INTRODUCTION

Over the past few decades, the proportion of new cases diagnosed in this population has grown substantially. In 1986, 25% of HIV/AIDS cases were among African Americans. By 2001–2004, African Americans represented 51% of newly diagnosed infections. The wide-spread impact of this disturbing epidemic is intensifying. Accordingly, the medical community has been charged with the responsibility of providing appropriate care for affected members of the African-American community, as well as advancing the design and implementation of strategies to prevent new infections from occurring.

Several national and local prevention plans have been executed in response to these alarming trends across the country. However, the approaches that may have helped decrease the spread of HIV among white homosexual men have not proven to be as successful in meeting the prevention needs of the African-American community. Comparing the 1980s to the 1990s, the proportion of AIDS cases in white men who have sex with men declined, whereas the proportion of cases in females and males in minority populations increased, particularly among African Americans and Hispanics. Thus, it is important for healthcare providers and community leaders to achieve an understanding of the characteristics of this disease as they relate to African-American individuals, from important risk factors to contributing community beliefs and access to healthcare.

Despite recognition and attention to these issues, albeit focal, elimination of the disparities in the rates of new infection in minority populations is an enormous task. In a 1998 press release by the Kaiser Family Foundation, Dr. Sophia Chang, director of HIV programs, stated “the challenge now is to convert this high level of awareness and concern into greater action by all those involved in the fight against AIDS.” The objective of this review of the current state of HIV/AIDS in African Americans is to provide such heightened awareness amongst the members of the medical community, in hopes that we may arm ourselves with the weapons of knowledge and responsiveness to urgently combat this crisis.

RECENT STATISTICS

African Americans comprise approximately 13% of the United States population according to the 2000 U.S. census. However, a 2006 Centers for Disease Control (CDC) Morbidity and Mortality Weekly Report (MMWR) examining HIV data from 33 states with long-term, confidential name-based reporting found that African Americans accounted for 18,991 (50.5%) of the estimated 37,331 new HIV/AIDS diagnosed in the United States between 2001 and 2005. The details of the characteristics of the populations examined in the 33 states are listed in Table 1.

In 2005, it was estimated that 469,298 individuals were living with HIV/AIDS, and African Americans were 49% of the estimated 38,096 new diagnoses that year (Figure 1). The estimated annual HIV/AIDS diagnosis rate among black males was 124.8 per 100,000 population and 60.2 per 100,000 among black females, both higher than the rates for all other racial/ethnic populations. Among males, the annual HIV/AIDS diagnosis black/white rate ratio (RR) of 6.9 was higher than the
Hispanic/white RR of 3.1. Among females, the black/white RR was 20.1 and the Hispanic/white RR was 5.3.

African-American infants and children are also affected by these disparities. In 2005, 91 (65%) of the estimated 141 infants perinatally infected with HIV were black. Of the 68 U.S. children (age <13) who received new AIDS diagnoses, 46 (68%) were black. In addition to disparities in infection rates, there are also differences found in the prognoses for infected children and adults. Of persons diagnosed with AIDS during 1997–2004, a smaller proportion of blacks (66%) were alive after nine years compared with Hispanics (74%), whites (75%), and Asian and Pacific Islanders (81%) (Figure 2).

During the time period 2001–2004, HIV diagnosis rates among black males and females declined by 4.4% and 6.8%, respectively. Results from a 2007 study reported similar declines among African Americans in the state of Florida. Although these declines in rates of new HIV diagnoses appear promising, they may not directly reflect trends in HIV incidence due to influences from changes in testing behavior and surveillance practices. Regardless of the trends (Figure 3), African Americans remain disproportionately affected by high rates of HIV/AIDS. As the number of cases continues to rise and the longevity of infected individuals increases due to advances in antiretroviral therapies, the factors contributing to these higher rates will need to be critically examined and taken into consideration.

**RISK FACTORS INFLUENCING TRANSMISSION**

There is no simple answer to the cause of the disparities seen in African Americans in regards to HIV/AIDS. In the past, explanations for the disproportionate epidemic focused on individual risk behaviors and race differences in activities related to sex or drug use. However, it has been recently recognized that African Americans report less risky sexual activity and drug use than their white counterparts. For example, though African-American youth do report more sexual behavior earlier than white youth, consistent use of a reliable means of contraception has a stronger association with African-American youth and adults than the white population. Furthermore, white adolescents are more likely to use certain illicit drugs than African Americans, initiating drug use at younger ages. In addition, a study examining the risk behaviors of female jail prisoners reported that rates of needle-sharing were significantly higher among white females than among either African-American or Latino women.

Nevertheless, according to updated 2001–2005 MMWR CDC data arranged by transmission category, among HIV infected men and women with risk factors of intravenous (IV) drug use and high-risk heterosexual contact, more than half in each category were African American (men: 53.8% and 65.7%; women 58.8% and 69.5%, respectively). Thus, African Americans are again overrepresented in these essential categories of transmission. Most individuals with HIV/AIDS in the category of men who have sex with men (MSM) were white (42.8%), with smaller percentages of black (36.1%) and Hispanic (19.0%) individuals.

Within the African-American population alone, most HIV/AIDS diagnoses of black male adults and adolescents at the end of 2005 were classified as MSM (48%), followed by intravenous drug use (23%), high-risk heterosexual contact (22%) and MSM in combination with intravenous drug use (7%). Among black female adults and adolescents, most HIV/AIDS diagnoses were classified as high-risk sexual contact (74%), followed by IV drug use (24%). These reported statistics are displayed graphically in Figure 4. The risk factors influencing transmission among the African-American community are reviewed here individually.

**Sexual Risk Factors**

Among female adults and adolescents, from 2001–2005, the estimated number of AIDS cases decreased among IV drug users and increased among both females and males exposed through high-risk heterosexual contact. The data show that black women are most likely to be infected with HIV as a result of sex with men who are infected with HIV. Studies have postulated lack of knowledge about their male partners’ possible risk factors for HIV infection, including unprotected sex with multiple partners, IV drug use or bisexuality as driving influences for this predominant mode of transmission. Furthermore, black women are more likely than white women to have acquired HIV heterosexually. Because
of the disproportionate and increasing number of heterosexually acquired cases, it has been suggested that minority communities at risk for HIV infection be considered a high priority for prevention and education programs specifically targeting heterosexually active adolescents and adults. If the risk for African-American females continues to go unrecognized, the consequences will undoubtedly be further increases in heterosexual transmission rates.

Sexual contact is also the main risk factor for black men, with male-to-male sexual contact being the predominant mode of transmission. High-risk heterosexual contact is less common as a primary risk factor for HIV/AIDS cases among black male adults and adolescents, though the rate is increasing. In the current available literature, supported hypotheses to explain the disproportionate higher incidence of HIV/AIDS in black MSM males compared to other racial groups included a higher incidence of past or current STD diagnoses as well as lack of HIV status awareness and testing early in the progression of their disease among black MSM males compared to other groups of MSM. From 2004–2005, the National HIV Behavioral Surveillance System (NHBS) surveyed 1,767 MSM males who frequented MSM-identified venues, such as bars, street locations, dance clubs, cafés, retail stores, gay pride events, social organizations, gyms, sex clubs and parks, in five U.S. cities. Of the black MSM males included in the study (25% of study population), 46% were HIV positive. Of those HIV positive, 67% were previously unaware of their HIV status. These data underscore the significance of testing and improving primary prevention practices for MSM males in the black population.

Sexually Transmitted Diseases

The highest rates of sexually transmitted diseases (STDs) are found among the black population. In 2005, African Americans were 18 times as likely as whites to have gonorrhea (representing approximately 68% of the total number of cases in 2005) and approximately five times as likely to have syphilis (comprising 41% of all primary and secondary cases in 2005). Inflammatory STDs, such as gonorrhea, have been associated with increased HIV susceptibility and infectiousness, and may act by increasing the number of white blood cells in the genital tract or by elaborating cytokines that upregulate HIV expression and increase the viral load in the genital tract. Ulcerative STDs, such as syphilis, afford additional portals of entry through mucosal ulcerations and also recruit inflammatory cells that bind and propagate HIV infection.

In short, the presence of certain STDs can increase one’s chances of contracting HIV infection 3–5-fold, and an individual infected with both HIV and certain STDs has a greater chance of spreading HIV to others. Accordingly, the high rates of HIV infection for the African-American community may be partly attributable to a high prevalence of STDs that facilitate HIV transmission, and barriers to acquiring sexually transmitted dis-

![Figure 2. Proportion of persons surviving, by months after AIDS diagnosis during 1997–2004 and by race/ethnicity](image)
eases should be an essential component of HIV/AIDS prevention strategies within this population.

**Substance Use**

Illicit drug use is an important primary risk factor for HIV/AIDS infection among African Americans, noted to be the second leading cause of HIV infection for both black men and black women.\(^6\) Aside from the direct infectious risks of needle-sharing, there are also indirect mechanisms that lead to an increase HIV infection and inferior disease progression in this population. Substance users are more likely to engage in high-risk behaviors, such as unprotected sex, when they are under the influence of drugs and alcohol.\(^5\) Furthermore, drug use has an impact on treatment success. A study of female cocaine users, predominantly African-American women, showed that substance users were less likely than nonusers to take their antiretroviral therapies exactly as prescribed.\(^23\) The authors concluded that HIV-infected black women substance users may require sustained treatment and counseling to help them reduce substance use and adhere to antiretroviral therapy.

**Incarceration**

The number of individuals in U.S. prisons and jails has increased significantly over the past decade, with nearly 1.4 million people incarcerated in U.S. federal or state prisons in 2003.\(^24\) This growth is even more evident among the black community. Between 1984–1997, the rate of current incarceration among African-American men went from one in 30 individuals to one in 15.\(^25\) By 2003, blacks were five times more likely than whites to have been to jail, 39% of local jail inmates were black,\(^24\) and 44% of the prisoners under federal or state jurisdic-

![Figure 3. Cases of HIV/AIDS among persons aged ≥13, by year of diagnosis and race/ethnicity, 2001–2005](image)

Adapted from CDC HIV/AIDS Surveillance Report, 2005

![Figure 4. Transmission categories for African-American adults and adolescents living with HIV/AIDS at the end of 2005](image)

Adapted from CDC Fact Sheet: HIV/AIDS Among African Americans

From another data perspective, as of 1997, an African-American male was estimated to have a one in four likelihood of going to prison in his lifetime, compared with a chance of one in 23 for a white male.\(^27\) Without question, these racial disparities are devastating to the social networks, family relationships and economic stability within the black community.

There is widespread concern about the effects of incarceration on HIV/AIDS risk in African Americans. The prison environment is indeed a high-risk setting for the transmission of HIV/AIDS as a result of the prevalence of HIV among inmate populations and the high-risk activities that may occur within the institutions, including unprotected risky sexual contact, drug use and the potential risks from nonsterile tattooing.\(^28\) Shockingly, one-fourth of all people living with HIV in the
United States in 1997 were incarcerated at some point during the year. In addition to any risks associated with the prison environment, investigators have considered the long-term consequences of incarceration for the lives of released inmates. In terms of social network and relationship disruption, Hoffman and colleagues found that individuals in networks with higher rates of turnover (more new members entering the network and more members leaving) were more likely than others to engage in HIV risk behaviors. The economic security of released inmates is also affected by their criminal history in several ways, including the reluctance of employers to hire individuals with criminal records. Economic instability may lead individuals to engage in “survival sex” and risky drug use, both serious risk factors for HIV/AIDS. Furthermore, former inmates’ access to drug treatment services is generally limited by their lack of financial resources.

By and large, the degree to which African Americans are disproportionately more likely to be incarcerated relative to white individuals contributes to the racial disparities in HIV/AIDS. Current recommendations to further delineate the role of incarceration include large-scale meta-analyses to estimate the proportion of black male infections attributable to transmission to incarceration.

Socioeconomic Status and Access to Healthcare

Finally, studies have found multifactorial associations between higher incidence of HIV/AIDS and lower income. Limited access to high-quality healthcare, housing and HIV/AIDS prevention and education programs both directly and indirectly increase the risk factors for HIV infection. In 1999, nearly one in four African Americans was living in poverty. The over-representation of HIV within this community has been linked to the consequences of marginalized social status and poverty, including higher risks for homelessness, drug use, incarceration and risky sexual behavior, all of which contribute to infection with and transmission of HIV/AIDS within the community as mentioned in previous sections of this review. In addition, data from the HIV Cost and Services Utilization Study (HCSUS), the only nationally representative study of people with HIV/AIDS receiving regular medical care, showed that access to healthcare is heavily influenced by race and ethnicity: blacks were more likely to report postponing medical care because they lacked transportation, were too sick to go to the physician or had other competing needs. More often than not, African Americans and individuals living in poverty do not have adequate access to the health education, prevention plans and treatments available to those who are not impoverished.

Along these lines, access to care can be improved by access to health insurance (public or private). Expectedly, insurance coverage of those with HIV/AIDS varies by race and ethnicity. According to HCSUS, African Americans with HIV/AIDS were more likely to be publicly insured or uninsured than their white counterparts. More than half of African Americans in the study (59%) relied on Medicaid compared to 32% of whites. One fifth of the black participants (22%) were uninsured compared to 17% of whites. Thus, socioeconomic status represents another likely contributing factor to the racial disparities of HIV/AIDS in African-Americans.

Figure 5. Percent of surveyed individuals who report being tested by race/ethnicity

From Kaiser Family Foundation Survey of Americans on HIV/AIDS
HIV SEROSTATUS AWARENESS

The high level of unrecognized HIV infections among African Americans is a public health concern. Individuals unknowingly infected with HIV cannot benefit from earlier lifesaving therapies, nor can they protect their partners from becoming infected with HIV. A large 2004 Kaiser Family Foundation survey found that, although African Americans are more likely than whites to say they have been tested for HIV, particularly in the last year, almost one-third of the African Americans surveyed have reported having never been tested for HIV (Figure 5). The lack of screening is even more concerning among black MSM. Of black MSM individuals who tested HIV positive in a 2005 National HIV Behavioral Surveillance study, more than two-thirds were previously unaware of their HIV status. Timely diagnosis is also critical. CDC surveillance data shows that, of all HIV infections diagnosed in African Americans in 2004, 40% were diagnosed with AIDS <12 months later.

COMMUNITY BELIEFS AND PERCEPTIONS

HIV/AIDS ranks first as the most urgent health problem facing the nation named by African Americans. Compared to white individuals, African Americans are more likely to be personally concerned about the disease, in terms of themselves and their children, and are also more likely to know someone who has HIV/AIDS or has died from AIDS. African Americans are also more likely to say there is a significant amount of discrimination against people with HIV/AIDS in the United States today. Despite these statistics, the HIV/AIDS epidemic has created: 1) significant stigma within the African-American community and also 2) outward mistrust of the biomedical community, both hampering the population’s ability to fully engage in HIV/AIDS prevention.

In a community where religious leaders are critically important, black churches play a major role in shaping cultural norms and attitudes in relation to beliefs about sexuality. Openly discussing topics such as sexuality, homosexuality, sex outside marriage, drug use and other private issues has always been taboo. Raising awareness about HIV/AIDS thus becomes a huge challenge and, in some cases, can lead to denial about HIV, decreasing testing among the population. Early in the course of epidemic, community-based organizations, particularly those serving drug users, were likely to acknowledge the AIDS epidemic, whereas religious leaders maintained a distance. This unequal movement with the community has been postulated to be a source of great concern given the importance placed on religious institutions. National surveys report that the majority of African Americans are members of a church, and these sectors have great influence on community attitudes, even for nonmembers. For a variety of reasons beyond the scope of this review, teachings have led to prejudice within many black communities towards homosexuality. The end result, in many instances, is justified discrimination and marginalization by heterosexuals. This decreases the amount of open discussion and education about HIV/AIDS and, as a result, there is a lack of widespread community support.

Mistrust of the biomedical community by African Americans has been documented over centuries, rooted in historical racial discrimination in the nation’s healthcare system, including the well-known Tuskegee Syphilis study travesty. Such mistrust has also been linked to conspiracy beliefs about HIV. In 1999, black research assistants conducted a door-to-door survey of >500 black adults in San Bernadino, CA. Nearly 27% of those surveyed endorsed the view that HIV is an artificially created virus designed by the federal government to exterminate the black population. Furthermore, those who agreed that AIDS is a conspiracy against them tended to be culturally traditional, college-educated men who had experienced considerable racial discrimination. A second large survey of African Americans reported that, among men, stronger conspiracy beliefs were significantly associated with more negative condom attitudes and inconsistent condom use.

Given the highly imbalanced prevalence rates of HIV/AIDS within the African-American community, identifying any barriers to prevention efforts is essential for the design and implementation of effective interventions in black communities. Lack of open HIV/AIDS discussion and pervasive conspiracy beliefs must be addressed in the context of prevention strategies.

MASKING HOMOSEXUAL BEHAVIOR

Homophobia and stigma can cause some black MSM males to identify themselves as heterosexual or to not disclose their sexual orientation. In a 1998 psychology study from the University of Illinois, qualitative data from individual interviews with 18–29-year-old African-American MSM males were used to examine the relationship of negative attitudes toward homosexuality, self-esteem and risk for HIV. Respondents perceived members of their communities as holding negative attitudes toward homosexuality, and many thought the African-American community was less accepting of homosexuality than the white community, leading to significant psychological stresses. In addition, respondents articulated several mechanisms by which low self-esteem and distress might be associated with sexual behaviors that put one at risk for HIV.

Termed by the media first in 2001 as the “down-low” phenomenon, it was widely debated that being openly homosexual may lead to considerable stigma in communities, such as the African-American community, where traditional family behavior is greatly valued. This leads to engagement in male-to-male sexual contact in secret while publicly maintaining heterosexual relationships.
with women. Some critics later argued that this negative mainstream attention wrongfully linked the down-low phenomenon to solely African-American men, clouding the real contributors to the growing HIV/AIDS epidemic among this population. For example, one author argued that the down-low debate demonized black men, stigmatized black women and encouraged an unhealthy “battle of the sexes,” distracting attention from the issue of HIV prevention, personal responsibility and condom use. There is also evidence that black MSM males who do not disclose their homosexual or bisexual activities engage in a lower prevalence of HIV risks than black MSM males who do disclose. Furthermore, black men who are currently bisexual or active account for a very small proportion of the overall population of black men (estimates of approximately 2%).

Still, in a CDC-sponsored study of 8,780 MSM with HIV infection or AIDS, 24% of non-Hispanic black MSM identified themselves as heterosexual, compared with 6% of non-Hispanic white MSM. It was then suggested that minority community leaders should promote dialogue about issues of sexual orientation to overcome social barriers to HIV prevention for African-American MSM, especially among young men.

STRATEGIES FOR PREVENTION AND ACTION

Disproportionately high rates of infection among blacks highlight the need to expand HIV-prevention interventions known to be effective and implement new, improved and culturally appropriate HIV/AIDS strategies. Since the early beginnings of the epidemic, the CDC has funded programs that: 1) help individuals learn their HIV status, 2) help high-risk HIV-negative persons avoid infection, 3) support prevention services for persons living with HIV infection, and 4) help track the course of the epidemic and identify new and enhanced interventions. However, given the disparities for blacks more than any other race or ethnicity, the CDC recently committed to reassessing, strengthening and expanding its efforts to address the epidemic among African Americans.

Action strategies to accomplish this culturally specific outreach include expanding access to resources by building linkages with other organizations that provide related social and health services to African Americans (e.g., employment, housing and mental health services) to make HIV prevention information and services more widely available. Attempts are also being made to promote early HIV testing as a normal part of healthcare screenings for all African Americans to increase opportunity for HIV diagnosis and early treatment. Furthermore, African-American researchers, including behavioral scientists, anthropologists, psychologists and sociologists, are being recruited to develop HIV prevention interventions tailored to the needs of the black community. Perhaps even more challenging will be the objective task to mobilize broader community action, fostering forums such that African Americans can talk about HIV/AIDS in places where they live, work and worship. One strategy to create such vast change involves merging HIV/AIDS prevention with efforts against racism, homophobia, joblessness, sexual violence, homelessness, substance use, mental illness and poverty.

There are additional initiatives recently put in place that are specific to high-risk subgroups of African Americans, including programs for incarcerated men upon release and prevention strategies for homosexual and bisexual black men. In addition to national organizations and programs, such as National Black HIV/AIDS Awareness Day, there are several opportunities for members of the biomedical and African-American communities to collaborate and support these efforts, decreasing the deep-rooted racial health disparities in HIV/AIDS that currently exist.

CONCLUSIONS

The HIV/AIDS epidemic in African Americans is a deadly reminder of the health disparities that exist among this population. Several sets of statistics prove that there are many areas within this disease process in which African Americans are continuing to lose ground. Blacks are overrepresented in subgroups of individual risk factors for HIV transmission, including those related to sexual behavior, substance use, sexually transmitted diseases and incarceration. The disproportionate rates of lower socioeconomic status and poverty in African Americans indirectly leads to a vicious cycle enhancing risk factors for HIV infection and also contributes to the overt discrepancies in access to appropriate healthcare services for prevention and treatment resources.

Furthermore, the paucity of widely available and promoted HIV testing, confounded by cultural hindrances to serostatus awareness, has fostered a delay in diagnosis and missed opportunities for prevented transmission and early treatment of HIV. The concealment of homosexual behavior, which spurs a host of psychological and health consequences in its own right, has garnished nationwide media attention and debate with little resolution or progressive action. Similarly, community belief systems in regards to perceived immoral behaviors and prevalent conspiracy theories have had deleterious impacts on African-American involvement in prevention and education programs, also fueling the unyielding health disparities.

So what is the role of the minority providers and those practitioners that serve the African-American communities? This review provided only a snapshot of the multifactorial nature of the HIV/AIDS epidemic. However, the objective was to present a foundation of knowledge and awareness of the issues that our community faces daily, both in practice and in life. The CDC has outlined
solid action strategies to begin chipping away at the barriers to HIV prevention and treatment in African Americans, and the members of the biomedical community have the potential to be a major driving force in their execution and success. Scientists have the promise to spearhead research advances in HIV vaccinations and continued understanding of genetic differences that may lead to variable responses to antiretroviral therapies. Public health researchers can pioneer the epidemiological studies to investigate the advantages and pitfalls of current HIV prevention strategies for African Americans, with data then being used to steer public policies in a positive direction. Psychologists and sociologists stand to reach the males and females struggling with consequences of having to re-establish their social networks after release from incarceration or following condemnation for their sexuality. Regardless of the mode of contribution, the call for action has been presented. The HIV/AIDS crisis in African Americans as it stands today represents a state of emergency.

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