disease Control and Prevention(A). "HIV in the United States: At A Glance." *CDC.gov*. N.p., July 2015. Web. 21 Nov. 2016.
- 37 Siconolfi, D. E., Halkitis, P. N., Moeller, R. W., Barton, S. C., & Rodriguez, S. M. (2011). HIV Testing in a New York City Sample of Gay, Bisexual, and Other Young Men Who Have Sex with Men. *Journal of Gay & Lesbian Social Services*, 23(3), 411-427. doi:10.1080/10538720.2011.590781

- 
- 38 Wilson, P. A., Wittlin, N. M., Muñoz-Laboy, M., & Parker, R. (2011). Ideologies of Black churches in New York City and the public health crisis of HIV among Black men who have sex with men. *Global Public Health*, 6(Sup2). doi:10.1080/17441692.2011.605068
- 39 Harris, A. C. (2009). Sex, Stigma, and the Holy Ghost: The Black Church and the Construction of AIDS in New York City. *Journal of African American Studies*, 14(1), 21-43. doi:10.1007/s12111-009-9105-6
- 40 Jeffries, W. L., Dodge, B., & Sandfort, T. G. (2008). Religion and spirituality among bisexual Black men in the USA. *Culture, Health & Sexuality*, 10(5), 463-477. doi:10.1080/13691050701877526
- 41 D'anna, L., Margolis, A., Warner, L., Korosteleva, O., O'donnell, L., Rietmeijer, C., . . . Group, T. S. (2012). Condom use problems during anal sex among men who have sex with men (MSM): Findings from the Safe in the City Study. *AIDS Care*, 24(8), 1028-1038. doi:10.1080/09540121.2012.668285
- 42 Silva, A. P., Greco, M., Fausto, M. A., Greco, D. B., & Carneiro, M. (2014). Risk Factors Associated with HIV Infection among Male Homosexuals and Bisexuals Followed in an Open Cohort Study: Project Horizonte, Brazil (1994-2010). *PLoS ONE*, 9(10). doi:10.1371/journal.pone.0109390
- 43 Drabkin, A. S., Sikkema, K. J., Wilson, P. A., Meade, C. S., Hansen, N. B., Delorenzo, A., . . . Mayer, G. (2013). Risk Patterns Preceding Diagnosis Among Newly HIV-Diagnosed Men Who Have Sex with Men in New York City. *AIDS Patient Care and STDs*, 27(6), 333-341. doi:10.1089/apc.2012.0313
- 44 UNAIDS. "Report on the Global AIDS Epidemic 2012." (n.d.). Retrieved March 20, 2017, from [http://www.unaids.org/en/resources/documents/2012/20121120\\_UNAIDS\\_Global\\_Report\\_2012](http://www.unaids.org/en/resources/documents/2012/20121120_UNAIDS_Global_Report_2012)
- 45 Razzaghi E RA, Hosseni M and Chatterjee A. Rapid Situation Assessment (RSA) of Drug Abuse in Iran (1998-1999). *Tehran: Iranian Welfare Organization and United Nations International Drug Control Program*; 1999.
- 46 Rosser, B. S., Horvath, K. J., Hatfield, L. A., Peterson, J. L., Jacoby, S., Stately, A., & Team, T. P. (2008). Predictors of HIV disclosure to secondary partners and sexual risk behavior among a high-risk sample of HIV-positive MSM: results from six epicenters in the US. *AIDS Care*, 20(8), 925-930. doi:10.1080/09540120701767265
- 47 Nation's Health. New York health department links with hair salons to offer HIV tests. (2009, March), p. 8.
- 48 Richard, D. (2011, June). Shave and a haircut, two bits (condoms, gratis). *Contemporary Sexuality*.

---

**APPENDIX**

Map 1: World map of HIV prevalence, 2009 – UNAIDS<sup>13</sup>

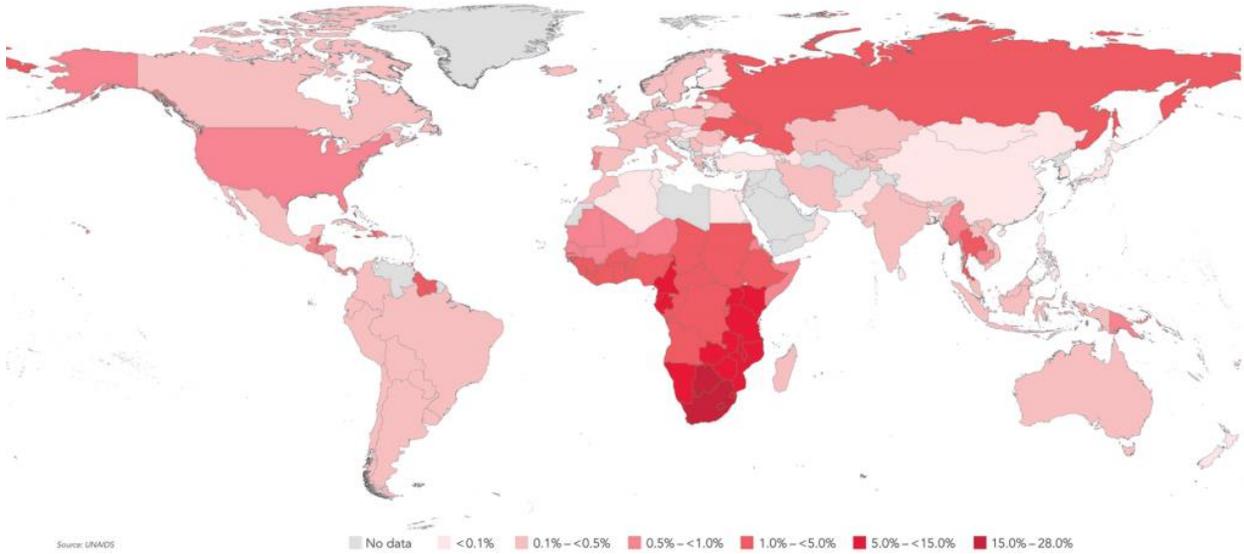


FIGURE ERROR! MAIN DOCUMENT ONLY.

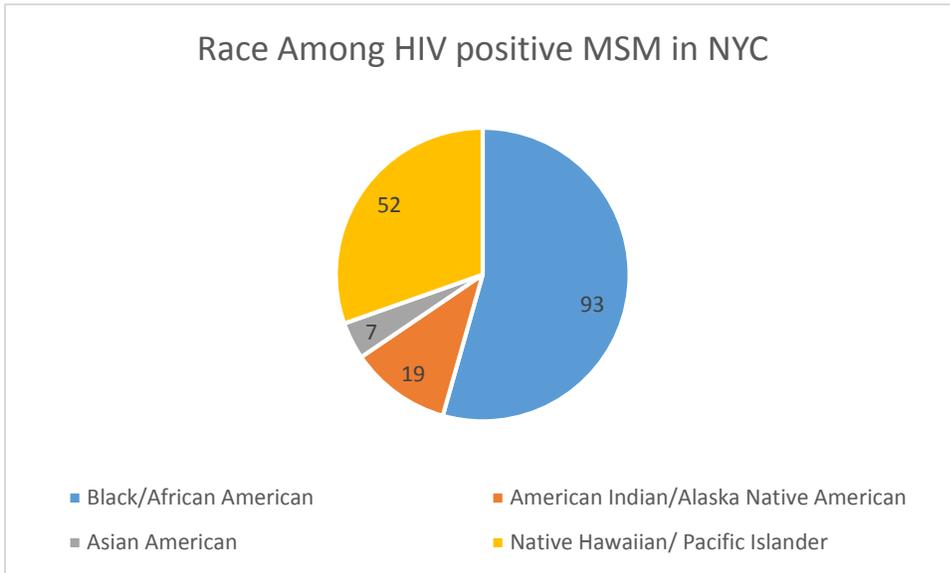


FIGURE ERROR! MAIN DOCUMENT ONLY.

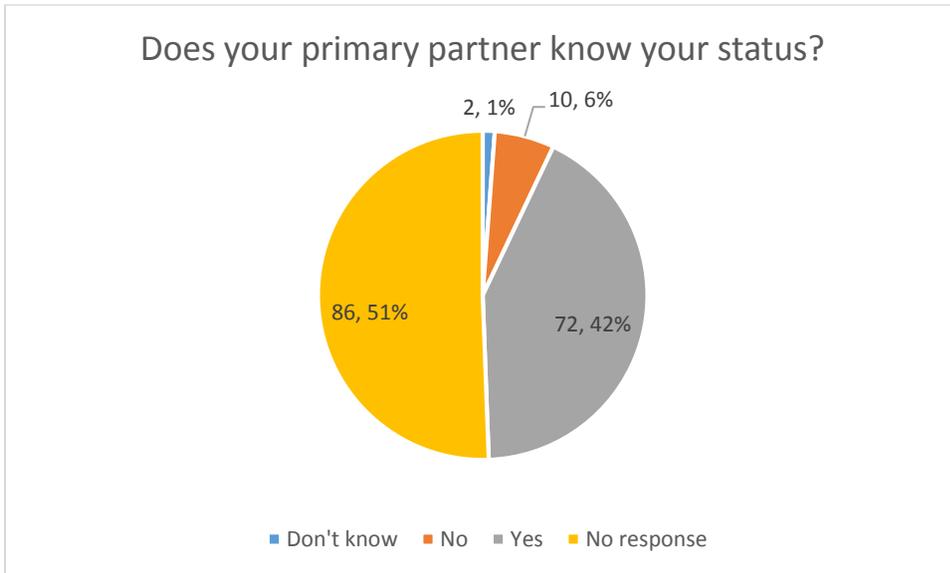


FIGURE ERROR! MAIN DOCUMENT ONLY.

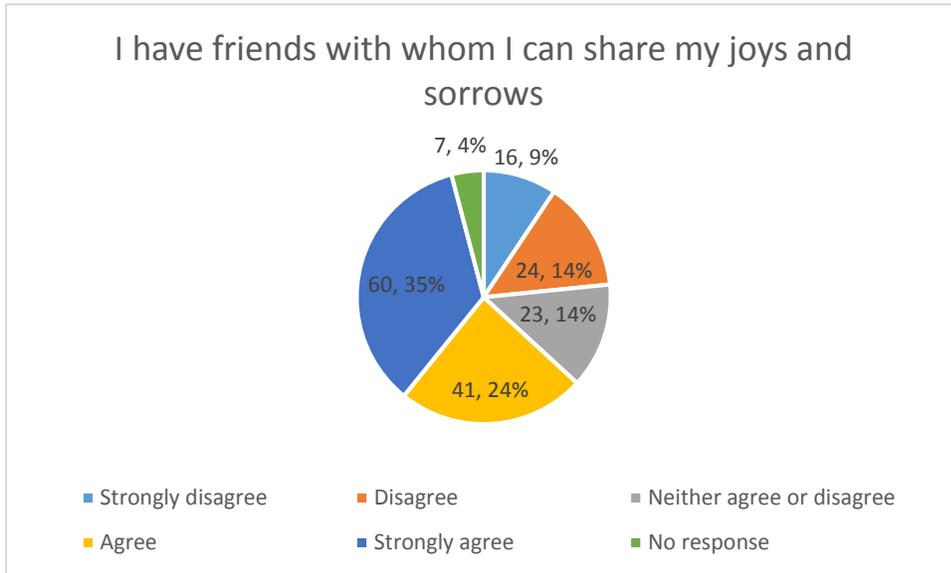


FIGURE ERROR! MAIN DOCUMENT ONLY.

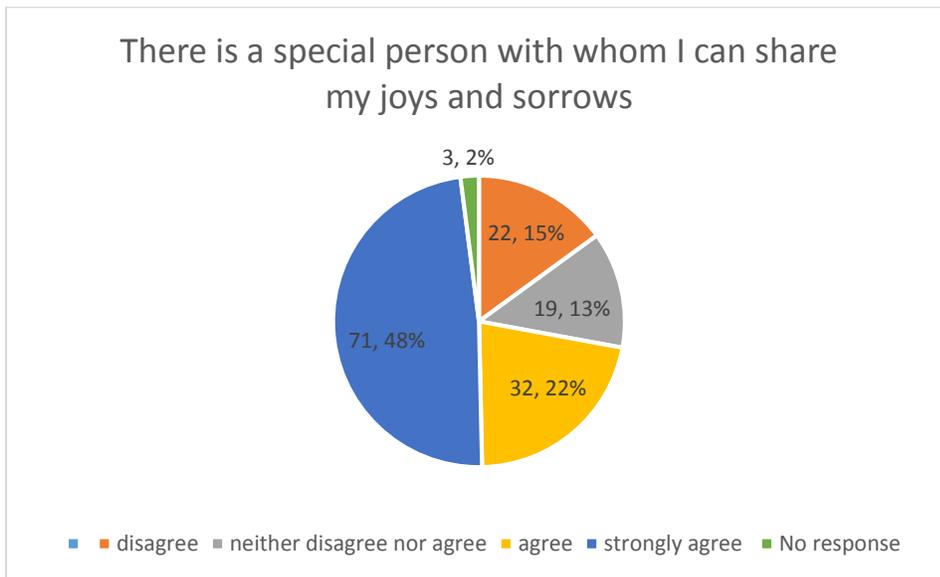


FIGURE ERROR! MAIN DOCUMENT ONLY.

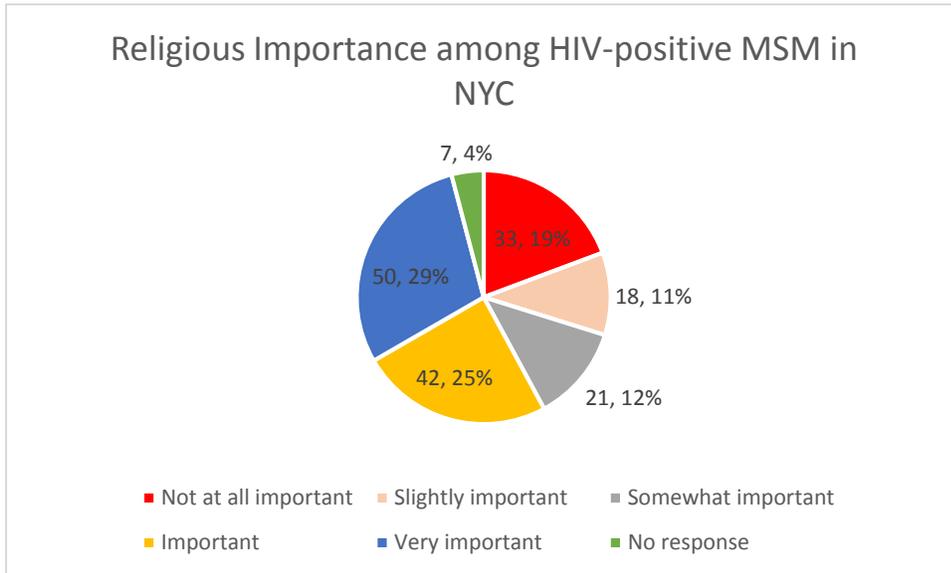


FIGURE ERROR! MAIN DOCUMENT ONLY.

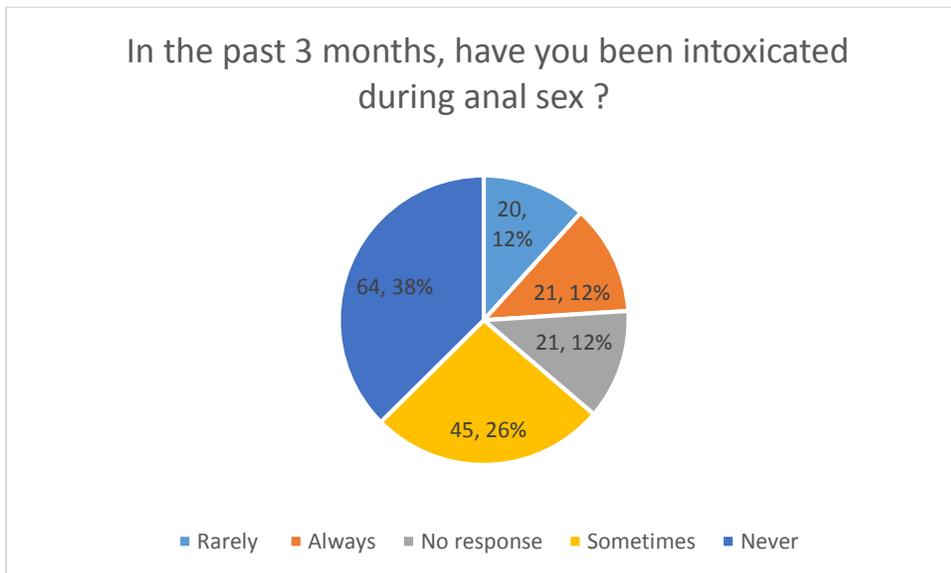


FIGURE ERROR! MAIN DOCUMENT ONLY.

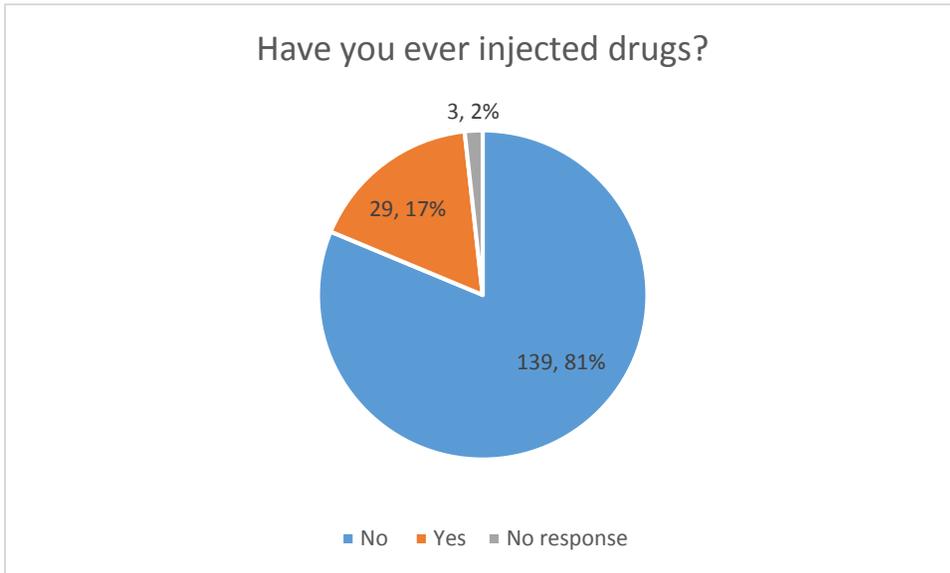


FIGURE 8

