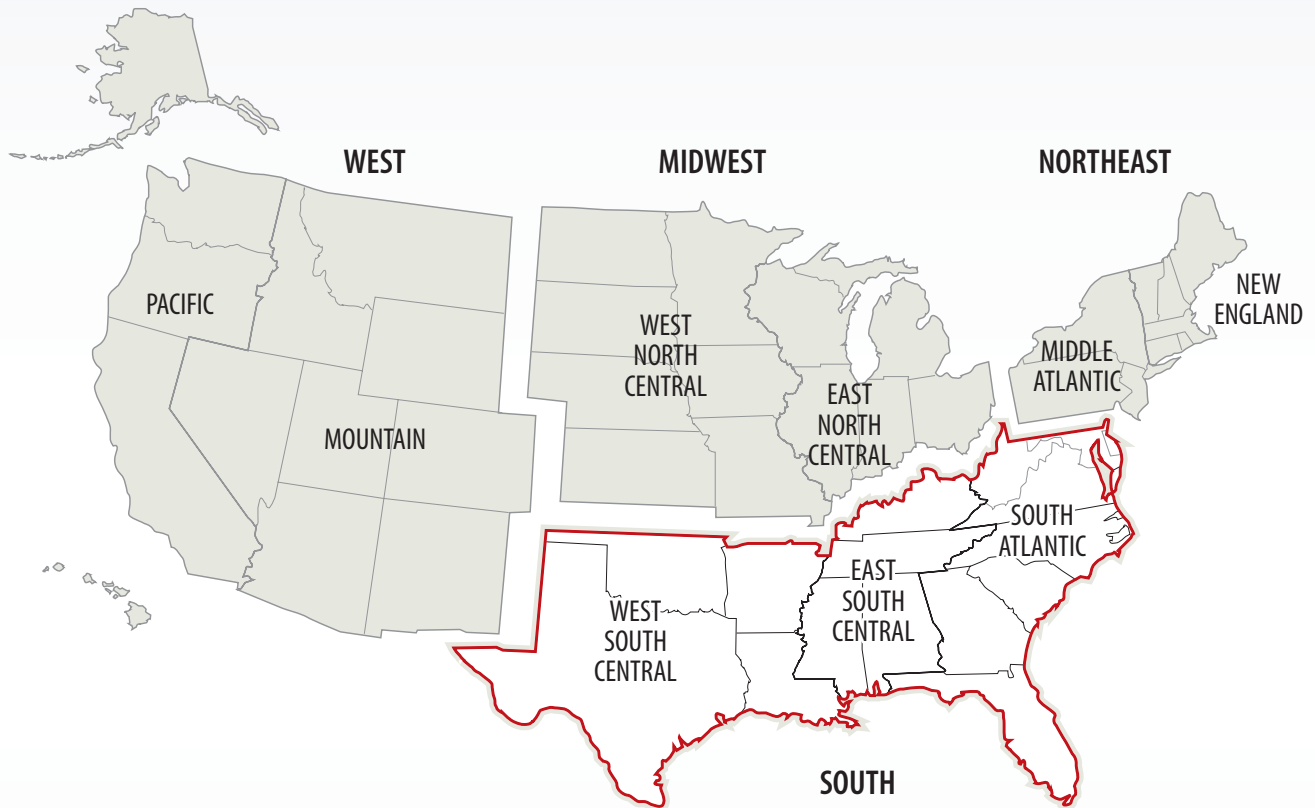


STILL CAUGHT IN THE STORM

THE CONTINUING CRISIS OF HIV/AIDS
AMONG GAY, BISEXUAL, AND OTHER MEN
WHO HAVE SEX WITH MEN
IN THE SOUTHERN UNITED STATES



CENSUS REGIONS AND DIVISIONS OF THE UNITED STATES



SOUTH REGION

Alabama
Arkansas
Delaware
District of Columbia
Florida
Georgia

Kentucky
Louisiana
Maryland
Mississippi
North Carolina
Oklahoma

South Carolina
Tennessee
Texas
Virginia
West Virginia

BACKGROUND

The Southern AIDS Coalition (SAC) prepared this report to provide information that can help control the spread of HIV/AIDS in the South. SAC is a non-governmental, public health organization dedicated to combating HIV through advocacy and action. SAC develops HIV program and policy recommendations and monitors the course of the HIV epidemic in the 17 states of the southern region of the U.S.

In 2009, SAC first published a technical article in the Journal of Urban Health, where the goal was to estimate how many gay, bisexual, and other men who have sex with men (MSM) from each racial or ethnic group reside in each of the southern states.¹ The report was sponsored by SAC's National Policy Center. Then, in 2010, in collaboration with the Centers for Disease Control and Prevention (CDC), SAC published a second article in the journal AIDS and Behavior, which estimated HIV/AIDS prevalence rates among southern MSM.² This current report seeks to expand on these two unique articles to advance HIV prevention and patient care efforts among MSM in the South.

The first steps in fighting any epidemic are **1)** knowing how many people are at risk and **2)** understanding which of these people are infected. Therefore, we hope that these numbers will help officials plan where and how to place limited HIV/AIDS prevention and patient care resources. We hope to help communities devise new strategies to confront local epidemics. We recognize that a publication in a scientific journal probably would not reach all of the people who can make a difference by using this information.

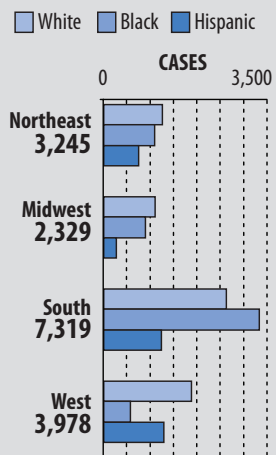
In this combined version of the two technical reports we will share with you the research we conducted, and we will do this using everyday language. A common term that we intend to clarify is one used by many in public health, "MSM". This term was created to help public health officials keep in mind that not all men who have sex with men identify themselves as "gay" or "bisexual". So throughout the report we will frequently – but not always – use the term MSM to refer to any man who has had sex with other men, whether or not he identifies as gay or bisexual. We tend to use the terms gay and bisexual at other times, often when referring to individuals and communities based on sexual identities.

The Southern AIDS Coalition (SAC) conceived and developed this report.

INTRODUCTION

The South has **33%** of all MSM in the U.S., but a full **43%** of all new AIDS cases among MSM in 2007.

figure
Number of AIDS cases among MSM, by region and race/ethnicity*
United States, 2007



*Numbers of cases among those of other race/ethnicity not shown (Asians, Native Hawaiians/other Pacific Islanders, American Indians/Alaska Natives), but included in totals.
Source: CDC. HIV/AIDS Surveillance in Men Who Have Sex With Men (MSM) (slide set). July 2009.

Since the beginning of the epidemic in the U.S., HIV/AIDS has been a continuing crisis for MSM, in particular. From the mid-1980s into the early 1990s, many gay/bisexual men diligently educated and informed their peers about how to reduce risk behaviors, allowing some of the most devastated communities a fighting chance to drive the epidemic out. In some major urban areas, peer education and public health efforts brought new HIV infections among gay and bisexual residents down by two-thirds or more.³ However, today many MSM are once again becoming HIV infected at high rates, perhaps because they no longer believe HIV is a threat. Perhaps new generations of MSM are also not receiving the intensive education that previous generations had.⁴

Each year, more new HIV infections (“incidence”) occur among MSM than among any other group, and MSM still make up the largest number of all people living with HIV (“prevalence”) in the U.S.^{5,6} MSM in the South currently shoulder a disproportionate share of the epidemic. Compared with the three other regions of the country, the South is home to an estimated 33% of all MSM,¹ but accounts for 43% of newly reported AIDS cases among MSM in 2007.⁷ The South is the only region where AIDS cases among non-Hispanic black MSM outnumber those among non-Hispanic white MSM (Figure). In 2008, 13 of the 15 states in the U.S. ranked as lowest in “overall health” were located in the South.⁸

This report focuses on MSM living with HIV/AIDS in the South at the end of 2007. (These data are estimates based on reported HIV/AIDS cases that are adjusted for reporting delays and reassignment of cases with no identified risk into risk categories.⁹) HIV/AIDS has impacted MSM of each racial and ethnic group to different extents due to a variety of underlying issues. One of the main reasons that HIV impacts all groups of MSM so much is simply because so many of them are living with the virus (diagnosed or not) that the chance of having an HIV-infected partner is higher each time an uninfected MSM has unprotected sex. Another reason for the greater risk is that it is easier to spread HIV through anal sex than through other types of sex. This is because the rectum absorbs HIV more easily than other parts of the body.

MSM may not want to talk about HIV out of fear of being rejected by partners or friends. So these MSM may not know their true risks. Here in the U.S., where same-sex behavior is still often criticized and



ACTION ACROSS ALL LEVELS OF SOCIETY IS NEEDED

judged, some MSM do not want to reveal their behaviors or their HIV infection to others, or they may be in denial themselves. This makes planning for safer sex a challenge.

Decreasing the number of new HIV infections among MSM requires action across all levels of society: individuals, families of all kinds, organizations, and social institutions. Members of gay and bisexual communities and other MSM can change their own risk behaviors. They can also advocate against and repair the damage from homophobia, HIV stigma, and racism. At the same time, many other institutions and groups need to help bring about change. These include federal, state, and local public health agencies; community partners; health care providers; churches, schools, and parents; the media; and the general public.

Our research shows that MSM still face the highest chance of having HIV or AIDS by far. We recognize that sharing this information might initially make people feel powerless or even stigmatized. But it was a clear understanding of HIV's risk that mobilized gay and bisexual communities throughout the 1980s and early 1990s to educate their peers and slow HIV's spread. We believe the compelling data and the recommendation of practices and policies presented in this report could once again mobilize communities and lead to a reduction in new HIV/AIDS cases, HIV/AIDS deaths, and HIV/AIDS-related stigma in all racial/ethnic groups of southern MSM.

Repair the damage
from homophobia,
HIV stigma,
and racism.



This report should help people take new steps to fight HIV.

GOAL

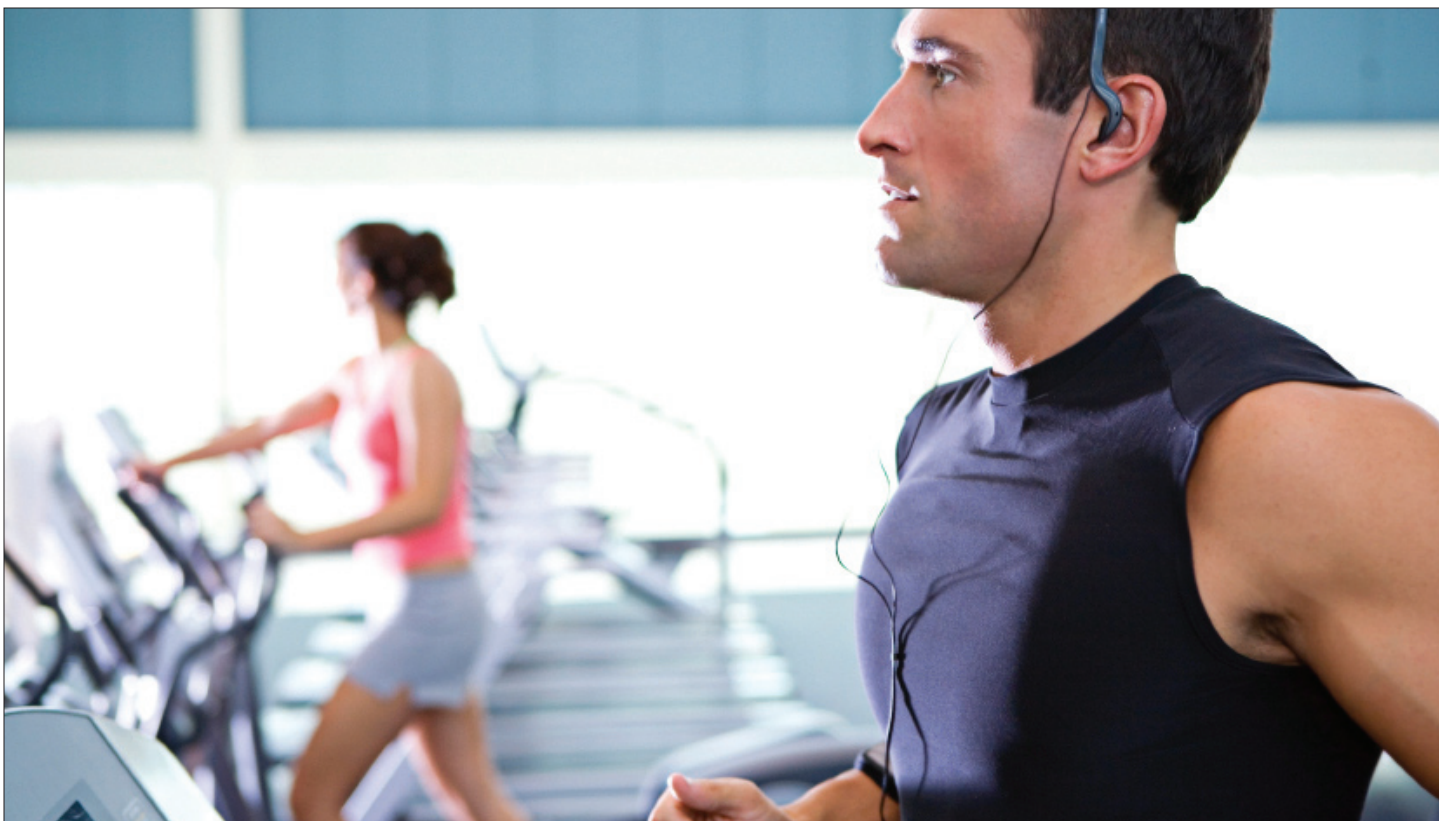
Enlist the support of sufficient numbers of MSM to stem the tide of new HIV infections.

OBJECTIVES

This report should help people take new steps to fight HIV. We hope that the following changes will occur:

- Clinicians, public health agencies, and community-based organizations will develop new strategies to increase HIV awareness and improve efforts focused on gay, bisexual, and other MSM.
- Gay, bisexual, and other MSM will be motivated to become involved in keeping themselves and their peers healthy, including wanting to protect themselves from HIV.
- Gay community leaders will speak to key leaders in local governments and communities about how HIV has harmed their community for decades. They will show how and why stereotypes and discrimination make it harder to stop HIV's spread.
- Public health and gay leaders will encourage local governments and communities to re-examine existing policies and priorities and enhance their HIV prevention and patient care strategies targeting MSM.
- Peers and people working at agencies that serve gay, bisexual, and other MSM will get more of them to be tested regularly for HIV and other sexually transmitted diseases (STDs), and to get treatment if needed.

We have numerous and specific suggestions to meet these objectives, as discussed in the report's Recommendations section.



DEFINITION OF MSM

For this report, we defined “MSM” as any adult male 18 years of age and older who ever had sex with another male, whether this was anal sex or oral sex. We used this broad definition because it is the same that was used in our two previously published scientific reports.^{1,2} It is also similar to the definition in another key study that we relied on to develop our published MSM population estimates in the South.¹⁰ And it is similar to the way the states and CDC collect data on the HIV/AIDS surveillance reporting form.¹¹ In this definition, we also included MSM who ever used injection drugs.

We said earlier that the term MSM means men who have sex with men. About 20 years ago, public health officials began using this term to emphasize that a man’s behavior determines his risk, whether or not he identifies himself as gay or bisexual. We use the broad definition of MSM to make sure we include all of the men who might have had sex with other men, regardless of identity.¹² This is also the term that CDC and most published articles use.

Use of the term “MSM” helps us to keep in mind that some new HIV/AIDS cases get assigned to the wrong HIV risk group because men might claim their only risk is heterosexual sex or injection drug use. MSM who do not identify as gay or bisexual could be harder to recruit to new HIV prevention community efforts. While most urban areas have a gay community, there may not be any “community” of non-gay-identified MSM who will work together as a group.^{13,14} We use “gay” and other identity terms to encourage community responses.

Use of the term “MSM” helps us to keep in mind that some new HIV/AIDS cases get assigned to the wrong HIV risk group because men might claim their only risk is heterosexual sex or injection drug use.

There are an estimated **2.4 million** MSM in the South. Nearly **175,000** of them are living with HIV/AIDS. Overall, **7.2%** of southern MSM are living with HIV/AIDS.

Identity and community are central reasons to why people act. We look at contexts within which people act, and we promote effective mobilization. These responses will likely originate in communities of gay men or those who identify with other sexual minority groups.

We also recognize that just as some people wish to avoid the labels and stigma they may be subject to if they “come out” as gays, bisexuals, or MSM, there can be another stigma when they acknowledge that they have HIV or AIDS. Some men might be willing to identify themselves as gay or bisexual as long as they remain uninfected. But they may feel that admitting they were infected with HIV through male-to-male sexual contact will bring too much judgment.

THE FINDINGS

table 1.

Estimated numbers of men who have sex with men (MSM), and numbers and rates of MSM living with HIV/AIDS, by state, southern United States, through 2007

	Estimated Number of MSM*	Estimated Number of MSM PLWHAs**	Estimated Percentage (Rate) of MSM Living with HIV/AIDS**
Alabama	71,726	5,180	7.2%
Arkansas	46,385	2,699	5.8%
Delaware	20,111	1,197	6.0%
District of Columbia***	29,065	7,580	26.1%
Florida	517,299	41,897	8.1%
Georgia	220,946	16,679	7.5%
Kentucky	71,959	3,374	4.7%
Louisiana	82,842	8,101	9.8%
Maryland	137,697	8,696	6.3%
Mississippi	36,744	3,742	10.2%
North Carolina	167,955	10,116	6.0%
Oklahoma	66,290	3,091	4.7%
South Carolina	83,424	6,156	7.4%
Tennessee	123,980	7,978	6.4%
Texas	537,887	37,174	6.9%
Virginia	176,884	10,218	5.8%
West Virginia	26,870	833	3.1%
TOTAL	2,418,064	174,709	7.2%

MSM=men who have sex with men; PLWHA=person living with HIV/AIDS.

*Estimated numbers of MSM are from reference #1 (Journal of Urban Health, 2009).

**PLWHA numbers and rates are from reference #2 (AIDS and Behavior, 2010).

***The District of Columbia is treated as if it were a state.

Table 1. This table shows the total number of gay, bisexual, and other MSM we think reside in each of the 17 southern states and how many are living with HIV or AIDS (based on reported cases⁹). Based on these two sets of numbers, a final column shows the overall rate of MSM who might have HIV/AIDS, expressed as a percentage. Although these estimates are presented as “exact” numbers for convenience, we recognize that they are actually approximations.



One shortcoming of the estimates is that they have not yet been examined by statewide behavioral surveys or other modeling procedures. However, as far as we know, they are the best available estimates at present.

The first column of the table shows that we estimate there are nearly two-and-a-half million gay, bisexual, and other MSM living in the South in 2007.¹ More MSM live in Texas (537,887) and Florida (517,299) than any of the other southern states. Delaware has the fewest overall number of MSM (20,111). Table 4 in Appendix 1 shows the estimated numbers of MSM according to race/ethnicity for each state.

The second column shows the total number of MSM living with HIV/AIDS in each state.² We use the abbreviation “PLWHAs” to mean “persons living with HIV or AIDS.” Only those who are aware of their HIV infection and have been reported to the HIV/AIDS surveillance systems are included in the PLWHA numbers. Florida has more MSM living with HIV or AIDS than any other southern state (41,897), followed by Texas (37,174).

The third column of Table 1 shows the estimated MSM PLWHA rates, which are a measure of the impact of HIV/AIDS on living MSM. The rate provides a way to directly compare that impact across or within states, no matter how large the number of MSM. Here, the rate is expressed as a percentage, and it equals the estimated number of MSM living with HIV/AIDS divided by the number of MSM and multiplied by 100. (Note: Often the rate is expressed as “per 100,000 population”.)

The HIV/AIDS prevalence rate enables direct comparison of impact on various groups of MSM.

Overall, in the South,
through 2007,
an estimated
1 in 14 MSM were
living with HIV/AIDS:

- **1 in 5** Black MSM
- **1 in 16** Hispanic MSM
- **1 in 22** White MSM

The overall estimated MSM PLWHA rate in the South was 7.2% (or 7,200 per 100,000 MSM.) The MSM PLWHA rate ranged from a low of 3.1% in West Virginia to a high of 26.1% in the District of Columbia (D.C.), which is treated as if it were a state. By contrast, in the general population of the U.S., the estimated HIV prevalence rate is approximately 0.4%, or four-tenths of one percent.⁴ The HIV prevalence rate estimate for the U.S. includes all those who are diagnosed and reported with HIV, as well as those who are HIV-infected but unaware of it.¹⁵

table 2.

Estimated PLWHA rates among MSM, by race/ethnicity, southern United States, through 2007*

BLACK/AFRICAN AMERICAN		HISPANIC/LATINO		WHITE		TOTAL	
State	One in	State	One in	State	One in	State	One in
D.C.	2	D.C.	6	D.C.	7	D.C.	4
Mississippi	4	Louisiana	10	Florida	17	Louisiana	10
Tennessee	4	Florida	11	Louisiana	17	Mississippi	10
Alabama	5	Kentucky	12	Texas	17	Florida	12
Arkansas	5	Mississippi	14	Mississippi	21	Georgia	13
Delaware	5	Alabama	18	Arkansas	23	Alabama	14
Florida	5	Texas	19	Alabama	25	South Carolina	14
Georgia	5	Virginia	19	Tennessee	25	Texas	14
Kentucky	5	North Carolina	21	Oklahoma	26	Maryland	16
Louisiana	5	South Carolina	21	South Carolina	26	Tennessee	16
Maryland	5	Delaware	22	Georgia	27	Arkansas	17
North Carolina	5	West Virginia	23	Kentucky	27	Delaware	17
South Carolina	5	Maryland	24	Delaware	28	North Carolina	17
Texas	5	Tennessee	24	Virginia	29	Virginia	17
Virginia	5	Georgia	26	North Carolina	33	Kentucky	21
Oklahoma	6	Oklahoma	26	West Virginia	37	Oklahoma	21
West Virginia	6	Arkansas	33	Maryland	38	West Virginia	32
TOTAL	5	TOTAL	16	TOTAL	22	TOTAL	14

PLWHA = person living with HIV/AIDS; MSM = men who have sex with men; D.C. = District of Columbia, which is treated as if it were a state.

*States are ranked from highest to lowest PLWHA rates, by race/ethnicity.

Source: Reference #2 (AIDS and Behavior, 2010).

Table 2. Another way to think about how HIV and AIDS impact MSM is to estimate, on average, how many MSM you would have to sample in a state before you would find one who is living with HIV or AIDS (based on reported cases⁹). This rate is referred to as a “one-in statement”. The one-in number is equal to the number of MSM divided by the number of MSM PLWHAs, rounded to the nearest whole number. The lower the one-in number, the higher the rate of MSM living with HIV or AIDS. For example, in D.C., an estimated total of 1 in 4 MSM were living with HIV/AIDS through 2007, which is the highest total PLWHA rate. Table 2 ranks the states from highest to lowest estimated PLWHA rate for each racial/ethnic group of MSM.



We have presented Table 2 because many readers find it easier to picture what rates mean when they are presented as “one-in” statements, which are equivalent to the percentage of MSM that are living with HIV/AIDS. Also, the rounded numbers in this table reflect the lack of precision or exactness of the estimated PLWHA rates. There were not enough MSM PLWHA cases to calculate reliable PLWHA rates for each of the individual groups of other minority MSM populations, such as Asians, Native Hawaiians/Other Pacific Islanders and American Indians/Alaska Natives.

Each of the southern states had high PLWHA rates among their racial/ethnic groups of MSM. When focusing specifically on black MSM, the rates were the highest and also the most similar from one state to the next. This means that HIV/AIDS is having a greater and more consistent impact on black MSM across the states than on white or Hispanic MSM. Twelve of the 17 states had a black MSM PLWHA rate of approximately 1 in 5. The lowest PLWHA rate among black MSM (1 in 6 in West Virginia and Oklahoma) exceeded the highest PLWHA rate among white MSM (1 in 7 for D.C). For Hispanic MSM, the estimated rates were lower than those for black MSM, but usually higher than those for white MSM. Two exceptions were Arkansas and Texas, where the HIV/AIDS rates were higher among white MSM than among Hispanic MSM.

HIV/AIDS is having a greater and more consistent impact on black MSM across the states than on white or Hispanic MSM.

In the South, the overall rate of MSM living with HIV/AIDS was **36 times** that of all other males.

table 3.

Estimated PLWHA rates among MSM and other adult males, by race/ethnicity, southern region of the United States, through 2007*

Race/ Ethnicity	ESTIMATED MSM PLWHA RATE		ESTIMATED OTHER ADULT MALE PLWHA RATE		
	Percent	One-in	Percent	One-in	Rate Ratio**
Black/AA	21.3	5	0.85	118	25.2
Hispanic/Latino	6.4	16	0.15	668	43.0
White	4.6	22	0.04	2,305	106.0
Total	7.2	14	0.20	496	36.1

MSM=men who have sex with men; PLWHA=person living with HIV/AIDS; AA=African American.

*Data shown are for the 17 southern states combined.

**The rate ratio used here is the unrounded PLWHA rate (also known as the percent infected) among each racial/ethnic group of MSM divided by the unrounded PLWHA rate in the corresponding other male racial/ethnic group.

Source: Reference #2 (AIDS and Behavior, 2010).

Table 3. In this table, for the sake of comparison, we show the rates of MSM who are living with HIV or AIDS and then compare these rates to those for all males who are not MSM in the southern region, with data from all 17 states combined. In each racial or ethnic group, MSM face far higher HIV/AIDS rates than do other men in the region. The “rate ratio” equals the PLWHA rate among MSM divided by the rate among all other males. It indicates how many times greater the rate is among MSM than among all other males for each racial/ethnic group. The other males are the “comparison” group. The difference in PLWHA rates is very obvious for each group, especially for white MSM. The ratio of the PLWHA rate among white MSM to the rate among all other white males is the highest by far (106.0), mainly because white males who are not MSM have the lowest PLWHA rate by far.

We do not show the data comparing estimates of PLWHA rates among MSM and all other males for each individual southern state according to race/ethnicity because it would require too large a table for this report. However, we found that the pattern of much higher PLWHA rates among MSM than among all other males does in fact apply throughout the South for each state’s racial/ethnic groups.



What if many minority MSM are incorrectly identified?

As we mentioned earlier, this report builds on our prior research, which provided estimates of the numbers of MSM, the numbers of MSM living with HIV/AIDS (PLWHAs), and the PLWHA rates among MSM.^{1,2} To learn more about how we calculated these estimated numbers, refer to the technical notes in Appendices 1 and 2, as well as our two previously published scientific articles.

In the southern region overall, we found that approximately 6.0% of all males are MSM. This includes 6.4% of white men, 6.1% of Hispanic men, 4.9% of black men, and 3.3% of all other racial/ethnic groups of men.¹ Table 5 in Appendix 1 shows these percentage estimates for each southern state. (It is important to note that in this report the percentage of men who are MSM – which expresses the share of all adult males who are MSM – is different than the percentage of MSM who are living with HIV/AIDS, which is one way of expressing the PLWHA rate.) The estimated percentages of men who are MSM varied by state, but in each instance the order was the same: whites had the highest percentage MSM, followed by Hispanics, while the percentage MSM among blacks was consistently the lowest of the three largest racial/ethnic groups.

These estimates seem to say that white males are more likely to be MSM than black or Hispanic males. But it could be that black and Hispanic males are just more likely to be incorrectly identified as heterosexuals, as other studies have found.¹²⁻¹⁴ So we calculated our esti-

White males appear more likely to be identified as MSM than minority males

Similar levels of risky behavior among black and white MSM, but different chances of becoming HIV-infected.

mates of the numbers of MSM and the MSM PLWHA rates again, for each state, this time assuming that black and Hispanic males are just as likely as white males to be MSM. We found that black and Hispanic MSM still tended to have significantly higher HIV/AIDS rates than white MSM. Table 6 in Appendix 2 shows the black-to-white MSM PLWHA rate ratios and the Hispanic-to-white MSM PLWHA rate ratios for each southern state, according to the original calculation and the alternative calculation.

COMMENTS ON THE MSM ESTIMATES

When we analyze the numbers of MSM living with HIV/AIDS and the PLWHA rates among MSM in each state, it helps us track the epidemic. We consider whether community programs that try to get MSM into care and treatment are succeeding in preventing those who are HIV-infected from progressing to illness or death. We look at the total numbers of MSM that are living with HIV/AIDS (known as HIV/AIDS “prevalence”). HIV/AIDS prevalence among MSM has been increasing each year.^{17,18} In other words, this is a public health threat and a continuing crisis among gay, bisexual, and other MSM in each passing year.

We found that the rates of MSM living with HIV/AIDS in the South were extremely high for all racial/ethnic groups, compared with the corresponding rates among all other males. We found racial/ethnic disparities in all the data. Although evidence suggests that black and white MSM have similar levels of risky behavior,¹⁹ the HIV epidemic apparently has a greater impact on southern black MSM. All of the data in this report could help state AIDS directors, policymakers, and community-based organizations decide where to focus their primary and secondary HIV prevention efforts. We can compare numbers between and within states to see where the epidemic is heading next and how greatly each racial/ethnic group is impacted by HIV/AIDS.

When we try to evaluate the directions that the epidemic has come so far and monitor where it is heading next, we have to consider the sorts



of general factors that make individual MSM or groups of MSM so vulnerable to HIV infection, AIDS, and death:

- **Biological and behavioral factors:** Whether there is much HIV or many STDs in a population of gay, bisexual, and other MSM; and whether an MSM prefers the insertive or receptive role during anal or oral sex.
- **Psychosocial factors:** How MSM see themselves and their own self-worth; how they deal with stress or depression; how they are able to make plans for their own future; and how their families support them or reject them.
- **Cultural factors:** How MSM in a community were raised to think about homosexuality and whether they are able to find acceptance in their cultural community.
- **Economic factors:** Whether MSM are secure in their basic needs.

These and other specific factors listed below directly and indirectly affect how HIV passes through a population and how rapidly people living with HIV progress to AIDS or death.

Although we found that the PLWHA rates among southern MSM were very high, this report and studies that include HIV testing in groups of MSM consistently show that most MSM are not infected with HIV.^{4,6} This means that most MSM remain at risk for HIV. Studies like these also show that increased HIV risk and infection are not the result of race and ethnicity. Still, MSM who have specific knowledge, attitudes, beliefs, and behaviors are more (or less) likely to become infected and more (or less) likely to suffer HIV's effects. Socioeconomic circumstances represent another set of factors influencing trends in HIV infection and among MSM. In considering a long list of these underlying factors, ask, "Who sees their own situation in each statement? Who recognizes their community when reading these words? What could peers do to address each situation?"

Studies like these also show that increased HIV risk and infection are not the result of race and ethnicity.



Researchers recently found that the majority of MSM who become infected actually acquired HIV from a “primary partner”.

Underlying Factors Potentially Contributing to HIV/AIDS Trends Among MSM²⁰

UNPROTECTED SEX

Unprotected sexual risks among un-partnered gay, bisexual, and other MSM

Risky situations can include unprotected sex with untested sexual partners, higher numbers of partners, or anonymous partners. Many gay, bisexual, or other MSM still skip condoms if they feel that their sexual partner is unlikely to have HIV (either because he “looks good,” he does not have a reputation for sleeping around, or he told them that he does not think he has HIV). Simply stated, the odds of being in a situation where HIV infection status (“serostatus”) is unknown or where HIV infection is not disclosed multiplies with higher numbers of partners. And casual sex does not always provide a safe space for men to honestly disclose their recent risk history or HIV status. Condoms can protect much more effectively than guesses about a partner’s serostatus or honesty.

Unprotected sexual risks among coupled gay, bisexual, and other MSM

If two gay, bisexual, or other MSM choose to have unprotected sex only with each other, and they have both taken a recent HIV test together that has proven neither has HIV, then the only way that an infection can occur is if a partner brings HIV in from outside the relationship. This strategy for lowering HIV risk is called “negotiated safety”: both HIV negative men vow either to remain monogamous or to use condoms with outside partners if the relationship is “open”.²¹ Still, it is important to remember that negotiated safety pledges do not always work. Of course, couples in which one partner has HIV and the other does not should always use condoms.

Researchers recently found that the majority of MSM who become infected actually acquired HIV from a “primary partner.”²² How does this happen? Unfortunately, affection does not guarantee protection. If men skip the first step of confirming that they are both HIV-negative, or if they test too soon after recent risks, they cannot be sure that they are in a mutually HIV-negative relationship. MSM, just like heterosexuals, sometimes allow unprotected sex before they get HIV-tested together

because they want to show how much they trust their partner.²³ Also, if a couple choosing negotiated safety wants to have sex with outside partners, researchers have shown that the habit of unprotected sex at home makes it harder to stick to plans to use condoms with outside partners.²² And, of course, some MSM who start out planning on monogamy will stray, just as some straight people do.

CONDOM USAGE

Using condoms correctly can significantly reduce chances of acquiring or spreading HIV infection. Most gay, bisexual, and other MSM have learned not to lubricate a condom with anything oil-based (oils disintegrate the condom more quickly). Most, too, know to pinch the tip while they roll a condom on (leaving space to catch sexual fluids). In real-world studies, condoms rarely break (0.4-2.3% of uses) or slip off (0.6-1.3% of uses), and proper use of condoms reduces HIV risk by 85%.²⁴

Why don't condoms provide even higher protection? Some gay, bisexual, or other MSM make mistakes when using condoms. Some handle the condom too roughly when putting it on, perhaps because of excitement or because they are drunk or high. Others begin sex without a condom and only put one on when they feel close to climax.²⁵ This delay can let some pre-ejaculate fluids spread HIV, as well as other STDs. Others who usually use condoms still slip up and forget them in certain situations (for example, during a night when they are particularly lonely, drunk, or high).

SEROSORTING

Serosorting refers to trying to limit sex partners to those of the same HIV status, that is, HIV-positive men with HIV-positive men or HIV-negative men with HIV-negative men. This practice might prevent HIV from spreading, even if there is unprotected sex or if a condom breaks. However, serosorting cannot work if one partner is unaware of his infection, does not disclose his HIV-positive status, or has sex with other partners of unknown or negative HIV status. Serosorting does not always protect against other STDs.

STRATEGIC POSITIONING

Strategic positioning refers to the different risk of insertive versus receptive anal sex and adopting sexual positions that decrease the risk of HIV transmission. If only one partner is HIV-positive, strategic positioning means this partner will take the receptive role during sex.

Disparities are affected and often explained by underlying factors. It is not race/ethnicity that causes increased risk for HIV.

SOCIAL/SEXUAL MIXING

Certain studies found that while MSM are likely to date across racial and ethnic groups, they do not select partners at random.

Just like heterosexuals, some MSM choose to have sex with others who are very similar to themselves, while others date or have sex with men from groups that differ in age, race/ethnicity, or other traits. If an MSM restricts his sexual contacts to other MSM in a very specific group (such as those living in the same town), this can affect his risk of acquiring HIV. If the group he is selecting partners from has very few members living with HIV, he lowers his chances of becoming infected. However, if the group has very high HIV/AIDS rates, then he unknowingly puts himself at higher risk of catching HIV. Researchers have suggested that when MSM from small towns visit or relocate to “gay meccas”, they increase their risk of acquiring HIV.²⁶ A number of studies specifically note that when gay men take vacations in major gay metropolises, or during gay “circuit party” events, they are more likely to take a “time out” from their safer sex habits, and so take on risky sexual behaviors, and are more likely to have infected partners when they do so.²⁷⁻³³

Within some sexual networks, younger MSM might have sexual partners ten years of age or older than themselves.³⁴ Age mixing in sexual networks potentially exposes younger partners to HIV and other STDs from those with more sexual experience.

Certain studies found that while MSM are likely to date across racial and ethnic groups, they do not select partners at random.^{34,35} Factors such as societal attitudes towards appropriate partners and racial and residential segregation influence who their potential partners are. Regarding disproportionate rates of HIV/AIDS among black MSM, research shows that black MSM are more likely to have sex only with other black MSM.³⁵ If a local community of black MSM already has high HIV/AIDS rates, the virus can become centered there, posing a much higher risk to other black MSM. It is important to remember that this does not mean black MSM are engaging in more risks, only that each episode of unprotected sex is riskier because of the greater odds that a partner will be infected.

OTHER UNDERLYING FACTORS

1. Saturation: This addresses the number of people who are already living with HIV in the community. If more MSM have HIV, every instance of an HIV-negative MSM having unprotected sexual exposure to an untested or non-disclosing partner is that much riskier. It increases the chances of encountering an HIV-positive partner.

2. Late diagnosis: If people avoid HIV testing, they may end up getting a late diagnosis when they finally do test. They might find they have already been living with HIV or AIDS for a long time. That means they have less chance to take advantage of life-prolonging medications and more time to spread the infection unknowingly

3. Access: If people do not have clear access to prevention services and HIV/AIDS counseling and testing, they miss opportunities to learn how to avoid infection (primary prevention). Linkage to treatment must occur, and those in care need counseling about how to protect others from infection (secondary prevention, or “prevention for positives”). If those living with HIV do not have clear access to quality care, they cannot protect their own health. If people do not understand how to take their medicines on time to fight the virus, they cannot live healthier lives with HIV.

4. Homophobia: Verbal and physical abuse of gay and bisexual men of all ages often involves bullying and violence. These can result from attitudes and beliefs that homosexuality and/or effeminate males are not acceptable. This in turn increases the potential for other negative health effects. Common school-day bullying can have harmful effects on the targeted individual in the present, as well as years later. If people have heard peers, co-workers, family, their church, or others make homophobic remarks about gay, bisexual, and other MSM, they may hide their identity. Men who cannot establish relationships without judgment may be at higher risk for HIV infection through occasional and often anonymous unprotected sexual encounters.

5. HIV stigma: This is another type of judgment that people fear will be placed on them, which is similar to homophobia, but affects people for a different reason. If MSM feel that others will judge them for having HIV or even for taking an HIV test, they may try to avoid revealing their HIV status to sexual partners. They might also deny to themselves their own risk for infection. Stigma and denial give HIV a hiding place.

6. Economic challenges: If MSM are living in poverty, are unemployed, lack health insurance, are homeless, or have difficulty getting basic food and shelter, they could make desperate choices that increase their HIV risk.

7. Childhood abuse: MSM who have suffered sexual abuse when they were children often take more sexual risks as adults because of the trauma and confusion of their experiences.

8. Incarceration: MSM who have been in jail or prison have higher HIV/AIDS rates than the general population for several reasons. A high percentage of new inmates and prisoners may already have HIV. Most prisons forbid condoms to avoid encouraging sex between inmates or prisoners, which is officially prohibited. Injection drug use with smuggled drugs or sharing needles for tattoos might be other issues for some incarcerated MSM.

9. Other STDs: If many MSM in a community have other sexually transmitted diseases (STDs), there is a significantly increased chance of being infected with HIV or passing it on to someone else.

10. Mental health issues: If MSM are struggling with any psychosocial health issues, such as depression, partner violence, and low self-esteem, they may feel less worthy and less able to protect themselves and their partners from HIV.

11. Drugs: If MSM use illicit mood-altering drugs or “recreational” drugs, HIV risks can increase dramatically. “Ecstasy” (also known

Men who cannot establish relationships without judgment may be at higher risk for HIV infection through occasional and often anonymous unprotected sexual encounters.

Some MSM might not have the healthy respect for HIV's threat that they once had.

as X or E) makes many users want to be touched, and they may not be as concerned about risks as long as they get the physical sensation they seek. Crystal methamphetamine (also called “crystal”, “Tina”, or “meth”) might be the most dangerous threat. Crystal makes many MSM feel they need the stimulation of multiple partners for long sex sessions. Crystal also makes many users unable to keep an erection, so some MSM who usually “top” might be more likely to take the “bottom” sexual role, which is riskier. Meanwhile, if an HIV-infected MSM uses prescription drugs like Viagra™ to get and keep erections while under crystal's influence, they may be more likely to pass HIV to others, since they will now be able to “top”. Studies indicate that most MSM do not use crystal meth or drugs to correct erectile dysfunction.^{36,37}

12. Treatment optimism and illusions of safety: Some MSM might not have the healthy respect for HIV's threat that they once had. Compared with the 1980s and early 1990s, fewer people now have visible symptoms of HIV/AIDS or are dying with HIV/AIDS. Thus, some MSM might have less fear of infection. Some MSM do not understand that HIV still makes life more difficult, since the medicines can cause embarrassing, painful, and even life-threatening side effects. Since HIV can sometimes find its way around the medicines used to fight it, an infected MSM must structure his life very carefully to take his pills at the right time every single day.

13. Prevention burnout or fatigue: MSM who have been tested and are in an apparently monogamous relationship, or who grew up before the HIV epidemic, when condoms were not used often, might become tired of taking precautions.

14. The Internet: MSM who use the web to arrange sex with anonymous partners might take more risks. For decades, MSM relied on bars and nightclubs as their safety zone to meet and socialize. The shared setting led many to develop friendships and community, which tend to lead people to feel valuable and worthy of protecting themselves and others. With the ease of meeting men online, MSM might not even realize that they are seeing themselves and others in a different way—a way that some studies suggest leads to more risk-taking.

15. Mistrust of the health care system: Researchers have found that some men (not necessarily MSM) who subscribe to false beliefs such as, “A lot of information about AIDS is being held back from the public,” or “the government deliberately created HIV” tend to use condoms less frequently or not at all.³⁸

16. Personal responsibility: Among HIV-positive and HIV-negative MSM, those who think it is “the other guy's job” to protect himself are more likely to have unprotected sex.^{39,40} Those who feel a high sense of community responsibility to protect others from HIV or any other STD are far less likely to have unprotected sex.

RECOMMENDATIONS

Individuals, communities, clinicians, public health agencies, and community-based organizations should disseminate information on how the HIV epidemic is impacting MSM. Spread the word. Reach out to gay, bisexual, and other MSM who are unlikely to read this report. Inform them of the urgency of the situation in ways that resonate with them. Combat complacency: Convince young MSM that as good as treatment has gotten there is no substitute for prevention. Confront stigma and homophobia: recognize it, refuse to accept it, and inform others of its damaging effects.

FOR THE INDIVIDUAL

- Empower yourself

Commit to the health and safety of yourself, your partners, and your community. Use protection. If you are HIV-negative or do not know your HIV status and have unprotected sex, get tested at least every six months. Be honest and up-front with partners about sexual risk behaviors and existing HIV infection or STD diagnoses.

- Promote a dialogue on your health

■ **The HIV test.** Encourage your family, friends, and co-workers to take the HIV test and get involved with HIV prevention.

■ **Be honest.** If you have multiple partners, inform your partners of your HIV status and ask your partners about their status – this applies whether you are HIV positive or negative. Avoid making assumptions about someone's status.

■ **Engage in casual conversations.** Discuss safer sex practices with your partner(s) and peers in everyday conversations, when online, and through e-mails.

■ **Negotiate safety.** If you are not HIV-infected, having sex with one uninfected partner who only has sex with you might keep you safe from HIV/AIDS. Discuss relationship expectations (including monogamy) with your partner, and be sure to confirm one another's status before you consider unprotected sex. If you or your partner has more than one partner, use protection.

- Use condoms

Use condoms, particularly for anal or vaginal sex. Use male latex condoms or polyurethane condoms if you or your partner is allergic to latex. “Natural” or lambskin condoms do not protect against HIV. Condoms are highly protective when used correctly. Use only water-based or silicone-based lubricants, since oil-based products damage condoms. Condoms can provide some protection against diseases that you can easily acquire like syphilis, gonorrhea, herpes, hepatitis A and hepatitis B. For oral sex, dental dams also might offer some protection. In terms of HIV transmission, oral sex is considerably less risky than anal sex; however, receptive oral sex carries more risk than insertive oral sex. Our ability to measure these risks is limited, as many factors influence the likelihood of any one individual transmitting or acquiring HIV. However, these distinctions are important and relevant to many MSM.

Commit to the health and safety of yourself, your partners, and your community.

STDs are serious because they serve as a “bridge” to HIV infection.

- Take the HIV test

Know your HIV status. Gay, bisexual, and other MSM of negative or unknown HIV status who are having unprotected sex should get tested for HIV every six months. Most MSM who know they have HIV do try to avoid passing it to anyone else. Knowledge of HIV status encourages communication with partners, prevention strategies, and early intervention/linkage to care for those infected.

- Seek care

If infected, you keep the amount of HIV (“viral load”) in your body low by taking antiretroviral (ARV) meds. This can keep you healthier much longer. It can also make it much less likely that you will pass HIV on to others, as you will become less infectious.

- Get an annual physical examination

Find a physician with whom you can openly discuss your sexual practices. You might feel uncomfortable about this discussion at first, but opening up to your doctor helps him or her know what to look for. You will get the tools you need to stay healthy.

- Avoid or minimize Drugs and alcohol

It is this simple: you cannot make clear decisions if you are drunk, high, or “buzzed”. So you might put yourself at risk of being infected with or spreading HIV. If you are already living with HIV, using drugs or alcohol can make you forget to take the medicines you need to stay healthy. If you need help stopping excessive use of alcohol or use of other substances, there are good support groups and counselors who work especially with gay, bisexual, and other MSM. If you cannot stop, at least try cutting back on your use: fewer drinks or fewer “hits.”

- Sexually transmitted diseases

Most of the things you can do to protect yourself against HIV might also protect you from other STDs. Some people think that other STDs are not much of a threat. STDs are serious because they serve as a “bridge” to HIV infection. If you have an STD, it is at least twice as easy for you to become HIV-infected. If your partner has an STD, it is at least twice as easy for him to pass HIV to you, too. STDs can lower CD4 counts and increase viral loads in those already HIV-infected. Most of these other diseases cannot be seen, so it is safest to act as if your partner could be infected and protect yourself.



FOR THE COMMUNITY

- The health environment

Engage the community in a dialogue about MSM's health, including awareness of HIV and other STDs and the need for testing. Promote community mobilization for collective HIV prevention.

- Media campaigns

Engage in public awareness campaigns addressing MSM's health issues to promote complete health strategies.

- Provider coalitions

Create coalitions of care providers to address the health needs of MSM in the community, including health disparities and access to medical, mental, and preventive care.

- Stakeholders

Hold stakeholders meetings to determine the HIV/AIDS/STD education, prevention, and testing needs for MSM.

- Advocacy groups

Support advocacy groups to develop materials and strategies that address MSM's health issues.

Engage the community in a dialogue about MSM's health.

Consider prevention and care measures in the context of the lives of MSM, cultural diversities, and societal challenges.

- *Community planning*

Encourage participation the community planning processes of state health departments.

- *Businesses and churches*

Engage local businesses and places of worship in the HIV/AIDS dialogue.

- *Sex education*

Ensure that young men receive age-appropriate sex education in school health classes. Determine what HIV/AIDS awareness/education is provided in your local middle schools and high schools. Promote comprehensive sex education in these settings

FOR THE ORGANIZATIONS

- *Increase HIV testing, STD screening, and linkage to care for MSM*

Conduct intensive HIV case-finding. Sexually active gay, bisexual, and other MSM who are considered to be at increased risk for HIV infection should be tested for HIV every six months, especially younger MSM and minority MSM.

■ Clinicians should conduct routine HIV/STD screening and sexual risk assessment.

■ Increase routine testing in medical settings.

■ Providers should seek strategies to increase HIV and STD testing among MSM. Such strategies should include the use of social networks and testing during non-traditional hours and/or settings.

■ Local communities should work with gay communities to develop messages about HIV/STD testing.

- *Enhance the effectiveness of HIV prevention, treatment, and care programs*

Foster a sense of personal power to avoid acquiring and transmitting HIV. Design and expand effective interventions. Examine profiles of local epidemics in terms of race/ethnicity, age, risk, and culture. Adjust the use of available prevention and care resources accordingly. Medical treatment of those diagnosed should be routine and easy.

- *Integrate viral hepatitis into HIV prevention programs*

MSM are at increased risk and should be screened for hepatitis A, B, and C. Those who are found to be uninfected with hepatitis A or B should be vaccinated. Those who are found to have chronic hepatitis C should be linked to care and treatment.

- *Comprehensive approaches to HIV prevention and care*

Consider prevention and care measures in the context of the lives of MSM, cultural diversities, and societal challenges. Prevention should include community-level interventions, individual-level interventions, and group-level interventions, as well as outreach strategies that

work together in addressing co-factors that put MSM at risk. Promote “structural” interventions. An example of a structural intervention is passing laws against bullying of lesbians, gays, bisexuals, other MSM, and transgender persons.

- Address issues related to discrimination, homophobia, stigma, and denial

Develop strategies to educate the community about the impact of HIV/AIDS on MSM and how stigma and homophobia fuel the epidemic. Keep HIV/AIDS in the minds of the general public to create a climate of acceptability and to normalize HIV prevention, testing, and care. Encourage HIV prevention and diversity training for health care providers in higher education settings, continuing education, and publications. Promote “structural” interventions such as passage of laws against bullying in school settings.

- Form and facilitate gay men/MSM workgroups in partnership with public health and HIV prevention providers

Workgroups in partnership with public health and HIV prevention providers can serve as a catalyst for organized community mobilization efforts and the development of a comprehensive approach to HIV prevention for MSM. These workgroups could be useful in supporting the following initiatives:

- Developing and delivering empowering messages to MSM to reduce stigma;
- Creating real-life stories for social marketing efforts;
- Using gatekeepers as key entry points in social networks to offer HIV and STD screening and linkage to care and treatment;
- Conducting outreach and testing in bars, clubs, bathhouses, and other MSM venues;
- Promoting peer education;
- Fostering a sense of personal responsibility about sexual behaviors and HIV prevention.

- Develop working partnerships with universities

Collaborate on the development of HIV prevention strategies and interventions. Identify research and intervention development opportunities. Work with campus gay/lesbian/bisexual/transgender groups to promote HIV education and testing for students.

- Work with substance abuse and mental health providers

Coordinate HIV prevention and care initiatives. Jointly develop effective social marketing campaigns against crystal methamphetamine and other substance/alcohol abuse. MSM who inject drugs are doubly at risk for HIV/AIDS and should be counseled to refrain from sharing needles and “works”, as well as practice safer sex.

- Form partnerships with gay-friendly businesses

Many business settings present opportunities for informing and educating patrons about HIV prevention.

Keep HIV/AIDS
in the minds of the
general public to
create a climate of
acceptability and to
normalize HIV
prevention, testing,
and care.

- *Expand Internet HIV prevention messages*

Take advantage of chat rooms, dating/sex-seeking websites, and other opportunities for online marketing, education, risk reduction, and partner counseling and referral services.

- *Promote and sustain HIV/AIDS media campaigns targeting gay men/MSM*

Media campaigns should refrain from utilizing “shame and blame” tactics. Campaigns should include men of color.

Media campaigns should refrain from utilizing “shame and blame” tactics.

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A report that addressed the HIV epidemic among Florida gay, bisexual, and other MSM, called Out in the Open: The Continuing Crisis of HIV/AIDS Among Florida's Men Who Have Sex with Men, was prepared and disseminated in 2007 by the Florida Department of Health. It served as a model for this more comprehensive, multi-state report. The coauthors were Spencer Lieb, MPH, Alberto Santana, MS, Leisha McKinley, MS, and Paul Arons, MD. Out in the Open is available at: <http://www.floridaaids.org>.

ABOUT THE APPENDICES

Technical language is needed to describe how the estimates were computed.

We encourage the reader to review Tables 4 and 5 in Appendix 1 and Table 6 in Appendix 2. However, note that the use of somewhat technical language was necessary to faithfully describe the methodologies for developing the estimates in the tables.

APPENDIX 1

Technical Notes on Estimating Populations of MSM by State and Race/Ethnicity

table 4.

Estimated number adult males who are MSM, by race/ethnicity, southern United States, 2007*

	ESTIMATED NUMBER OF ADULT MSM				
	White	Black	Hispanic	All Other*	Total
Texas	293,215	47,046	184,194	13,431	537,887
Florida	348,043	54,717	105,688	8,851	517,299
Georgia	147,955	49,327	18,916	4,747	220,946
Virginia	132,751	26,334	11,914	5,885	176,884
North Carolina	126,006	26,407	12,281	3,261	167,955
Maryland	92,692	30,901	9,208	4,897	137,697
Tennessee	103,462	14,537	4,449	1,533	123,980
South Carolina	61,399	17,580	3,468	977	83,424
Louisiana	59,221	19,480	2,871	1,270	82,842
Kentucky	65,634	3,967	1,648	709	71,959
Alabama	55,111	13,804	1,943	868	71,726
Oklahoma	53,390	3,944	4,615	4,340	66,290
Arkansas	38,312	5,069	2,337	666	46,385
Mississippi	25,305	10,199	878	362	36,744
District of Columbia	12,915	12,413	2,915	823	29,065
West Virginia	25,680	708	264	218	26,870
Delaware	15,428	3,018	1,233	432	20,111
Total South	1,656,521	339,449	368,821	53,273	2,418,064

*All other includes Asians, Native Hawaiians/Other Pacific Islanders, American Indians/Alaska Natives, and those of other, unknown, or multiple races/ethnicities.

States are ranked from highest to lowest total number of MSM.

Source: Reference #1, Journal of Urban Health, 2009.

table 5.**Estimated percentage of adult males who are MSM, by race/ethnicity, southern United States, 2007**

	PERCENTAGE OF ADULT MSM				
	White	Black	Hispanic	All Other*	Total
District of Columbia	15.3%	11.8%	14.6%	7.8%	13.2%
Florida	7.9%	6.1%	7.6%	4.0%	7.5%
Maryland	7.5%	5.8%	7.2%	3.8%	6.8%
Georgia	7.1%	5.5%	6.8%	3.6%	6.5%
Delaware	6.8%	5.3%	6.5%	3.5%	6.4%
Texas	6.7%	5.2%	6.4%	3.4%	6.3%
Virginia	6.7%	5.2%	6.4%	3.4%	6.2%
Tennessee	5.8%	4.4%	5.5%	2.9%	5.5%
Louisiana	5.9%	4.5%	5.6%	3.0%	5.4%
South Carolina	5.6%	4.3%	5.3%	2.8%	5.2%
North Carolina	5.5%	4.2%	5.2%	2.8%	5.1%
Oklahoma	5.4%	4.2%	5.2%	2.8%	5.0%
Kentucky	4.7%	3.6%	4.5%	2.4%	4.6%
Arkansas	4.7%	3.6%	4.5%	2.4%	4.5%
Alabama	4.6%	3.5%	4.4%	2.3%	4.3%
West Virginia	4.0%	3.0%	3.8%	2.0%	3.9%
Mississippi	3.9%	3.0%	3.8%	2.0%	3.6%
Total South	6.4%	4.9%	6.1%	3.3%	6.0%

MSM=men who have sex with men.

States are ranked from highest to lowest total percentage MSM.

*All other includes American Indians/Alaska Natives, Asians, Native Hawaiians/other Pacific Islanders, and those of other, unknown, or multiple races/ethnicities.

Source: Reference #1, Journal of Urban Health, 2009.

In the South,
the overall estimated
percentage of adult
males who are MSM is
6.0%

Table 4. This table presents the primary findings of the first Southern AIDS Coalition's published report. These show the estimated numbers of MSM in the South by region, state, and race/ethnicity.¹ The study described in detail the methods for developing these estimates (the PLWHA rate denominators) and the limitations of the estimates. Three algebraic spreadsheet models were created to produce the estimates.

To summarize, the first model differentiated the states by the proportion of each state's total population residing in rural, urban, and suburban areas in the 2000 U.S. census.⁴¹ The proportions in each such area were then multiplied by national estimates of the percentage MSM in each area, (respectively, 1%, 4% and 9%), based on a nationally representative sample.⁴² These products were summed to obtain the state-level percentage MSM estimates.

The second model differentiated the states by an "MSM Index", which equaled each state's proportion of same-sex male unmarried partner households in the U.S. divided by the state's proportion of households in the U.S., based on the American Community Survey.⁴³ (By definition, the MSM Index for the U.S. is 1.00.) In the second model, each state's MSM Index was multiplied by 6.0%, which was an estimated U.S. percentage MSM estimate found in the nationally representative sample of the National Survey of Family Growth,¹⁰ to produce state-level percentage MSM estimates.

Because the percentage MSM estimates from the first and second model had similar means (5.82 and 5.88, respectively) and medians

(5.5 and 5.2, respectively), and were strongly correlated ($r = 0.74$, $r\text{-squared} = 0.55$, $p < 0.001$), they were averaged to obtain the final statewide percentage MSM estimates. The final statewide percentages MSM were then multiplied by the 2007 midyear male population estimates for each state⁴⁴ to obtain the estimated statewide total numbers of MSM.

The percentage of adult males who are MSM varies by state and race/ethnicity

Table 5. This table shows the estimated percentage of males who are MSM in each state, by race/ethnicity. The third model broke down the statewide percentage MSM estimates by race/ethnicity. Briefly, based on national racial/ethnic percentage MSM estimates from the National Survey of Family Growth (6.5% for whites, 6.2% for Hispanics, 5.0% for blacks and 3.3% for those of other race/ethnicity),¹⁰ the third model assumed that a history of male-male sexual contact in southern states was most common among whites, followed by Hispanics, blacks, and all others. Specifically, Hispanic MSM were set to equal 95% (6.2/6.5) of the state-specific estimated white percentage MSM, black MSM were 77% (5.0/6.5) of the white percentage MSM, and all other MSM were 51% (3.3/6.5) of the white percentage MSM. The statewide numbers of MSM (determined from the average of the estimates from the first and second models) were allocated via the third model in such a way that Hispanic, black, and other MSM consistently accounted for 95%, 77%, and 51%, respectively, of the total statewide estimated white percentage MSM. The final state-specific percentages MSM by race/ethnicity were multiplied by the 2007 midyear male population estimates by race/ethnicity for each state⁴⁴ to obtain the estimated numbers of MSM, also by race/ethnicity. Because the white percentage MSM varied by state, so did the black and Hispanic percentage MSM.

APPENDIX 2

Technical Notes on a Comparison of the Findings of the Original Analysis and the Alternate Analysis

table 6.

Original and alternate analyses: estimated PLWHA rate ratios of black-to-white MSM and Hispanic-to-white MSM, southern United States, through 2007.*

BLACK MSM TO WHITE MSM			HISPANIC MSM TO WHITE MSM		
State	Rate ratio		State	Rate ratio	
	Original	Alternate		Original	Alternate
Maryland	7.1	5.5	Kentucky	2.2	2.1
North Carolina	6.7	5.2	Louisiana	1.7	1.6
Tennessee	6.3	4.8	Maryland	1.6	1.6
West Virginia	6.3	4.8	Florida	1.6	1.5
Georgia	5.5	4.3	West Virginia	1.6	1.5
South Carolina	5.4	4.2	Mississippi	1.5	1.5
Virginia	5.4	4.2	North Carolina	1.5	1.5
Delaware	5.3	4.1	Virginia	1.5	1.5
Kentucky	5.3	4.1	Alabama	1.4	1.4
Alabama	5.2	4.0	Delaware	1.3	1.2
Mississippi	5.1	3.9	South Carolina	1.2	1.2
Arkansas	4.3	3.3	D.C.	1.1	1.1
Oklahoma	4.0	3.1	Tennessee	1.1	1.0
Louisiana	3.7	2.9	Georgia	1.0	1.0
Florida	3.6	2.8	Oklahoma	1.0	1.0
Texas	3.5	2.7	Texas	0.9	0.9
D.C.	2.9	2.2	Arkansas	0.7	0.7

MSM=men who have sex with men; PLWHA=person living with HIV/AIDS;

D.C.=District of Columbia.

The states are ranked from highest to lowest rate ratio.

*In the alternate analysis, each state's racial/ethnic percentages MSM equal the state's white percentage MSM (see text).

Source: Reference #2, AIDS and Behavior, 2010.

Table 6. The columns of data in this table labeled Original show the estimated rate ratios (RRs) of the PLWHA rates among black and Hispanic MSM, respectively, compared to those among white MSM, according to the initial analysis.² The columns labeled Alternate show the RRs if black and Hispanic men in each state were just as likely as white men to be MSM. The RR (the PLWHA rate in one group of MSM divided by the rate in the comparison group of MSM) is a measure of how much greater the PLWHA rate is in one group compared with the second group.

Racial/ethnic disparities persist in the alternate analysis, but the RRs are lower than in the original analysis. The largest disparities in both analyses are among black MSM compared to white MSM. The lowest black-to-white MSM RRs in both analyses are greater than the highest Hispanic-to-white MSM RRs. The black-to-white MSM RRs in all states and in both analyses are significantly high, at $p<0.001$. Hispanic-to-white RRs, though lower, are for the most part significantly high. The Hispanic-to-white MSM RRs were high in 10 states ($p<0.01$) and not significant ($p>0.05$) in five states. In both analyses, two states (Arkansas and Texas) had RRs that were significantly lower for Hispanic MSM than for white MSM ($p<0.01$) (see interpretation in Endnote⁴⁵). The persistence of marked racial/ethnic disparities among minority MSM in the alternate analysis suggests that the higher PLWHA rates among minority MSM in the original analysis were not just a result of their numbers of MSM being underestimated.

Racial/ethnic disparities persist in the alternate analysis

ENDNOTES

This section includes citations for the references from the scientific literature, as well as comments to clarify certain points in the narrative.

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