HIV/AIDS Epidemic in the South Reaches Crisis Proportions in the Last Decade

Duke Center for Health Policy and Inequalities Research

Susan Reif PhD, LCSW
Kathryn Whetten PhD, MPH
Elena Wilson MPH
Winston Gong, MS

EXECUTIVE SUMMARY

(See http://globalhealth.duke.edu/news/2011/ResearchReportFinal3-12.pdf for full report**)**

Executive Summary:
Surveillance data from the Centers for Disease Control and Prevention (CDC)[1] regarding HIV and AIDS in the United States indicate a significant and disproportionate impact of HIV on the Southern United States.[i] These data indicate both a greater impact in Southern states in terms of the proportion of the population affected in the region as well as a disproportionate share of the overall number of individuals with HIV in the US.

The following 2009 data from the CDC provide evidence of the disproportionate burden of new HIV infections (which include all new infections reported regardless of stage of HIV disease) and of new AIDS diagnoses in the South:

- The rate of new HIV infections per 100,000 population was the highest in the Southern US, indicating that this region had the greatest proportion of residents testing positive for HIV in 2009.[2]
- Eight of the 10 US states with the highest rates of new HIV infections were located in the South.[2]
- Half of newly reported HIV infections were in the South although the South accounted for only 37% of the US population.[2, 3]
- The South accounted for nearly half (46%) of new **AIDS** diagnoses and the AIDS diagnosis rate in the Southern region was only second to the AIDS diagnosis rate in the Northeast region. An AIDS diagnosis indicates progression of HIV and is uniformly determined either by a lab test such as a CD4 test or by having certain AIDS defining medical conditions.[1]
- Eight of the 10 US states with the highest rates of new AIDS diagnoses were in the South.[1]

Data from the CDC regarding number and rates of people living with HIV at year end 2008 (also referred to as HIV prevalence) provide evidence of the disproportionate effect of the disease in the US South[1]:

- HIV prevalence data indicate that 43% of people living with HIV in the US reside in the Southern region.[4]
- The Southern region has the second highest HIV prevalence rate per 100,000 population.[4] The Northeastern region continues to have the highest HIV prevalence rate primarily due to the high prevalence rates in New York and New Jersey - states where the epidemic began and where people have been living with the disease for long periods of time.
- **AIDS** prevalence is also high in many Southern states, as Southern states/District of Columbia represent 6 of the 10 areas with the highest AIDS prevalence rates. [5]

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[i] The Census Bureau defines the Southern US as consisting of Alabama, Arkansas, Delaware, Florida, Georgia, Louisiana, Kentucky, Maryland, Mississippi, Oklahoma, North Carolina, South Carolina, Tennessee, Texas, Virginia, West Virginia, and the District of Columbia

Targeted Southern states:
A group of Southern states has been particularly affected by the HIV epidemic in recent years and shares common characteristics such as overall poorer health, high poverty rates, and a cultural climate that likely contributes to the spread of HIV and poor health outcomes for those infected. For the purpose of this report, these states are referred to as the "targeted states" and include Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee and East Texas. The CDC HIV surveillance statistics for the targeted states are particularly striking[1]:

- The targeted states have the highest rates of new HIV infections compared to other regions of the country and to the rest of the Southern US.[2]
- 8 out of 10 states with the highest rates of new HIV infections are targeted Southern states.[2]
- 35% of new HIV infections were in the targeted states, which contain only 22% of the US population.[3]
- Six of the 10 states with the highest HIV prevalence rates are targeted Southern states.[4]
- The targeted Southern states lead the nation in new AIDS diagnosis rates followed by the Northeast region and then the rest of the Southern states.[1]
- CDC data regarding metropolitan areas indicate that 9 of the 10 metropolitan areas with the highest rates of new HIV infections are in the targeted Southern states. Nine of the 10 metropolitan areas with the highest **prevalence** rates per 100,000 were also in the targeted region.[6]

HIV Disease Outcomes:
Data gathered by the CDC and other data sources indicate that the Southern US has the highest HIV-related death rates and the highest level of HIV morbidity.

- The Southern states account for 8 of the 10 states with the highest HIV death rates[i] (deaths per 100,000 population). All nine targeted Southern states are among the 15 states with the highest death rates.[7]
- When HIV case fatality rates were examined (defined as the number of HIV-related deaths among those who are HIV-positive), results indicate that 9 of the 10 states[ii] with the highest case fatality rates were in the South; eight of these states were targeted Southern states.[8]

In addition, a study of morbidity among HIV-positive individuals found that individuals with HIV residing in the Southern US were significantly more likely to experience greater than one HIV-related medical event during the study period. They were also significantly less likely to have started antiretroviral therapy in comparison to individuals with HIV living in other geographic regions.[9]

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[i] 10 states did not have CDC death rate information available AK, NH, ME, ID, IA, MT, SD, ND, VT, WY

[ii] Includes all of Texas rather than just East Texas, as county level data was not available for HIV death rates.

Factors that may contribute to the impact of HIV in the South:
General Health Status: The Southern US has some of the worst overall health rankings in the US, as 9 of the 10 states with the worst health ratings are in the South.[10] The Southern region is also disproportionately affected by sexually transmitted diseases (STDs). For instance in 2009, 9 of the 10 states with the highest syphilis rates were in the South and 7 of these states are targeted states.[11] The high levels of STDs in the targeted states offer some explanation for the higher incidence of HIV in this region, as STDs have been consistently found to facilitate HIV transmission.[12]

Poverty: The South and particularly the targeted states have some of the highest levels of poverty in the US. Nine of the 10 states with the lowest median incomes are located in the South[13] and 6 of the 10 states with the highest poverty levels are located in the South.[14] Half of these states are targeted states including Mississippi, which has the highest poverty level (28%) in the US. Poverty is associated with poorer health due to factors such as lack of adequate health care access and lower levels of education.[15] Poorer health in turn leads to greater difficulty escaping poverty, creating a vicious cycle of poverty, lower levels of education, and poorer health. There is increasing evidence that HIV is concentrated in low-income communities, particularly in the South, and states with the lowest incomes have the greatest HIV case fatality rates (HIV-related deaths among people with HIV).[16]

High levels of poverty and disease also result in greater difficulty for Southern states to adequately respond to the health care and resource needs of their citizens. Examination of Medicaid spending for HIV care revealed that Southern states cover fewer individuals with HIV and pay less per individual with HIV than the national average, in addition to having the most restrictive Medicaid eligibility criteria and providing fewer Medicaid benefits than other regions in the country.[17-19]

Race/Ethnicity and Gender Issues: African Americans are disproportionately affected by HIV in the US in general and particularly in the South, where the majority of African Americans reside.[20] African Americans are disproportionately represented in low-income communities in the US South, having a poverty rate twice that of White individuals.[21] This phenomenon offers some explanation for the greater impact of HIV on this population. However, research has consistently demonstrated a link between African American race and poorer health access even after controlling for income and health insurance status.[22, 23] A number of potential explanations for this phenomenon among African Americans have been identified, including a large proportion of African Americans with unstable housing and higher rates of incarceration among African Americans, HIV-related stigma issues, lack of trust in the government and health care systems and perceived racial discrimination in health care. [24-26] In addition, African Americans are more likely to report that homosexuality is morally wrong (64% vs. 48% among Caucasian Americans), possibly creating the need for different types of interventions that would be effective for African American men who have sex with men.[27]

The proportion of new HIV infections occurring among women is highest in the South and Northeast and African-American women are particularly affected in the South, as the majority of new HIV diagnoses (71%) among women in this region were among African-American women.[28] African-American women are more likely to report heterosexual HIV transmission than white women.[29]

The disproportionate effect of HIV in minority communities in the South is not limited to African-Americans, as Hispanics/Latinos are also strongly impacted in this region. Half of the new HIV diagnoses among Hispanics/Latinos occurred in the Southern US (among 37 states with CDC estimated HIV infection data) and 6 of the 10 states with the highest HIV infection rate among Hispanics/Latinos from 2006-2009 were in the South.[28, 30]

State Geography and Culture: The cultural conservatism in the South, particularly among the targeted states likely plays a role in perceptions and experiences of stigma among people living with HIV in this region.[31] Stigma has been shown to have negative effects on preventive behaviors and health outcomes.[32-36] HIV-related stigma has been found to be greater in rural areas.[32, 37] Rural areas also have additional challenges in addressing HIV due to prolonged travel to access care, lack of financial resources and insufficient supply of HIV care providers.[37-40] The South has the highest number of individuals with HIV living in rural areas so these issues are particularly salient in this region.[41] Some of the Southern laws and policies, especially among targeted states, have also been implicated in fostering the spread of HIV in the South. For example, most targeted states have abstinence-based sex education or lack of sex education in general, which fails to prepare teens to protect themselves from HIV and STD transmission.[31] In addition, laws that criminalize HIV-related behaviors and prohibit needle exchange are common in the South. These laws further marginalize populations at extremely high risk for acquiring HIV, such as sex workers and injecting drug users, and can discourage affected individuals from HIV testing and treatment. [31]

Conclusions:
HIV epidemiological and outcomes data clearly demonstrate a disproportionate effect of HIV disease in the Southern US. These effects are particularly acute among the targeted states, which also have disproportionate rates of other diseases and poverty. Characteristics such as high poverty levels, lack of adequate insurance, HIV-related stigma and the culture of conservatism in the South provide some explanation for the greater impact of HIV in this region. These economic and social factors are all interrelated, each affecting one another, and all contribute to the disproportionate share of HIV found in the US South.

This report documents the epidemiology and outcomes of HIV disease in the South and the targeted Southern states, presents data on financing of HIV care and discusses the factors that contribute to HIV in the South. This information is critical in identifying the nature of the epidemic in the South and devising strategies to address the crisis of HIV disease in this region.

Research Team: The research team in Duke's Center for Health Policy and Inequalities Research, within the Duke Global Health Institute, is being led by long-term researchers in the HIV epidemic in the Deep South, Drs. Susan Reif and Kathyrn Whetten with support from Elena Wilson, Andrew Goodall, Wenfeng (Winston) Gong, and Sara LeGrand.

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