

# HIV Among Marginalized Populations in Rhode Island

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**Across the globe, HIV prevalence is highest** among the most marginalized members of society. From Bangkok to Durban to Providence, HIV disproportionately affects those with the least access to care, those facing the most discrimination. In Rhode Island, these marginalized groups include injection and non-injection drug users, sexual minorities, current and former prisoners, the mentally ill, racial minorities, refugees, undocumented immigrants, commercial sex workers, and the poor, homeless and uninsured.

## DEMOGRAPHICS OF THE EPIDEMIC

Although small, Rhode Island, with 1 million residents, is the second most densely populated state in the country. Since 1982, when HIV reporting began, 2,926 AIDS cases have been diagnosed in the state. In 2007, 1,627 persons were known to be living with HIV infection in Rhode Island,<sup>1</sup> and an estimated 600 to 700 individuals in Rhode Island are unaware that they are living with HIV infection. While only 9% of Rhode Islanders are Hispanic and 5% are Black, Hispanics make up 18% and Blacks 25% of those living with HIV, respectively. These racial disparities are even more apparent among pediatric cases: 52% of children with HIV are Black and 21% Hispanic. Of women in Rhode Island, 14% are Black or Hispanic, but 70% of the women with known HIV are women of color. Overall, 75% of the cases diagnosed in the state since 1982 have been men; however, the gender gap has steadily narrowed since 1993 with a 14% increase in the proportion of female cases between 2006 and 2007 alone.

For the decade 1989-1999, 33% of initially diagnoses were made through the **Rhode Island Department of Corrections (RIDOC)** screening program.<sup>2</sup> The prevalence of HIV within the prison is 1.8%, four times the overall prevalence in the state.

The HIV prevalence among the refugee population in Rhode Island is also relatively high. Between 2000 and 2004, 1,467 legal refugees were resettled

in Rhode Island, 2.3% of whom were HIV-positive. Compared to the reported HIV rate of 0.3% among the total 340,171 refugees resettled in the United States during that time period, Rhode Island's refugee HIV rate was 7.4 times the national average.<sup>3</sup>

## TRANSMISSION

The common mode of HIV transmission among Rhode Island men is via **men who have sex with men (MSM)**, with a lesser proportion transmitted by **intravenous drug use (IDU)**.<sup>1</sup> Among women in Rhode Island, heterosexual contact is by far the most common mode of transmission. Since 2000, well over 80% of Rhode Island women newly diagnosed with HIV infection have reported no risk other than heterosexual contact. Among legal refugees, 81% reported heterosexual sex as their primary HIV exposure risk.

The use of non-injection illicit drugs contributes indirectly to the transmission of HIV, especially among individuals who abuse crack cocaine. The characteristics of the crack cocaine high (e.g., intense, short-lived), and the potential for binge use lead to increased frequencies of unprotected sex acts, often with multiple anonymous partners, which lead to an increased incidence in HIV infections.<sup>4,5,6</sup> The National Survey on Drug Use and Health for 2002 and 2003 demonstrated that the prevalence of crack cocaine use in the past year among persons aged 12 years and older was 3.6% in Rhode Island, compared to the national average of 2.5%.<sup>7</sup>

## TESTING

Rhode Island has 29 official HIV testing sites; all offer testing at low or no cost.<sup>8</sup> While most sites are located at community health centers, many of the state's social service agencies also serve as official testing sites. These community-based organizations include Crossroads, the state's largest homeless shelter, Progresso Latino, an immigrant and refugee service agency, MAP Outreach (an addiction

treatment and social service agency), and **AIDS Care Ocean State (ACOS)**. ACOS provides housing, case management, prevention and medical care to Rhode Islanders living with HIV. ACOS also offers free testing and has a street-based outreach team that distributes information on testing and prevention, and provides needle exchange services. To optimize diagnosis and prevention among high-risk male populations, rapid HIV testing has been offered since 2004 at the Megaplex, the largest MSM bath house in New England.<sup>9</sup> The RIDOC is an important location for HIV testing and diagnosis since one in four Americans with HIV pass through corrections each year.<sup>10</sup>

## TREATMENT AND LINKAGE TO CARE

The Miriam Hospital Immunology Center provides over 75% of the HIV care within the state and over 90% of the care for previously incarcerated individuals. Additionally, the Immunology Center provides care for refugees and those co-infected with Hepatitis C, and with co-occurring addiction and/or mental illness. A team approach, utilizing physicians, nurses, and social workers with the support of Ryan White funding, has provided a holistic approach to patient care.

Through successful collaborations with the RIDOC, the **International Institute of Rhode Island (IIRI)**, the Department of Health, and organizations such as ACOS and the Men's Health Collaborative, HIV providers in the state have been working to address the HIV needs of marginalized populations. Some doctors have formed lasting partnerships with specific agencies focused on these groups.

Doctors from The Miriam Hospital's Immunology Center and Brown University began visiting the RIDOC in 1986 to provide care for inmates infected with HIV. In 1988, when HIV testing became mandatory for all inmates, Dr. Carpenter, the then Chairman of Medicine, arranged state-of-the-art HIV disease management on a weekly basis for the incarcerated population.<sup>11</sup> In addition to HIV

care, the Brown-RIDOC collaboration has expanded to help address treatment of Hepatitis B and C, treatment of addiction, and mental health care. In addition to doctors providing HIV care while individuals are incarcerated, in 1996 Project Bridge was established. Project Bridge is an innovative, multi-disciplinary approach to providing intensive case management and continuity of care for HIV-positive ex-offenders. Working with a population that has a high proportion of homelessness, mental illness, and addiction, Project Bridge has provided HIV medical care to this often hard-to-reach population. At the 12-month follow-up meeting after release from prison, 96% of Project Bridge clients are still regularly receiving medical care at the Immunology Center.<sup>12</sup>

Brown physicians and others have also been involved in HIV prevention programs focused on IDUs. From 1995 to 2000, syringe exchange and a syringe prescription program, as well as the legalization of the sale of syringes, were implemented. In the decade following the launch of these programs, the percentage of IDU-related new HIV diagnoses showed an absolute reduction of 81%, decreasing from 53% in 1990 to 9.7% in 2003.<sup>13</sup>

For HIV-positive refugees, The Miriam Hospital Immunology Center is the main care provider. Between 2000 and 2006, 52 HIV-positive individuals classified as refugees by the United Nations High Commissioner for Refugees established care at The Miriam Immunology Center.<sup>14</sup> The majority of these refugees come from sub-Saharan Africa, which has a long resettlement history with Rhode Island. The Immunology Center, in conjunction with support from the International Institute and expertise from its social workers, has developed programs to work with refugees from West Africa. There are cultural and sociological challenges working with refugees from Liberia. For instance, many of these refugees may have been left in refugee camps for more than a decade. Another crucial partnership has been created between the Men's Health Collaborative and AIDS Project Rhode Island Division of Family Services to address the needs of the MSM community,

particularly those individuals visiting the Megaplex, a private men's club in Providence. In this very high-risk venue men often engage in anonymous sex with multiple partners. Through collaboration with the Megaplex, men are offered free hepatitis vaccinations as well as HIV and syphilis testing, as well as medical care. In addition, facilitated medical care is provided for those in need<sup>(15)</sup>.

As Rhode Island faces an increased prevalence of crack cocaine use, the rate of new HIV infections is expected to rise given that there are no evidence-based, behavioral treatments or medications for cocaine abuse (e.g., like methadone or Buprenorphine for opiate addiction) offered at the community level for HIV-positive individuals who use crack cocaine. Because HIV-positive individuals who use crack cocaine face the additional stigma of addiction, they are more likely to avoid medical care and treatment. If treated, they are less likely to follow through, due to their often chaotic lifestyles and memory deficits resulting from crack cocaine use.<sup>16</sup> Therefore, it is imperative that the academic and medical communities work together again to develop innovative methods which integrate interventions for all aspects (i.e., medical, mental health, substance abuse, social) of the relationship between HIV and crack cocaine abuse.

These partnerships between academic medical communities and community care providers are necessary to reach out to the marginalized communities both to facilitate testing and to provide linkage to care. These approaches can have a lasting impact through the provision of treatment for those individuals who are traditionally marginalized from the health care system.

## CONCLUSION

In Rhode Island, community care providers and academic leaders in HIV medicine have expanded testing, diagnoses and linkage to care in marginalized populations. These programs have emphasized not only testing and medical care, but also the needs of prisoners, IDUs, refugees, MSM and others.

HIV infection continues worldwide to spread most rapidly within marginalized communities. Academic

medicine can play a leading role both in prevention and treatment by engaging with marginalized communities and forming close partnerships. This is done best through community outreach. The HIV epidemic requires a holistic response across multiple disciplines, which must address not only medical needs, but also addiction, mental illness, and health disparities. Partnering between the academic community, community-based organizations and the RIDOC has been an effective means to engage marginalized communities in Rhode Island.

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## REFERENCES

- 2007 Rhode Island HIV/AIDS Epidemiologic Profile with Surrogate Data, Rhode Island Department of Health, August 2008.
- Desai AA, Latta ET, et al. The importance of routine HIV testing in the incarcerated population. *AIDS Education & Prevention* 2002;(14) suppl B:45-52.
- Desjardins S, Beckwith CG, et al. Caring for HIV-infected refugees in Rhode Island. *Med & Health RI* 2007;90:360-2.
- Timpson SC, Williams ML, et al. Condom use behaviors in HIV-infected African American crack cocaine users. *Substance Abuse* 2003;24:211-20.
- Moore J, Hamburger ME, et al. Longitudinal study of condom use patterns among women with or at risk for HIV. *AIDS and Behavior* 2001;5:263-73.
- Kalichman SC, Belcher L, et al. Risk for HIV infection and use of cocaine among indigent African American men. *Am J Health & Behavior* 1998;22:141-51.
- Office of Applied Studies. Results from the 2003 National Survey on Drug Use and Health: National findings (DHHS Publication No. SMA 04-3964, NSDUH Series H-25).
- Rhode Island Department of Health, Office of HIV/AIDS & Viral Hepatitis. HIV Testing Sites: <http://www.health.ri.gov/hiv/testing/sites.php>, Accessed 1-19-09.
- Mayer KH. Optimizing high risk men's sexual health: the Providence bathhouse experience. Paper presented at APHA Scientific Session, 2006. [http://alpha.confex.com/apha/134am/techprogram/paper\\_132530.htm](http://alpha.confex.com/apha/134am/techprogram/paper_132530.htm), Accessed 1-19-09.
- Hammitt TM, Harmon MP, Rhodes W. The burden of infectious disease among inmates of and releases from US correctional facilities, 1997. *Am J Pub Health* 2002;92:1789-94.
- O'Gara-Kurtis E. First do no harm, then make some noise. *Brown Med* 2007;(Fall) 24-9.
- Macalino GE, Vlahov D, et al. Prevalence and incidence of HIV, hepatitis B virus and hepatitis

- C virus infections among males in Rhode Island prisons. *Am J Pub Health* 2004;94:1218-23.
13. Zaller ND, Holmes L, et al. Linkage to treatment and supportive services among HIV-positive ex-offenders in Project Bridge. *J Hlth Care for the Poor and Underserved* 2008;19:522-31.
  14. Beckwith CG, Moreira CC, et al. A success story. *Substance Abuse Treatment, Prevention and Policy* 2006;1:34 doi:10.1186/1747-597X-1-1-34.
  15. Beckwith CG, DeLong AK, et al. HIV infection in refugees. *Int J Infect Dis* 2008;doi:10.1016/j.ijid.2008.06.004.
  16. AIDS Project Rhode Island. Men's Health Collaborative. <http://www.aidsprojectri.org/educationprograms.htm>. Accessed 1-19-09.
  17. Brewer T, Zhao W, et al. Initiating HIV care. *AIDS and Behavior* 2007;11:897-904.

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#### **Disclosure of Financial Interests**

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