Spencer Lieb, MPH
Senior Epidemiologist
Bureau of HIV/AIDS and Hepatitis

Alberto M. Santana, MS
Statewide Latino AIDS Coordinator
Miami-Dade County Health Department

Leisha McKinley-Beach, MS
Prevention Program Supervisor
Bureau of HIV/AIDS and Hepatitis

Paul Arons, MD
Medical Director
Bureau of HIV/AIDS and Hepatitis

DIVISION OF DISEASE CONTROL
FLORIDA DEPARTMENT OF HEALTH

OUT IN THE OPEN

The Continuing Crisis of HIV/AIDS Among Florida's Men Who Have Sex with Men

INTRODUCTION

Throughout the epidemic, HIV/AIDS has been a crisis for communities of men who have sex with men (MSM).[1] From the mid-1980s into the early 1990s, a large number of MSM diligently adopted risk reduction measures in the face of an incurable and unmanageable disease. The current intensity of the epidemic among MSM, coupled with increased HIV/AIDS complacency and sexual risk behavior,[2] calls for a renewed emphasis on prevention efforts. As always, the dilemma is to increase awareness of HIV/AIDS, while finding ways to decrease stigma.

MSM continue to account for the largest share of AIDS cases in the U.S. and Florida. In Florida, MSM represent 44% (46,045) of all 105,500 AIDS cases and 41% (14,672) of all 36,127 HIV cases reported to the Florida Department of Health (DOH) through 2006; 26,735 MSM with HIV/AIDS have died, accounting for 45% of 60,028 HIV/AIDS deaths through 2006. In Miami-Dade County, approximately 1 in 6 MSM (18%) are HIV infected, based on the best available research study of HIV seroprevalence (positivity) rates among MSM.[2]

The analysis of routinely collected surveillance data in this report focuses on MSM with HIV/AIDS in Florida (reported cases), according to race/ethnicity. HIV/AIDS has impacted MSM of each racial/ethnic group in different ways. These differences are due to factors other than race/ethnicity, such as the amount of HIV already established in the community, stigma, homophobia, and growing disregard for the consequences of HIV. The responsibility for addressing challenging issues like these is shared by MSM; MSM with HIV/AIDS; federal, state and local public health agencies; community partners; health care providers; churches, schools and parents; the media; and the general public.

The results of this data analysis generated much thought and debate among DOH and its community partners. It was ultimately decided that the public health benefits of releasing compelling data outweighed the risk of the information being misused and turned against MSM. Based on that data, this report concludes with a discussion of a set of recommendations that can bring about a reduction in HIV/AIDS cases and deaths in all racial/ethnic groups of Florida's men who have sex with men.

In Florida, at least 1 in 22 MSM are living with HIV/AIDS:

At least 1 in 29 white MSM

At least 1 in 12 black MSM

At least 1 in 18 Hispanic MSM

At least 1 in 20 other MSM

Footnote

[1] **Note: The generic term "MSM" is used in this report, though it seems to define a diverse group of men by a single behavior. This group includes gay-identified men, as well as those who may not identify with being gay. Labels can oversimplify, yet a shorthand way to collectively refer to all gay men and non gay-identified men who have sex with men is used for convenience in most of this report.**

[2] CDC (2005). **This MMWR article reports on HIV risk behaviors and an HIV serosurvey among MSM in five U.S. cities, including Miami, 2004-2005 (see References section for full citations). The serosurvey tested a sample of MSM aged 18+ years for HIV at randomly selected venues frequented by MSM.**

OBJECTIVES

- Reinvigorate HIV prevention efforts and strategies for MSM, and mobilize MSM leaders to support the reduction of risky behavior.
- Enlist the support of sufficient numbers of MSM to stem the tide of new HIV infections.
- Inform local governments and communities about 1) the nature of the epidemic and its impact on MSM, and 2) the damaging effects of stigma and homophobia.
- Encourage local government, communities and leaders to reprioritize and enhance their HIV prevention strategies targeting MSM.
- Increase HIV testing and linkage to care among MSM.
- Reduce barriers to HIV prevention, testing and care by getting a constructive dialogue about HIV/AIDS-related stigma and homophobia out in the open.
- Provide data to HIV prevention and care community planners to support new interventions, prioritization of initiatives, epidemic analysis, and grant writing.
- Stimulate the development of local plans for community mobilization and innovative HIV prevention interventions for MSM.

REPORTING

- HIV Cases: By Florida statute, confirmed positive HIV tests must be reported to the Florida Department of Health by every laboratory, as well as by all persons who diagnose or treat a person with HIV (since July 1997). [3]
- AIDS Cases: All persons who diagnose or treat an AIDS case must report it to the Florida Department of Health (since 1983).
    - Approximately 90% of all diagnosed HIV cases and AIDS cases are reported.
- PLWHA: Person living with HIV/AIDS at a given time (reported case).
    - Through 2006, there were 81,832 PLWHAs in Florida.
    - MSM account for 59% (33,592) of 56,935 male PLWHAs, but somewhat less than 10% of the adult male population. [4]

"We can't continue to lecture MSM about safer sex, but we can help promote it as the community norm"

— Alberto M. Santana, MS, Statewide Latino AIDS Coordinator

Footnote

[3] As of 11/20/06, virologic laboratory evidence of HIV infection also became reportable.

[4] Laumann et al. (1994); Black et al. (2000); CDC-NCHS (2003); Lieb et al. (2004); Lieb et al. (in press, 2007).

- Risk (Exposure) Categories: Based on epidemiologic investigations, HIV/AIDS cases are classified according to the way they most likely acquired their HIV infection.

  - Exposure categories of HIV/AIDS cases have been organized in a specific rank order in the U.S. since the beginning of the epidemic: MSM, IDUs (injection drug users), MSM/IDUs, people with hemophilia, high-risk heterosexual contact cases, transfusion-associated cases, and cases with no identified risk (NIR). An individual case is assigned to the highest ranked category and to only one category (i.e., the categories are mutually exclusive).

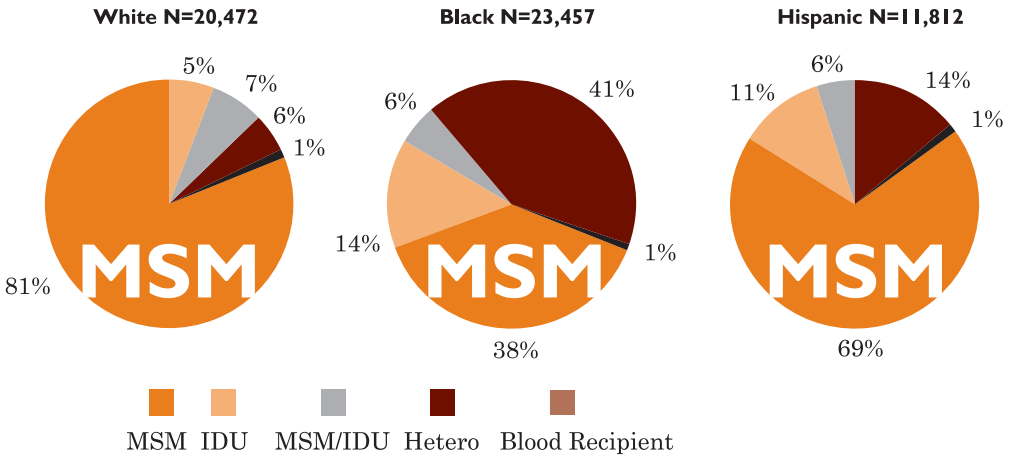
  - Classification of an HIV/AIDS case's HIV risk behavior into a specific category reflects a history of such behavior at any time since the epidemic began; an individual may not currently engage in that behavior.

  - NIRs: HIV/AIDS cases with no identified risk factor at the time of report. In this document, NIRs have been re-assigned to recognized risk (exposure) categories based on expected results of epidemiologic follow-up investigations.

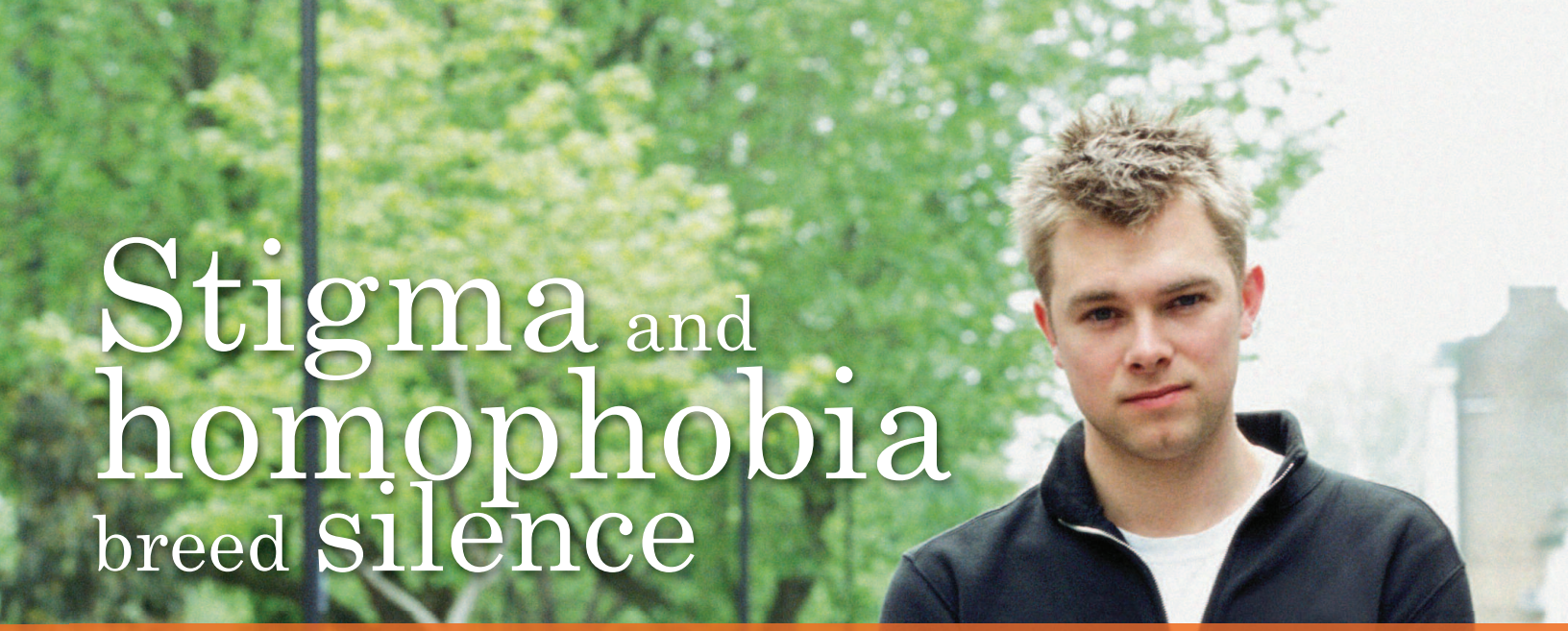
THE FINDINGS

Figure 1. This illustrates the intersection of race/ethnicity, risk behavior and HIV/AIDS. Through 2006, the data on 56,935 male PLWHAs (persons living with HIV/AIDS) aged 13+ years indicate considerably different behavioral risk profiles by race/ethnicity. MSM account for 81% of non-Hispanic white male PLWHAs, 38% of non-Hispanic black male PLWHAs, and 69% of Hispanic male PLWHAs.[5] Conversely, heterosexual contact cases account for 5% of white male PLWHAs, 41% of black male PLWHAs, and 14% of Hispanic male PLWHAs. MSM/IDUs account for another 6-7% of cases across groups.

Figure 1. Living Adult and Adolescent Male HIV/AIDS Cases By Race/Ethnicity and Exposure Category Florida, Through 2006



For all racial/ethnic groups it is probable that some MSM (and IDU) HIV/AIDS cases are mistakenly classified as heterosexual contact cases. HIV/AIDS stigma can be layered on top of pre-existing stigma experienced by MSM.[6] As a result of stigma and homophobia, an individual's MSM risk may be concealed. In one study, men who had sex exclusively with men but identified themselves as heterosexual were more likely than their gay-identified counterparts to belong to minority racial/ethnic groups.[7] Another recent study focusing on North Carolina college students indicated that a somewhat hidden group of men who have sex with men and women (MSM/W) is at increased risk for HIV and represents a threat of transmission to women.[8] Although these MSM/W were more likely to be black than white, it was not indicated that black MSM/W were the primary source of HIV infection for black women. More research is needed to define the role that the subset of MSM that are MSM/W play in heterosexual transmission of HIV.



Stigma and homophobia breed silence

-Recognize it

-Refuse to accept it

-Inform others of its damaging effects

PLWHA Rates: To get a sense of the impact of HIV/AIDS on each racial/ethnic group of MSM in Florida through 2006, a "one-in" statement was constructed. The "one-in" number was obtained by dividing the maximum number of MSM (infected and not infected) by the number of MSM PLWHAs. In line with research previously cited,[4] it was understood that, at most, 10% of each male population aged 13+ years (midyear 2006 population estimate) are MSM. The one-in statement is a way of expressing a PLWHA rate that enables visualization of the impact of HIV/AIDS on the MSM population. The data indicate that at least 1 in 22 MSM in Florida are living with HIV/AIDS (reported cases, through 2006), which are broken down as follows:

At least…

- 1 in 29 white MSM [9]
- 1 in 12 black MSM
- 1 in 18 Hispanic MSM
- 1 in 20 Asian/Pacific Islander, American Indian or multi-racial MSM

(**Appendix 1** shows how the one-in numbers are calculated, by race/ethnicity.)

Footnote

[5] The risk profile for Asian/Pacific Islanders, American Indians and multi-racial PLWHAs (N=1,194) (not shown in Figure 1) is 71% MSM, 7% IDU, 3% MSM/IDU, and 19% heterosexual.

[6] Nyblade (2006).

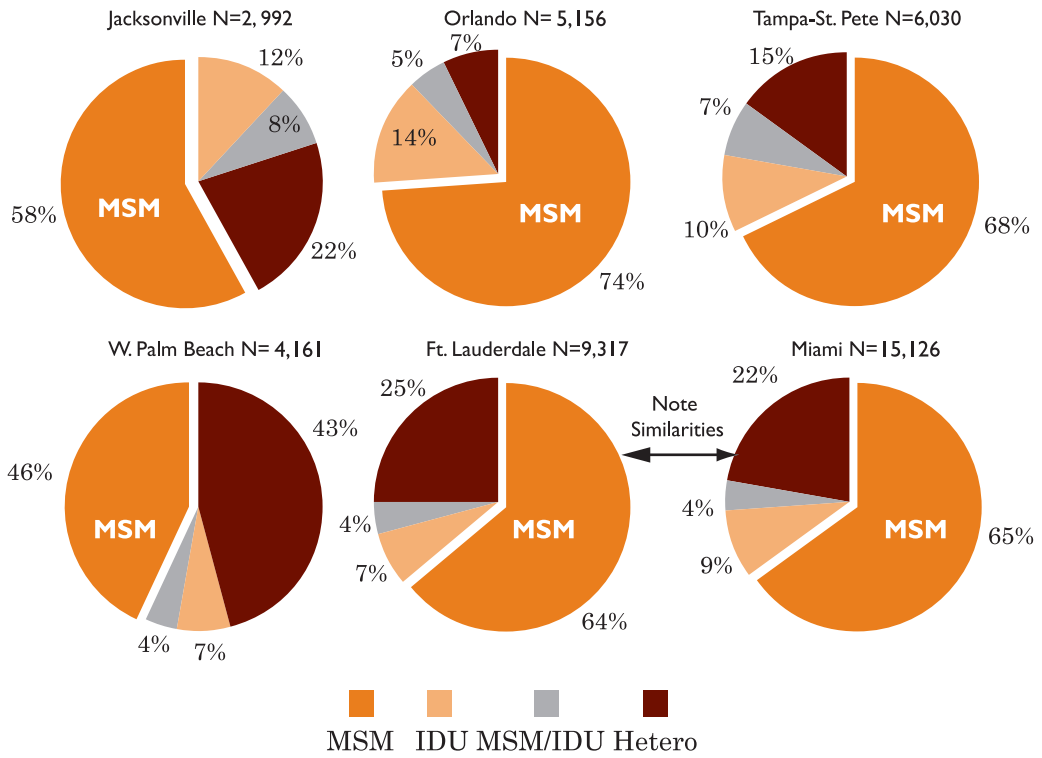
[7] Pathela et al. (2006).

[8] Hightow et al. (2006).

[9] These are considered to be minimum PLWHA rates (i.e., the lower bound of a range of possible rates). For example, the "one-in" number for white MSM (29) grows smaller (meaning the impact of HIV/AIDS increases) if the actual percentage of the white male population who are MSM is less than 10%. The true rate could be 1 in 27, 1 in 25, etc.; it could not be 1 in 30, 1 in 31, etc. In addition, to the extent that there may be underreporting of an MSM risk, the PLWHA rates would be higher than that shown for each racial/ethnic group.

For comparsion, similar PLWHA rates were determined for all males aged 13+ years who were not MSM. Overall, 1 in 301 of these non-MSM males were living with HIV/AIDS in Florida through 2006: 1 in 1,114 whites, 1 in 67 blacks, 1 in 358 Hispanics, and 1 in 446 Asian/Pacific Islanders, American Indians or multi-racial males. (These are maximum rates.)

Figure 2. Disribution of Male PLWHAs By Exposure Category, 6 Metropolitan Areas Florida, Through 2006



Geographic Distribution: The HIV/AIDS epidemic in Florida's six largest metropolitan statistical areas (MSAs) has branched out into surrounding suburban and rural communities.[10] The six MSAs account for 78% of all male PLWHAs and 81% of all MSM PLWHAs in Florida through 2006. The epidemic has evolved somewhat differently in different geographic regions. **Figure 2** shows much variability in the share of male PLWHAs belonging to the various HIV exposure categories in these urban epicenters. MSM-related HIV transmission has occurred most commonly in the Orlando MSA, where 74% of male PLWHAs are MSM, and least commonly in the West Palm Beach MSA, where 46% are MSM. The overall behavioral risk profiles among male PLWHAs are very similar in the adjacent Ft. Lauderdale and Miami MSAs.

Differences in the racial/ethnic populations of the six MSAs (data not shown) do not by themselves explain the observed variations in risk profiles of the males living with HIV/AIDS. This implies that there may be cultural differences within racial/ethnic communities across the MSAs that could be affecting routes of HIV transmission.

The actual number of PLWHAs in a given area can be affected by in-migration from other areas. A recent research study found that as many as 4.5% of urban, in-care PLWHAs could have been reported with HIV outside Florida.[11] (Such PLWHAs would not appear in Figure 2.) Being an MSM with HIV/AIDS or a non-Hispanic white male with HIV/AIDS was correlated with being first diagnosed with HIV outside the study counties.

Footnote

[10] The six largest MSAs: Jacksonville = Clay, Duval, Nassau, St. Johns counties; Orlando = Lake, Orange, Osceola, Seminole counties; Tampa-St. Petersburg = Hernando, Hillsborough, Pasco, Pinellas counties; West Palm Beach = Palm Beach County; Ft. Lauderdale = Broward County; Miami = Miami-Dade County.

[11] Lieb et al. (2006).

Table 1. Minimum PLWHA Rates Among MSM, by Race/Ethnicity, 19 Counties, Florida, Through 2006*

White MSM	At Least One in...	Black MSM	At Least One in...	Hispanic MSM	At Least One in...
Miami-Dade	8	Miami-Dade	8	Miami-Dade	12
Broward	11	Orange	8	Broward	16
Orange	13	Hillsborough	12	Orange	22
Hillsborough	22	Duval	13	Pinellas	27
Pinellas	26	Palm Beach	13	Palm Beach	29
Duval	30	Sarasota	13	Sarasota	30
Palm Beach	34	Pinellas	14	Collier	33
Osceola	40	St. Lucie	14	Hillsborough	33
Sarasota	47	Manatee	15	Osceola	43
Volusia	51	Volusia	15	Duval	44
Lee	54	Broward	17	Manatee	47
Manatee	54	Collier	18	Seminole	50
Seminole	55	Lake	18	Volusia	50
Brevard	61	Seminole	19	Brevard	53
Polk	65	Brevard	20	Lake	65
St. Lucie	71	Lee	21	Marion	69
Collier	72	Osceola	21	St. Lucie	74
Lake	79	Marion	26	Lee	76
Marion	107	Polk	30	Polk	114

PLWHA = person living with HIV/AIDS (reported case), aged 13+ years.
MSM = Men who have sex with men.
*19 counties are shown (those with at least 15 MSM PLWHAs and 500 MSM in each racial/ethnic group).
The PLWHA rate is expressed as a "one-in" statement. The one-in number equals the maximum MSM population aged 13+ years divided by the number of MSM PLWHAs. It is assumed that at most 10% of males aged 13+ years are MSM in each group.

Table 1. This table shows the "one-in" statements (PLWHA rates) for 19 counties that have at least 15 MSM PLWHA cases and at least 500 MSM in each racial/ethnic group. The PLWHA rates in groups with less than this number of cases or this number of MSM tend to be unstable. It must be emphasized again that these are regarded as minimum PLWHA rates, since it is given that at most 10% of the male population aged 13+ years are MSM in each racial/ethnic group.[12]

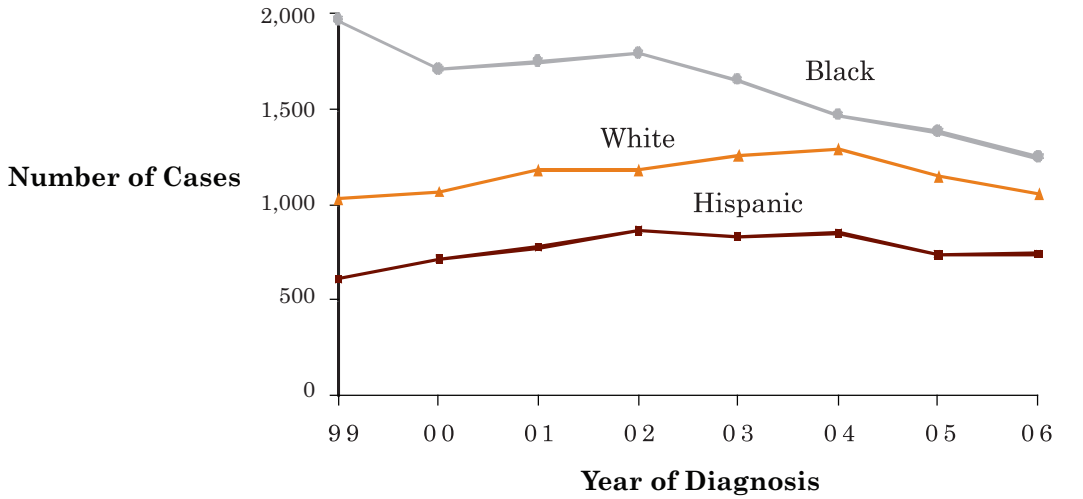
The epidemic among MSM is intense in virtually every county and racial/ethnic group. The minimum PLWHA rates among white MSM range from at least 1 in 8 to at least 1 in107 (median, 1 in 51),[13] while among Hispanic MSM, they range from at least 1 in 12 to at least 1 in 114 (median, 1 in 44). Among black MSM, the rates are higher and more tightly clustered, varying from at least 1 in 8 to at least 1 in 30 (median, 1 in 15), reflecting a more intense and uniform impact across counties. The PLWHA rates tend to be highest in the more populous counties, which are the core of the six urban epicenters (see Figure 2). In Miami-Dade County, the most populous county, at least 1 in 8 white MSM, 1 in 8 black MSM, and 1 in 12 Hispanic MSM are living with HIV/AIDS.

(***Appendix 2*** shows PLWHA rates, where applicable, for all 67 counties, by race/ethnicity. Data are not shown for subgroups with less than 15 MSM PLWHA cases or less than 500 MSM, as these small numbers give rise to unreliable PLWHA rates. ***Appendix 3*** is a map of Florida showing counties and central cities.)

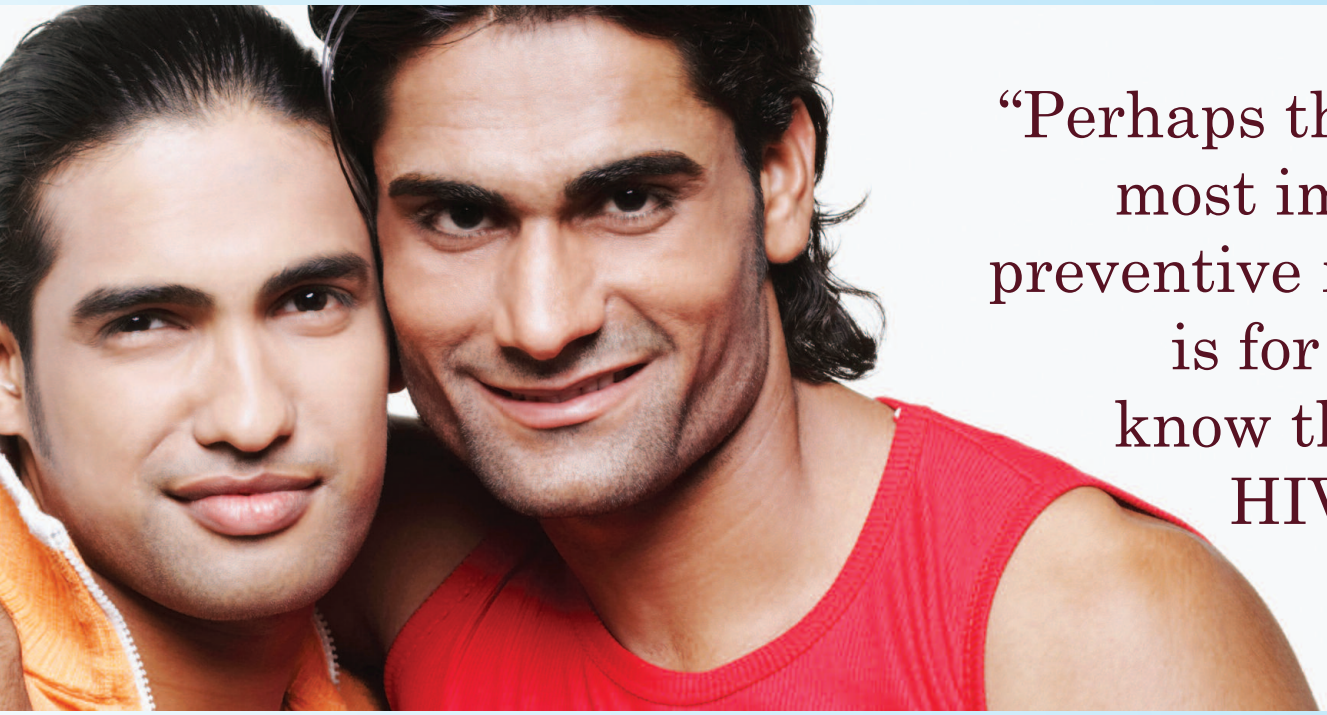
Footnote

[12] All the PLWHA rates would actually be higher (i.e., the one-in numbers would be smaller) to the extent that the percentage of the subgroups of males who are MSM is actually less than 10%. However, in the absence of more precise data, by using 10% as the upper limit of the proportion of males who may be MSM, plausible minimum rates among MSM PLWHAs are obtained.
[13] Here, the median is the 10th number from the top of each of the three lists in Table 1. The median divides a ranked series of numbers in half.

Figure 3. HIV Cases Among Men, by Race/Ethnicity and Year of Diagnosis, Florida, 1999-2006



HIV Trends Among All Men: During 1999-2004, the number of HIV cases diagnosed in Florida increased steadily among white men (32% increase) and Hispanic men (36% increase), and then decreased through 2006 ***(Figure 3)***.[14] Among black men, HIV cases decreased 37% overall during the entire period, 1999-2006, with some fluctuation. The decline among black men was part of a broader decline in diagnosed HIV/AIDS cases both among black men and black women in Florida, described in a report in a recent issue of the MMWR.[15]



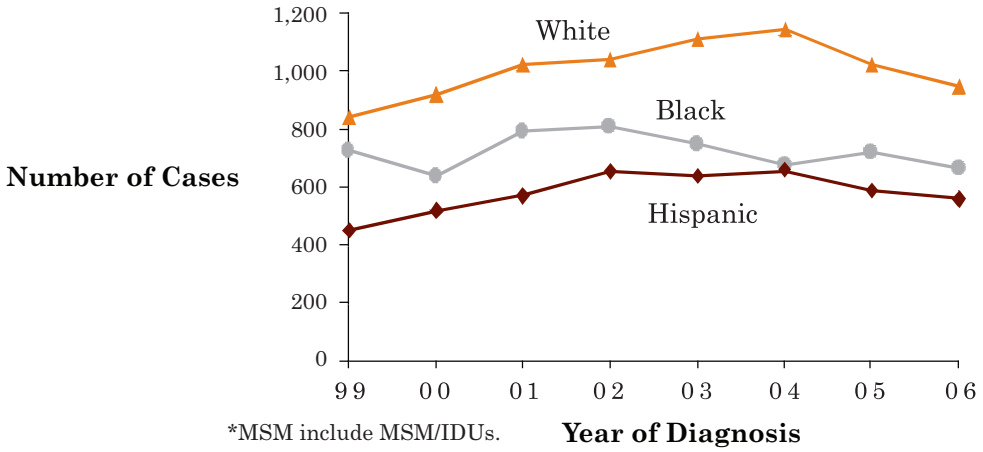
"Perhaps the single most important preventive measure is for MSM to know their own HIV status.

Footnote

[14] The trend in the annual numbers of HIV cases among Asian/Pacific Islander, American Indian and multi-racial males is based on too few cases to be reliably analyzed.

[15] Lieb et al. (2007).

Figure 4. HIV Cases Among MSM*, by Race/Ethnicity and Year of Diagnosis, Florida, 1999-2006



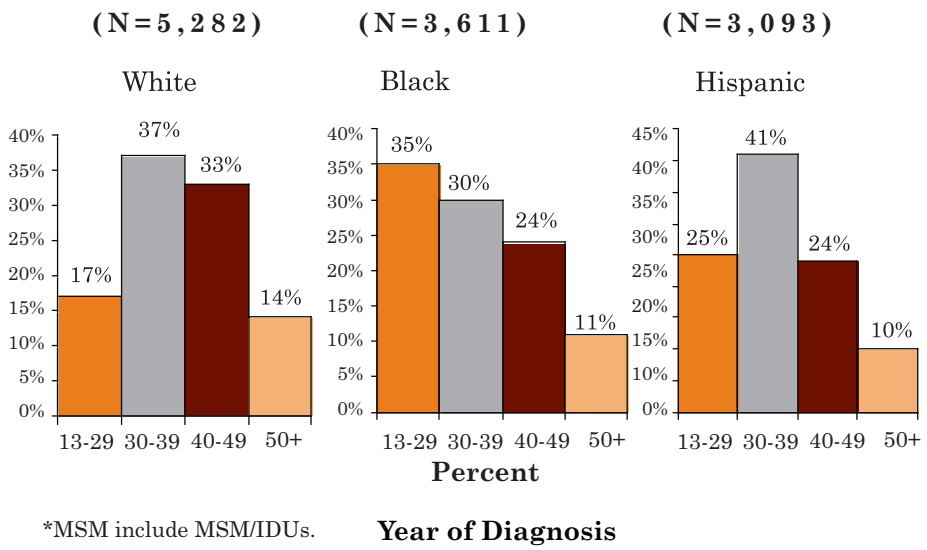
*MSM include MSM/IDUs.

HIV Trends Among MSM: The trend lines in ***Figure 4*** suggest that white and Hispanic MSM have been largely driving the trends in HIV cases among all white and Hispanic males (see Figure 3). Diagnosed white MSM HIV cases increased 36% during 1999-2004, and then decreased through 2006. Hispanic MSM cases increased 44% during 1999-2004, and then also decreased through 2006. These trends are parallel to the trends for all white and Hispanic male HIV cases, which could be expected since it is known that a large share of white and Hispanic male PLWHAs are MSM (81% and 69%, respectively, as shown in Figure 1). Black MSM account for a smaller percentage of all black male PLWHAs (38%), so their influence on HIV trends for all black males is relatively low. Despite the decreases in HIV cases during 2004-2006 among white and Hispanic MSM, HIV cases diagnosed among them in 2006 were 13% and 23% higher, respectively, than in 1999.

Trends in HIV diagnoses reflect trends in HIV testing patterns among the racial/ethnic groups, as well as trends in actual HIV incidence. It is difficult to evaluate the separate influence of these two factors. Most of the annual number of positive HIV tests are reported from the private sector, not publicly funded counseling and testing sites. However, private providers do not report any data to DOH on the large volume of negative HIV tests they presumably conduct. Thus, a comprehensive picture of statewide testing patterns by race/ethnicity is unavailable.

...If they are uninfected, this knowledge helps them protect themselves; if they are infected, the information helps them to protect their partners and to seek treatment and care for themselves,"— Tom Liberti, Chief, Bureau of HIV/AIDS

Figure 5. Percentage of MSM HIV Cases* By Race /Ethnicity and Age Group At Time of Diagnosis, Florida, 2002-2006



*MSM include MSM/IDUs.

HIV Cases by Age: The share of MSM HIV cases in each age group for whites, blacks and Hispanics is shown in ***Figure 5***, for those cases diagnosed during 2002-2006. Among white MSM, the peak age group is 30-39 years (accounting for 37% of cases), followed closely by the age group 40-49 years (33% of cases). Only 17% of white MSM were aged 13-29 years at time of HIV diagnosis. Among black MSM, a full 35% of HIV cases were diagnosed in the 13-29 year age group, followed by progressively smaller shares in each subsequent age group. This pattern among black MSM also differs from that among Hispanic MSM, where HIV cases peak in the 30-39 year age group (41% of cases), and roughly one-quarter of cases occur among those aged 13-29 years and those aged 40-49 years. Ten percent or more of HIV cases were diagnosed among MSM aged 50+ years in each racial/ethnic group, which translates to nearly 1,500 cases during 2002-2006. HIV testing patterns could influence the observed age distributions of HIV cases.

Table 2. Median Time from AIDS Diagnosis to Death Among MSM, by Race/Ethnicity Florida, 2003-2006

White MSM	(1,522 Deaths)	**6.2 years**
Black MSM	(1,063 Deaths)	**4.4 years**
Hispanic MSM	(616 Deaths)	**5.3 years**

Table 2. Of 1,522 white MSM with AIDS who died during 2003-2006, one-half died within 6.2 years of their AIDS diagnosis (and one-half died longer than that after AIDS diagnosis). For Hispanic MSM, the median time from AIDS diagnosis to death was 5.3 years (16% shorter than that for white MSM). Black MSM had the shortest median time, 4.4 years (29% shorter than that for white MSM). A recent research study in Miami-Dade County estimated that black MSM with HIV/AIDS were three times more likely to die than their white counterparts.[16] Racial/ethnic disparities in HIV/AIDS mortality like these are influenced by timeliness of HIV diagnosis, access to/acceptance of care and treatment, and other underlying factors to be discussed.

Footnote

[16] **Lieb et al. (in press, 2007).**

Figure 6. Infectious (Primary & Secondary) Syphilis
Florida, 1999-2005

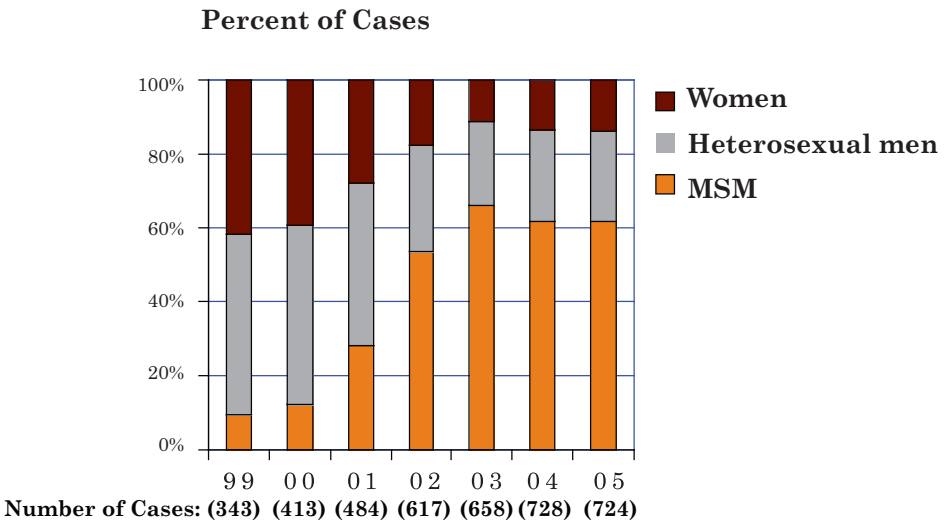


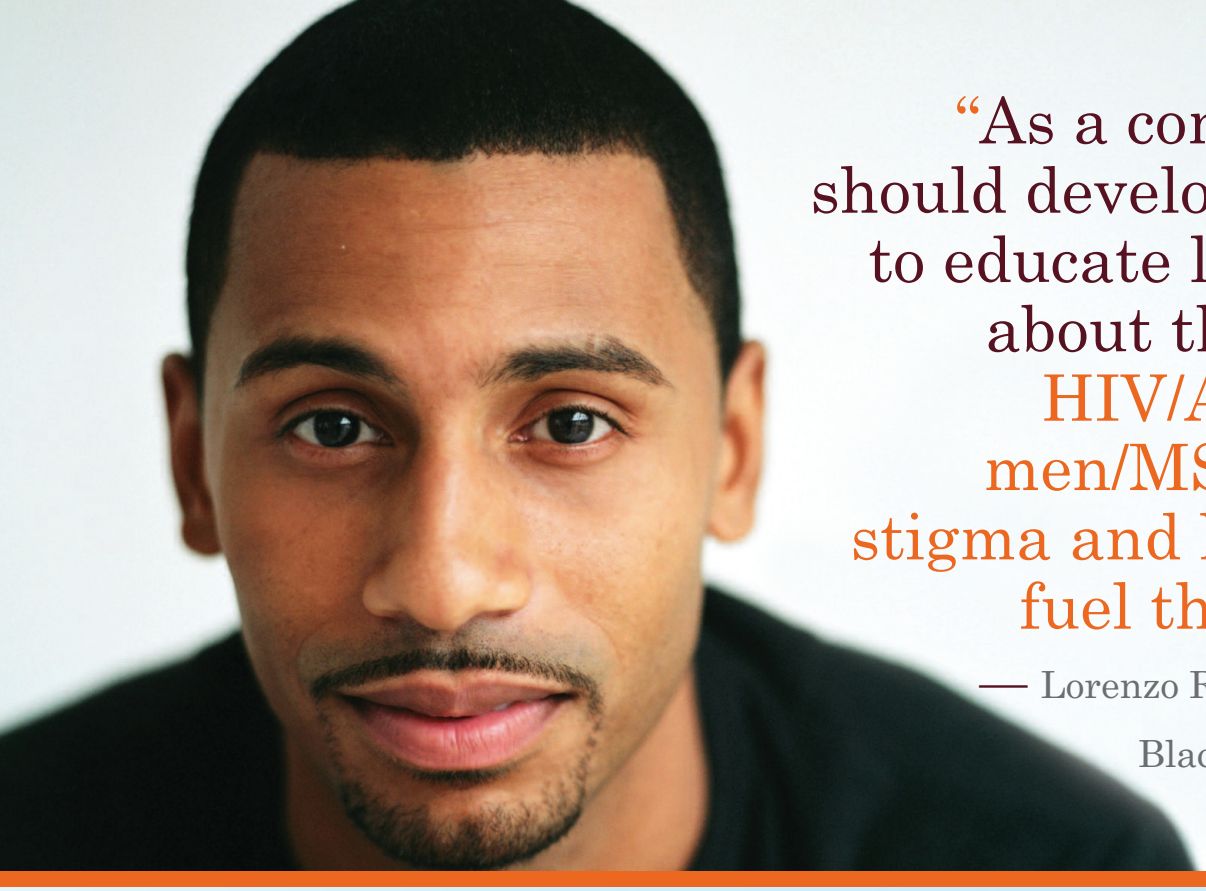
Figure 6. Recent trends in primary and secondary syphilis indicate an increasing number and percentage of cases among Florida MSM during 1999-2005. During 2003-2005, MSM accounted for more than 60% of all infectious syphilis cases. Local outbreaks among MSM in Miami-Dade and Broward counties contributed to the sharply increasing statewide syphilis trend. The largest number of these cases was among white MSM.

COMMENT ON THE DATA

- The data indicate that HIV/AIDS cases attributed to sexual behaviors of MSM have always accounted for the greatest share of total cases.
- MSM are currently impacted by HIV/AIDS to a degree that is far out of proportion to their representation in the general male population aged 13+ years: 59% of male PLWHAs in Florida through 2006 are MSM, but MSM account for somewhat less than 10% of the male population aged 13+ years.[17]
- Statewide, the greatest number of male PLWHA cases is among white MSM.
- The impact of the statewide epidemic is intense on all MSM. Black MSM are more impacted by HIV/AIDS (have a higher PLWHA rate) than white, Hispanic or Asian/Pacific Islander, American Indian and multi-racial MSM.
- Though the number of MSM PLWHA cases among Asian/Pacific Islanders and American Indians is low, their elevated PLWHA rate (1 in 20) warrants attention.
- Within 19 top counties, black MSM tend to have higher minimum PLWHA rates than their white or Hispanic counterparts.
- Research is needed to refine a more precise set of PLWHA rates for MSM by race/ethnicity, which would likely be higher than those shown.
- Newly diagnosed HIV cases (incidence) among white and Hispanic MSM increased during 1999-2004, and then decreased, but the number of PLWHAs (prevalence) in all racial/ethnic MSM groups has been steadily increasing and will continue to do so as long as new HIV/AIDS cases exceed new HIV/AIDS deaths.
- The MSA- and county-specific data indicate there are multiple HIV/AIDS epidemics in Florida. HIV prevention interventions, care and treatment need to be tailored to risk behavior and population variations throughout the state, as well as to cultural differences in prevailing behavioral norms within racial/ethnic groups.

Footnote

[17] Laumann et al. (1994); Black et al. (2000); CDC-NCHS (2003); Lieb et al. (2004); Lieb et al. (in press, 2007).



"As a community, we should develop strategies to educate local leaders about the impact of HIV/AIDS on gay men/MSM and how stigma and homophobia fuel the epidemic"

— Lorenzo Robertson, Statewide Black MSM Coordinator

- Data on the HIV infection rate among MSM in Miami-Dade County are based on the National HIV Behavioral Surveillance (NHBS) project. This HIV seroprevalence rate cannot be generalized to the rest of the state. However, a rate of 18% (or roughly 1 in 6)[18] is unacceptably high and suggestive of elevated rates elsewhere.
- National and local Florida NHBS research data indicate similar levels of sexual HIV risk behaviors among MSM, regardless of race/ethnicity, but show the highest HIV seroprevalence rates are among black MSM, followed by Hispanic and white MSM.[19] Unrecognized HIV infection is more common among black MSM than their white and Hispanic counterparts.
- Awareness of a sex partner's HIV risk behaviors and HIV infection status tends to result in more frequent safer sex practices and less HIV transmission.[20]
- Statewide public HIV counseling and testing data indicate an HIV positivity rate among MSM of 7.53% in 2006, which is higher than the rate in any other risk category except MSM/IDUs (9.98% of tests were HIV positive). However, counseling and testing data tend to underestimate true HIV seroprevalence.[21]
- Recognizing the differences in HIV risk profiles among male PLWHAs and age profiles among MSM diagnosed with HIV may help lead to better construction and targeting of HIV prevention messages and measures.
- Young black MSM and older MSM in all racial/ethnic groups need special attention for primary and secondary HIV prevention.
- Black males living with HIV/AIDS are least likely to be reported as MSM (38% of black male PLWHAs versus 81% for whites and 69% for Hispanics).
- More research is needed to develop effective HIV interventions for men who have sex with men and women.
- White MSM tend to live longer after an AIDS diagnosis than their Hispanic and black counterparts due to factors like early HIV diagnosis and access to/acceptance of care, as well as other underlying factors.

Footnote

[18] CDC (2005).
[19] CDC (2005); Metsch LM (personal communication, 2007); CDC (2002).
[20] Holtgrave (2004); Marks et al. (2006); Holtgrave et al. (2007).
[21] Holmberg (1996); Friedman et al. (2005).

- Syphilis and HIV-syphilis co-infection are indicative of unprotected sex. White MSM are at particularly elevated risk. Most sexually transmitted diseases (STDs) increase the likelihood of HIV transmission and acquisition 3-5 times.[22]
- There is a strong need to reconcile raising awareness of the risks of HIV/AIDS and STDs for MSM and stigmatizing them inadvertently.

Trends in HIV infection, AIDS cases, and HIV/AIDS deaths among MSM are affected by underlying factors.[23] Discussion of these factors may help reduce stigma. MSM with the following characteristics or who are in similar circumstances would tend to be at similar risk for HIV and its consequences, regardless of race/ethnicity. Those who experience these factors tend to be at increased risk for HIV, AIDS and death. Nonetheless, studies consistently show that most MSM remain uninfected.

Underlying Factors Potentially Contributing to HIV/AIDS Trends Among MSM

1. Amount of HIV already in the community: A higher density of HIV means even a few unprotected sexual exposures could result in infection.*
2. Late diagnosis of HIV or AIDS means less chance to take advantage of life-prolonging meds and more opportunity to unknowingly spread infection.*
3. Lack of access to and acceptance of HIV/AIDS screening, diagnosis and quality care; adherence to medical advice and drug regimens.*
4. Stigma and denial, including fear of learning one's HIV status or disclosing one's HIV-positive status.*
5. Discrimination and homophobia, including fear of disclosure of being a gay man/MSM or an IDU.* Intolerance can breed silence.
6. Rejection by family, church; loss of employment.*
7. Poverty, unemployment, lack of health insurance, homelessness, other socioeconomic factors are associated with increased risk.
8. Childhood sexual abuse: Research has shown increased risky behaviors and HIV infection rates among those with a history of forced sex.
9. Incarceration: Elevated HIV positivity rates among inmates and prisoners; unavailability of condoms; resumption of heterosexual activity upon release.
10. Non-HIV STDs in the community*: In the presence of most STDs, the likelihood of acquiring or transmitting HIV increases 3-5 fold.[22]
11. Pyschosocial health issues, such as depression, partner violence, low self-esteem can contribute to neglect of HIV prevention for self and others.
12. Substance use, including crystal meth, which increases libido, and drugs to counteract "erectile dysfunction" due to crystal meth.* Most MSM do not use crystal meth.
13. HIV/AIDS complacency and treatment optimism, including reduction or loss of fear of infection.*
14. Prevention burnout or fatigue.* May tend to apply to middle aged MSM, who previously had been practicing safer sex for years.
15. Use of the internet to arrange sex with anonymous partners.*
16. HIV/AIDS conspiracy beliefs, reflecting mistrust of the health care system.* Researchers have found that black men (not necessarily MSM) who subscribe to beliefs such as, "A lot of information about AIDS is being held back from the public," tend to use condoms less frequently or not at all. [24]

Footnote

[22] CDC (1998).

[23] Many of these same underlying factors can contribute to HIV/AIDS trends among males who are not MSM and trends among females.

[24] Bogart et al. (2005).

17. Sexual and IDU behaviors, including unprotected sex, number of partners or anonymous partners, lack of access to sterile needles and syringes.*
18. The extent of having a sense of personal responsibility about preventing HIV transmission, whether HIV positive, negative or of unknown infection status.*
19. Extent of condom usage.*
20. Extent of HIV serosorting (i.e., limiting sex partners to those of the same HIV infection status).*
21. Extent of mixing of high-risk and low-risk individuals in social-sexual networks.[25] This is a volatile situation, resulting too often in transmission.
22. Degree of gay-identification. Those who are MSM but not gay-identified tend to have more unprotected sex, but with fewer partners than those who self-identify as gay.[26] Non gay-identified MSM also tend to have sex with women to a greater extent than gay-identified MSM.

*The asterisk indicates factors that individual-level, group-level, community-wide and structural HIV/AIDS interventions may be able to directly influence.

RECOMMENDATIONS

- ***Disseminate information on how the HIV/AIDS epidemic is impacting MSM:*** Spread the word: Reach out to gay men/MSM who are unlikely to read this report, and 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. Address stigma and homophobia: Recognize it, refuse to accept it, and inform others of its damaging effects.

- ***Increase HIV testing, STD screening and linkage to care for MSM:*** Conduct intensive HIV case finding. Sexually active gay men/MSM should be tested at least annually for HIV infection,[27] especially younger MSM and minority MSM.[28]

    - 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 gay men/MSM. Such strategies should include the use of social networks and testing during non-traditional hours and/or settings; and
    - Local communities should work with MSM communities to develop messages about HIV/STD testing.

"We can be powerful peer advocates by encouraging friends and partners to use condoms consistently, test for HIV, and seek any needed services."

— Dano Beck, MSW, Behavioral Surveillance Coordinator

Footnote

[25] Wohlfeiler et al. (2007).
[26] Agronick et al. (2004); Pathela et al. (2006); Wolitski et al. (2006).
[27] CDC (2001).
[28] CDC (2002).

- ***Enhance the efficacy of HIV prevention, treatment and care programs:*** Foster a sense of personal responsibility for avoiding transmission of HIV. Design and expand effective interventions. Examine profiles of local epidemics in terms of race/ethnicity, culture, risk and age, and adjust the use of available prevention 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 and vaccinated for hepatitis A and B.[29]

- ***Select, implement, and support appropriate and effective interventions:*** The focus of HIV prevention must be to reduce or even eliminate risky sexual behaviors and drug-using practices

- ***Promote a comprehensive approach to HIV prevention programs targeting MSM:*** Consider prevention measures in the context of the lives of gay men/MSM, cultural diversities and societal challenges. Prevention should include community, structural, individual- and group-level interventions, as well as outreach strategies that work together in addressing co-factors that put MSM at risk. Involve the private sector in these efforts.

- ***Address issues related to discrimination, homophobia, stigma and denial:*** Develop strategies to educate local leaders about the impact of HIV/AIDS on gay men/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 treatment. Encourage HIV prevention and health care providers who work with MSM to consider diversity training.

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

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

- ***Develop working partnerships with universities:*** Collaborate on literature searches for effective HIV prevention strategies and interventions and 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/IDUs are doubly at increased risk for HIV/AIDS and should be counseled to refrain from sharing needles and "works", as well as practice safer sex.

Footnote

[29] CDC (2002).

- ***Form partnerships with gay-friendly businesses:*** Many business settings present opportunities for informing and educating patrons about HIV prevention.

- ***Expand Internet HIV prevention messages:*** Take advantage of chat rooms and opportunities for on-line 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.

ACKNOWLEDGMENTS

A draft of this report was circulated for comments to numerous reviewers. The Florida Department of Health gratefully acknowledges the feedback and input provided by its community partners, gay men, HIV/AIDS consumers and advocates, Bureau of HIV/AIDS staff, HIV/AIDS Program Coordinators, county health department staff, CDC staff, and university-based researchers. Special thanks to Lorene Maddox, MPH, and Tracina Bush, Surveillance Section, Bureau of HIV/AIDS and Hepatitis, for ad hoc data runs.

Numerous initiatives and activities are conducted around the state to address the HIV prevention, testing and treatment needs of MSM and others at increased risk for HIV/AIDS. A companion document to this report, ***"Recent and Future Initiatives for MSM in Florida,"*** summarizes such activities that address MSM. Both this report and the initiatives document can be accessed via the Bureau of HIV/AIDS and Hepatitis home page on its website at http://www.doh.state.fl.us/disease_ctrl/aids.

REFERENCES

Agronick G, O'Donnell L, Stueve A, et al. Sexual behaviors and risks among bisexually- and gay-identified young Latino men. *AIDS Behavior.* **2004 Jun;8(2):185-97.**

Black D, Gates G, Taylor L, et al. Demographics of the gay and lesbian population in the United States: evidence from available systematic data sources. *Demography.* **2000;37:139-154.**

Bogart LM, Thorburn S. Are HIV/AIDS conspiracy beliefs a barrier to HIV prevention among African Americans? *Journal of Acquired Immune Deficiency Syndromes.* **2005;38:213-218.**

CDC. HIV prevalence, unrecognized infection, and HIV testing among men who have sex with men --- five U.S. cities, **June 2004--April 2005.** *Morbidity and Mortality Weekly Report.* **2005;54:597-601.**

CDC. Unrecognized HIV infection, risk behaviors, and perceptions of risk among young black men who have sex with men---six U.S. cities, **1994—1998.** *Morbidity and Mortality Weekly Report.* **2002;51:733-736.**

CDC. Revised guidelines for HIV counseling, testing, and referral. *Morbidity and Mortality Weekly Report.* **2001;50(RR14):1-17.**

CDC - National Center for Health Statistics. Sexual behavior and selected health measures: men and women 15-44 years of age, United States, 2002. *Advance Data* **362. 2003. Accessed 8/3/07. Available at http://cdc.gov/nchs/products/pubs/pubd/ad/361-370/ad362.htm.**

CDC. HIV prevention through early detection and treatment of other sexually transmitted diseases – United States: recommendations of the advisory committee for HIV and STD prevention. *Morbidity and Mortality Weekly Report.* **1998;47(RR12):1-24.**

CDC. Sexually transmitted diseases guidelines 2002. *Morbidity and Mortality Weekly Report.* **2002;51(RR6):1-84.**

Friedman SR, Lieb S, Tempalski B, et al. HIV among injection drug users in large US metropolitan areas, **1998.** *Journal of Urban Health.* **2005;82:434-445.**

Hightow LB, Leone PA, MacDonald PD, et al. Men who have sex with men and women: a unique risk group for HIV transmission on North Carolina college campuses. *Sexually Transmitted Diseases.* **2006;33:585-593.**

Holmberg SD. The estimated prevalence and incidence of HIV in 96 large U.S. metropolitan areas. *American Journal of Public Health.* **1996;86:642-654.**

Holtgrave DR. Estimation of annual HIV transmission rates in the United States, 1978-2000. *Journal of Acquired Immune Deficiency Syndromes.* **2004;35:89-92.**

Holtgrave, DR, Pinkerton SD. Can increasing awareness of HIV seropositivity reduce infections by 50% in the United States? *Journal of Acquired Immune Deficiency Syndromes.* **2007;44:360-363.**

Laumann EO, Gagnon J, Michael R, et al. Chapter 8, in The Social Organization of Sexuality: *Sexual Practices in the United States. University of Chicago Press, Chicago.* **1994.**

Lieb S, Friedman SR, Zeni MB, et al. An HIV prevalence-based model for estimating risk populations of injection drug users and men who have sex with men. *Journal of Urban Health.* **2004;81:401-415.**

Lieb S, Trepka MJ, Liberti TM, et al. HIV/AIDS patients who move to urban Florida counties following a diagnosis of HIV: predictors and implications for HIV prevention. *Journal of Urban Health.* **2006;83:1158-1167.**

Lieb S, Selik R, LaLota M, et al. HIV/AIDS diagnoses among blacks — Florida, *1999-2004. Morbidity and Mortality Weekly Report.* **2007;56:69-73. Available at http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5604a2.htm**

Lieb S, Trepka MJ, Thompson DR, et al. Men who have sex with men: estimated population sizes and mortality rates, by race/ethnicity, Miami-Dade County, Florida. *Journal of Acquired Immune Deficiency Syndromes.* **2007 (in press).**

Marks G, Crepaz N, Janssen RS. Estimating the sexual transmission of HIV from persons aware and unaware that they are infected with the virus in the USA. *AIDS.* **2006;20:1447-1450.**

Nyblade LC. Measuring HIV stigma: existing knowledge and gaps. *Psychology, Health and Medicine.* **2006;11:335-345.**

Pathela P, Hajat A, Schillinger J, et al. Discordance between sexual behavior and self-reported sexual identity: a population-based survey of New York City men. *Annals of Internal Medicine.* **2006;145:416-25.**

Wohlfeiler D, Ellen JM. The limits of behavioral interventions for HIV prevention. *In Prevention is Primary: Strategies for Community Well-Being.* **Wiley, N.Y. 2007.**

Wolitski RJ, Jones KT, Wasserman JL, et al. Self-identification as "down low" among men who have sex with men (MSM) from 12 US cities. *AIDS Behavior.* **2006 Sep;10(5):519-29.**

APPENDIX I

Table 3 Calculation of MSM PLWHA Rates, by Race/ethnicity, Florida, Through 2006

	Male Pop.	Maximum Percent MSM	Maximum No. MSM	No. MSM PLWHAs	Minimum PLWHA Rate* At Least One in…	Minimum PLWHA Rate* Percentage Living with HIV/AIDS
White	4,813,443	10%	481,344	16,582	29	3.44%
Black	1,074,941	10%	107,494	8,914	12	8.29%
Hispanic	1,455,490	10%	145,549	8,150	18	5.60%
Other**	171,565	10%	17,157	848	20	4.94%
Total	7,515,439	10%	751,544	34,494	22	4.59%

PLWHA = Person living with HIV/AIDS (reported case); MSM = Men who have sex with men.
Note: All data in this table apply to those aged 13+ years.
*The one-in statement and the percentage living with HIV/AIDS are two ways of expressing the same rate, which is a measure of impact on the groups.
**Other includes Asian/Pacific Islanders, American Indians and multi-racial persons.

Table 3. Statewide, at least 1 in 22 MSM are living with HIV/AIDS (reported cases). In other words, at least 4.59% of all MSM are living with HIV/AIDS. Researchers tend to agree that somewhat less than 10% of the adult male population are MSM.[30] To get a sense of the impact of HIV/AIDS on the various groups, it was understood that the number of MSM was at most 10% of the male population aged 13+ years for each racial/ethnic group (midyear 2006 population estimates). The minimum PLWHA rate, expressed as a one-in number, equals the maximum number of MSM in the population divided by the number of MSM PLWHAs. Expressed as a percentage, the minimum PLWHA rate is the number of PLWHAs divided by the maximum number of MSM in the population. (The one-in number is thus the inverse of the percentage living with HIV/AIDS.) It is stated that "at least" 1 in 22 statewide are living with HIV/AIDS because as the estimated number of MSM gets smaller than 10% of adult males, the one-in number (22) also grows smaller, meaning the impact (rate) is something greater than the one-in statement reflected in the table.

Although the minimum PLWHA rates among the MSM may be known, the exact extent to which the rates are on the low side is not known. It is likely that different racial/ethnic groups of MSM in the various counties have different representations in the respective male populations aged 13+ years, which would have a bearing on the calculated PLWHA rates. More research is needed to refine the estimates of the percentages and numbers of the adult male populations that are MSM. This in turn would lead to more precise – and likely higher – MSM PLWHA rates, by race/ethnicity.

Footnote

[30] Laumann et al. (1994); Black et al. (2000); CDC-NCHS (2003); Lieb et al. (2004); Lieb et al. in press, (2007).

APPENDIX 2

Table 4 Minimum PLWHA Rates Among MSM
By County and Race/Ethnicity, Florida, Through 2006*

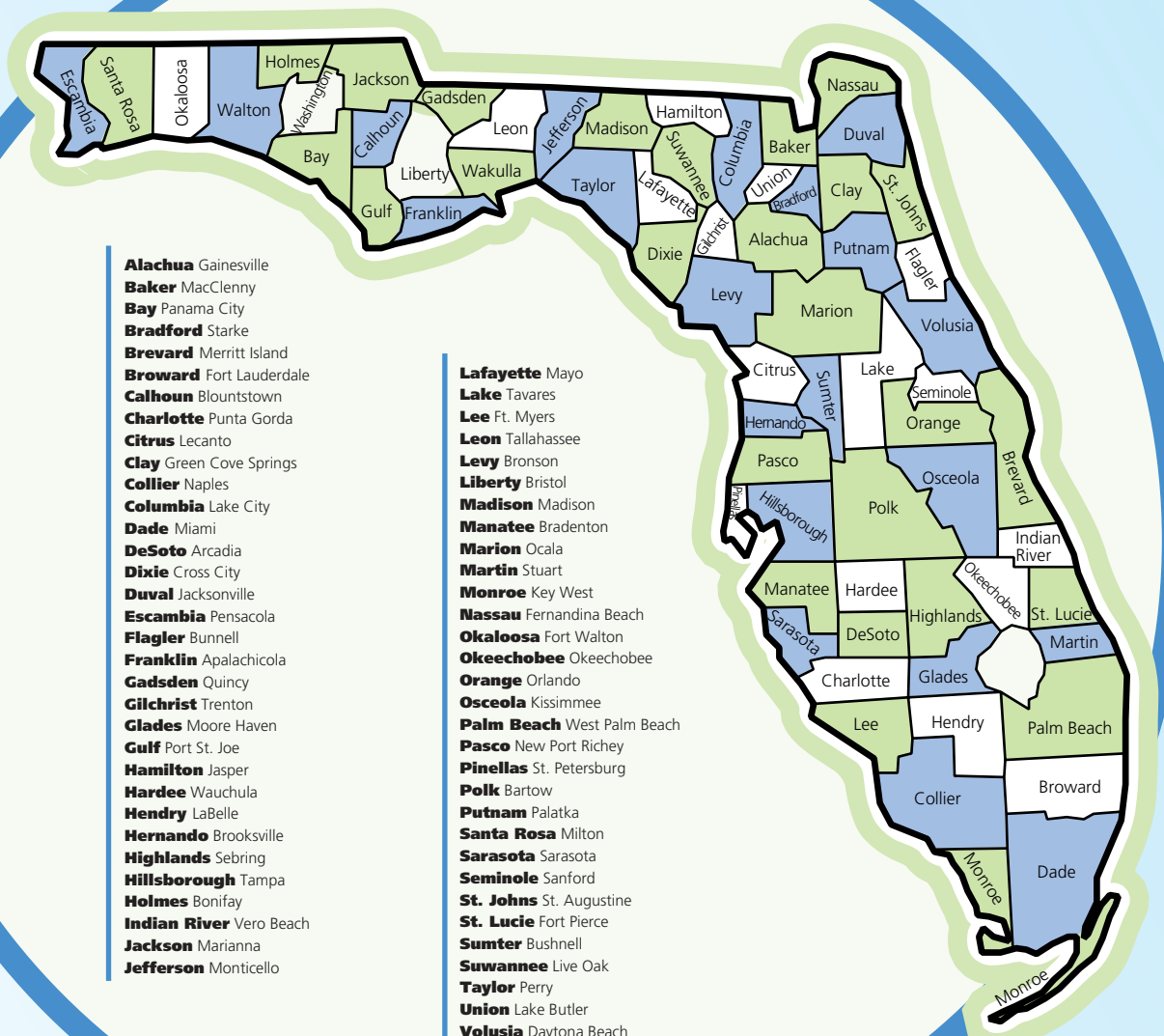
White MSM	At Least One in...	Black MSM	At Least One in...	Hispanic MSM	At Least One in...
Miami-Dade	8	Miami-Dade	8	Miami-Dade	12
Monroe	9	Orange	8	Broward	16
Broward	11	Jackson	10	Monroe	17
Orange	13	Hillsborough	12	**STATE**	**18**
Hillsborough	22	**STATE**	**12**	Orange	22
Pinellas	26	Duval	13	Pinellas	27
STATE	**29**	Palm Beach	13	Martin	28
Duval	30	Sarasota	13	Palm Beach	29
Escambia	33	Pinellas	14	Sarasota	30
Palm Beach	34	St. Lucie	14	Collier	33
Osceola	40	Bay	15	Hillsborough	33
Sarasota	47	Manatee	15	Osceola	43
Alachua	50	Volusia	15	Duval	44
Volusia	51	Broward	17	Manatee	47
Bay	52	Escambia	17	Seminole	50
Lee	54	Sumter	17	Volusia	50
Manatee	54	Collier	18	Brevard	53
Seminole	55	Lake	18	Lake	65
Brevard	61	Seminole	19	Marion	69
Polk	65	Alachua	20	St. Lucie	74
Pasco	71	Brevard	20	Lee	76
St. Lucie	71	Lee	21	Pasco	91
Collier	72	Osceola	21	Polk	114
Santa Rosa	77	Leon	22	Alachua	N/A
Lake	79	Okaloosa	24	Bay	N/A
Martin	79	Marion	26	De Soto	N/A
Okaloosa	79	Polk	30	Hendry	N/A
Leon	97	Gadsden	33	Highlands	N/A
Jackson	98	Clay	N/A/P	Indian River	N/A
Charlotte	100	Union	N/A/P	Leon	N/A
Indian River	100	Monroe	N/A/P	Baker	N/A+N/A/P
Marion	107	Calhoun	N/A/P	Bradford	N/A+N/A/P
Clay	111	Okeechobee	N/A/P	Calhoun	N/A+N/A/P
Putnam	112	Hardee	N/A/P	Charlotte	N/A+N/A/P
Walton	112	Baker	N/A/P	Citrus	N/A+N/A/P
Nassau	115	Gulf	N/A/P	Clay	N/A+N/A/P
Columbia	116	Liberty	N/A/P	Columbia	N/A+N/A/P
Sumter	122	Washington	N/A/P	Dixie	N/A+N/A/P
Hernando	126	De Soto	N/A/P	Escambia	N/A+N/A/P
St. Johns	139	Jefferson	N/A/P	Flagler	N/A+N/A/P
Citrus	164	Columbia	N/A/P	Franklin	N/A+N/A/P
Union	N/A	Highlands	N/A/P	Gadsden	N/A+N/A/P

White MSM	At Least One in...	Black MSM	At Least One in...	Hispanic MSM	At Least One in...
Gilchrist	N/A	Santa Rosa	N/A/P	Gilchrist	N/A+N/A/P
Gadsden	N/A	Putnam	N/A/P	Glades	N/A+N/A/P
Washington	N/A	Hamilton	N/A/P	Gulf	N/A+N/A/P
Wakulla	N/A	Bradford	N/A/P	Hamilton	N/A+N/A/P
Gulf	N/A	St. Johns	N/A/P	Hardee	N/A+N/A/P
Baker	N/A	Indian River	N/A/P	Hernando	N/A+N/A/P
Hardee	N/A	Martin	N/A/P	Holmes	N/A+N/A/P
Suwannee	N/A	Franklin	N/A+N/A/P	Jackson	N/A+N/A/P
Hendry	N/A	Levy	N/A+N/A/P	Jefferson	N/A+N/A/P
Taylor	N/A	Suwannee	N/A+N/A/P	Lafayette	N/A+N/A/P
Bradford	N/A	Holmes	N/A+N/A/P	Levy	N/A+N/A/P
De Soto	N/A	Dixie	N/A+N/A/P	Liberty	N/A+N/A/P
Okeechobee	N/A	Glades	N/A+N/A/P	Madison	N/A+N/A/P
Levy	N/A	Gilchrist	N/A+N/A/P	Nassau	N/A+N/A/P
Dixie	N/A	Hendry	N/A+N/A/P	Okaloosa	N/A+N/A/P
Flagler	N/A	Lafayette	N/A+N/A/P	Okeechobee	N/A+N/A/P
Holmes	N/A	Wakulla	N/A+N/A/P	Putnam	N/A+N/A/P
Highlands	N/A	Charlotte	N/A+N/A/P	St. Johns	N/A+N/A/P
Liberty	N/A+N/A/P	Madison	N/A+N/A/P	Santa Rosa	N/A+N/A/P
Calhoun	N/A+N/A/P	Pasco	N/A+N/A/P	Sumter	N/A+N/A/P
Franklin	N/A+N/A/P	Hernando	N/A+N/A/P	Suwannee	N/A+N/A/P
Madison	N/A+N/A/P	Nassau	N/A+N/A/P	Taylor	N/A+N/A/P
Jefferson	N/A+N/A/P	Citrus	N/A+N/A/P	Union	N/A+N/A/P
Lafayette	N/A+N/A/P	Flagler	N/A+N/A/P	Wakulla	N/A+N/A/P
Glades	N/A+N/A/P	Walton	N/A+N/A/P	Walton	N/A+N/A/P
Hamilton	N/A+N/A/P	Taylor	N/A+N/A/P	Washington	N/A+N/A/P

PLWHA = Person living with HIV/AIDS; MSM = Men who have sex with men.
N/A = Less than 15 MSM PLWHAs aged 13+ years in the subgroup; rate not shown.
N/A/P = Less than 500 MSM aged 13+ years in the subgroup; rate not shown.
*The one-in number = the maximum MSM population (at most, 10% of the total male population aged 13+ years) divided by the number of MSM PLWHAs. The one-in statement is a PLWHA rate, an expression of the extent of impact of HIV/AIDS on a given racial/ethnic subgroup in a given county. This is considered to be a minimum rate, as the percentage of the male population aged 13+ years who are MSM is somewhat less than 10%. Thus, the one-in statement is modified by "at least." PLWHA rates tend to be unreliable for subgroups with less than 15 MSM PLWHAs (N/A) or less than 500 MSM (N/A/P). The one-in numbers for these subgroups are not calculated.

APPENDIX 3

Florida Map with Counties



Alachua Gainesville
Baker MacClenny
Bay Panama City
Bradford Starke
Brevard Merritt Island
Broward Fort Lauderdale
Calhoun Blountstown
Charlotte Punta Gorda
Citrus Lecanto
Clay Green Cove Springs
Collier Naples
Columbia Lake City
Dade Miami
DeSoto Arcadia
Dixie Cross City
Duval Jacksonville
Escambia Pensacola
Flagler Bunnell
Franklin Apalachicola
Gadsden Quincy
Gilchrist Trenton
Glades Moore Haven
Gulf Port St. Joe
Hamilton Jasper
Hardee Wauchula
Hendry LaBelle
Hernando Brooksville
Highlands Sebring
Hillsborough Tampa
Holmes Bonifay
Indian River Vero Beach
Jackson Marianna
Jefferson Monticello

Lafayette Mayo
Lake Tavares
Lee Ft. Myers
Leon Tallahassee
Levy Bronson
Liberty Bristol
Madison Madison
Manatee Bradenton
Marion Ocala
Martin Stuart
Monroe Key West
Nassau Fernandina Beach
Okaloosa Fort Walton
Okeechobee Okeechobee
Orange Orlando
Osceola Kissimmee
Palm Beach West Palm Beach
Pasco New Port Richey
Pinellas St. Petersburg
Polk Bartow
Putnam Palatka
Santa Rosa Milton
Sarasota Sarasota
Seminole Sanford
St. Johns St. Augustine
St. Lucie Fort Pierce
Sumter Bushnell
Suwannee Live Oak
Taylor Perry
Union Lake Butler
Volusia Daytona Beach
Wakulla Crawfordville
Walton De Funiak Springs
Washington Chipley

Bureau *of*
HIV/AIDS
Florida Department of Health