

Swinging Seniors or Survival Success?: Mapping the over-50 HIV epidemic in Texas  
Medical geography, HIV/AIDS, seniors  
Poster Presentation

The HIV/AIDS pandemic is aging; an estimated 3.6 million people over 50 are living with the disease. In the United States the most recent data shows that 31 percent of Americans living with HIV/AIDS are 50 or older and 24 percent of new diagnoses are among this population. These numbers suggest that people may be aging in place due to better access to antiretroviral drugs and simultaneously HIV transmission may be increasing among older adults. Therefore, this paper asks how does Texas compare to the rest of the country? Who is living longer and where do they live?

Using HIV incidence data provided by the Texas Department of State Health Services I examine the rates of HIV/AIDS diagnosis and survival between 1999 and 2012. This data set contains individual level data for every case of HIV reported to the state. I first calculate simple descriptive statistics and rates for the entire state to compare incidence by gender, race and ethnicity, and mode of exposure. Then, I will calculate rates at the county level and create smoothed maps revealing the spatial patterns of disease across Texas, both for new diagnoses and longevity.

Results show that despite the young population structure of Texas the diagnosis rate among older adults is significantly higher among white and blacks than the general US rates. However, the diagnosis rate overall is falling over time, but not as quickly as among younger cohorts. Both longevity and diagnosis over 50 are more prevalent in urban areas, and higher rates are found in East Texas. While white Texans are less likely to be diagnosed over 50 than blacks or Hispanics, disproportionately more white patients live past 50 with HIV/AIDS. This gap suggests better survival rates among urban, white populations, but over time the gap is closing and more minority patients are living past 50.

Finally, one of the more surprising findings is the prevalence of intravenous drug use (IDU) in HIV transmission among older adults. Twenty-eight percent of HIV among older Texans is due to IDU, but only 17 percent of cases nationally can be attributed to this mode of exposure. Conversely, Texans are exposed to HIV through heterosexual sex acts much less than the national average. The IDU issue appears to be worst in rural areas, and highest among white and black females.

Understanding HIV among older adults is crucial for future health planning. Fully a third of the epidemic now belongs to this population, and they have special needs. Older adults are less likely to be tested for HIV, more likely to have co-morbid disorders that hide the development of AIDS, and consequently have lower survival times. In addition seniors often lack social support. Because of stigma, isolation, and low adherence to treatment older adults require re-evaluating the testing and treatment options available in the state of Texas.

Beyond East Texas: Exploring black exposure to HIV across the state

Medical Geography, HIV/AIDS, black, African-American  
Learning Workshop (Paper Presentation)

It is a well-known fact that black HIV is highest in deep East Texas and major urban nodes- or is it? Aggregated rates can hide minority issues. HIV rates among blacks are four times higher than whites, yet we know very little about modes of exposure across Texas. Therefore, this paper addresses this issue by examining black HIV rates across the entire state by mode of exposure. Statewide HIV rates may be on the decline, but rates among African American remain disproportionately high. Socio-economic variables are usually the strongest correlates to high HIV rates, yet these drivers are not well understood by gender or mode of exposure. Additionally, epidemiologists have found that black HIV patients are more susceptible to all major routes of HIV exposure, yet little has been done on the spatial distribution of these pathways to infection.

Is the black HIV epidemic limited to East Texas or does data aggregation hide issues in other parts of the state?

Where are rates higher due to male-to-male (M-M) exposure? Heterosexual contact? IDU? Are the patterns different for women?

Is there a difference in the socio-economic drivers behind these modes of exposure and between sexes?

Using HIV case data provided by the Texas Department of State Health Services, I will examine modes of exposure in the black population by county of residence. I will use this data to build choropleth maps and correlate this rate with socio-economic data obtained from the US census. Maps show that high rates of HIV occur among black populations across Texas. M-M exposure is higher in urban areas, yet also widespread in rural areas. IDU exposure rates are higher in rural areas especially among women. Heterosexual males show greater concentration in Austin, Dallas, and rural east and west Texas. Heterosexual female concentrations are greater in Dallas, Houston, and rural east and central regions. Rising rates of HIV are found in east, west, central and south coastal areas of the state.

Black HIV is not only a problem in rural east Texas and urban areas. While the typical socio-economic variables do correlate to HIV rates, they act differently with different modes of exposure. Variations in modes of exposure over space reveal that black M-M exposure is not limited to urban areas nor do male and female heterosexual exposure patterns mirror each other. These results reveal areas of rising HIV risk previously hidden by aggregated data. No region has a monopoly on black HIV; we cannot let smaller populations hide vulnerable populations at risk. Programs targeting HIV in black communities must expand beyond the traditional outreach areas of major cities and deep East Texas to address the rising rates in some central, west, north, and coastal counties.