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HIV and Other Infectious Diseases Among Drug-Involved Offenders

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It has been a generation since Acquired Immune Deficiency Syndrome (AIDS) was first described as a new and distinct clinical entity. Although the origins of HIV, the virus that causes AIDS, remain unclear, the first reports in the United States occurred during the late spring and early summer of 1981. Many contemporary readers may not recall the initial accounts, and for others they are likely buried in history. But it is an intriguing story that warrants some brief recounting. First, clinical investigators in Los Angeles reported five cases to the Centers for Disease Control and Prevention (CDC) of *Pneumocystis carinii* pneumonia (PCP) among gay men. None of these patients had an underlying disease that might have been associated with PCP or a history of treatment for a compromised immune system. All, however, had other clinical manifestations and laboratory evidence of immunosuppression. Second, and within a month, 26 cases of Kaposi's sarcoma (KS) were reported among gay men in New York and California.

What was so unusual was that prior to these reports, the appearance of both afflictions in populations of previously healthy young men was unprecedented. PCP is an infection caused by the parasite *P. carinii*, previously seen almost exclusively in cancer and transplant patients receiving immunosuppressive drugs. KS, a tumor of the blood vessel walls that often appears as blue-violet to brownish skin blotches, had been quite rare in the United States, occurring primarily in elderly men, usually of Mediterranean origin. Furthermore, like PCP, KS had also been reported among organ transplant recipients and others receiving immunosuppressive therapy. This observation quickly led to the hypothesis that the increased occurrences of the two disorders in gay men were due to some underlying immune system dysfunction. This hypothesis was further supported by the incidence among gay men of numerous "opportunistic infections"—infections caused by microorganisms that rarely generate disease in persons with normal immune defense mechanisms. It is for this reason that the occurrence of KS, PCP, or other opportunistic infections in a person with unexplained immune dysfunction became known as the "acquired immune deficiency syndrome," or more simply, AIDS.

With the recognition that the vast majority of the early cases of this new clinical syndrome involved gay and bisexual men, it seemed logical that the causes might be related to behaviors unique to that population. The sexual revolution of the 1960s and 1970s was accompanied not only by greater sexual permissiveness among both heterosexuals and gays, but also by a broader social acceptance of homosexuality. The emergence of commercial bathhouses and other

outlets for sexual contacts among gay men further increased promiscuity, with certain segments of the gay population viewing promiscuity as a facet of “gay liberation.” In fact, among the early patients diagnosed with AIDS, their sexual recreation typically occurred within the anonymity of the bathhouses with similarly promiscuous men. And to complicate matters, sexually active gay men with multiple sex partners were manifesting high rates of sexually transmitted diseases—gonorrhea, syphilis, genital herpes, anal warts, and hepatitis B.

Because of this situation, it is not surprising that such factors as frequent exposure to semen, rectal exposure to semen, the body’s exposure to amyl nitrate and butyl nitrate (better known as “poppers” and used to enhance sexual pleasure and performance), and a high prevalence of sexually transmitted diseases were themselves considered potential causes of AIDS. Yet while it was apparent that AIDS was a new disease, most of the gay lifestyle behaviors were *not* particularly new, having changed only in a relative sense. As such, it was difficult to immediately single out specific behaviors that might be related to the emerging epidemic. Within a brief period, however, the notion that AIDS was some form of “gay plague” was quickly extinguished. The disease was suddenly being reported in other populations, such as injection drug users, blood transfusion patients, and hemophiliacs. What these reports suggested to the scientific community was that an infectious etiology for AIDS had to be considered.

This was corroborated when AIDS cases began to emerge among individuals who had been injected with blood or blood products but had no other expected risk factors, making the transmission vectors for the disease somewhat clearer. Such cases were confirmed first among people with hemophilia, followed by blood transfusion recipients and injection drug users who shared hypodermic needles, syringes, and other paraphernalia. Then, with the appearance of documented cases of AIDS among the heterosexual partners of male injection drug users, it became increasingly evident that AIDS was a disease transmitted by the exchange of certain bodily fluids, primarily blood, blood products, and semen. As such, sexual orientation was not a risk factor per se.

In 1983 and 1984, scientists at the Institute Pasteur in Paris and the National Institutes of Health in the United States identified and isolated the cause of AIDS: Human T-cell Lymphotropic Virus, Type III (HTLV-III), or Lymph-adenopathy-Associated Virus (LAV). Later, this virus would be renamed human immunodeficiency virus, more commonly known as HIV.

HIV/AIDS, DRUG-INVOLVED OFFENDERS AND THE CJ-DATS INITIATIVE

In the almost three decades since the first clinical reports, HIV and AIDS spread globally, and by 2007 some 35 million people were living with HIV, representing almost 1% of the world’s population. In many countries, the number of new cases of HIV has declined as a result of both prevention and intervention programs designed for populations having a high risk for infection. In the United States, although the greatest number of new cases continues to be among men who have sex with men, the proportion of new infections through heterosexual contacts has increased substantially. In particular, the epidemic seemed to be shifting to women and people of color.

In recent years, drug-involved offenders have been targeted for prevention education, particularly those in correctional institutions. The U.S. currently has more prisoners than any other country in the world, with more than 2.26 million incarcerated at the end of 2006. Importantly, HIV/AIDS prevalence among prisoners is more than three times greater than that of the general U.S. population, and communities of color, who are disproportionately represented in the correctional system, are affected at higher rates. Women whose partners have been in the correctional system are also increasingly affected by HIV. Because more than

90% of inmates are eventually released to the community, a special emphasis on prevention and intervention has been directed toward those returning to the community.

Within this context, in 2002 the National Institute on Drug Abuse (NIDA) launched its first national Criminal Justice Drug Abuse Treatment Studies (CJ-DATS) research initiative. The CJ-DATS effort included NIDA, nine research centers and one coordinating center that worked together with federal, state, and local criminal justice partners to develop and test integrated approaches for the treatment of drug-involved offenders. Federal support included not only NIDA, but also the CDC, the Center for Substance Abuse Treatment, the National Institute on Alcohol Abuse and Alcoholism, the National Institute of Justice, the Office of Justice Programs, the Bureau of Prisons, and the National Institute of Corrections. The areas of study included screening and referral, modifying treatment programs and interventions for reentering offenders, improving engagement and retention, linking to services in the community, improving coordination with criminal justice reentry processes, addressing the needs of special populations, understanding the general organizational and contextual factors in treating offenders, and understanding current treatment practices for drug-involved offenders (Wexler and Fletcher 2007). In many of the studies that were launched under the CJ-DATS initiative, issues related to HIV received considerable attention, and the articles in this special issue of the *Journal of Psychoactive Drugs* examine portions of that work.

In the first article, “Integrating an HIV/HCV Brief Intervention in Prisoner Reentry: Results of a Multisite Prospective Study,” Martin and colleagues note that *brief* interventions to reduce risky behaviors have become increasingly popular in a variety of health fields, including HIV and hepatitis risk reduction, and discuss the need for intervention research initiatives to assess what constitutes an effective “dose” of an intervention. This research examines the relative effectiveness of three alternative brief interventions of varying intensity designed to change the risk behaviors of inmates who are reentering society: a DVD-based, peer-delivered intervention; the NIDA Standard HIV Intervention; and a standard practice condition (HIV educational video). Due to the large numbers of offenders returning to communities across the United States each year and the limited resources available to most correctional systems, establishing the parameters for an effective HIV intervention for criminal justice populations that is both brief and cost effective is critical for researchers and practitioners in correctional systems.

In “The Persistence of HIV Risk Behaviors Among Methamphetamine-Using Offenders,” Carrier, Greenwell and Prendergast address the fact that methamphetamine is rapidly becoming the drug of choice for a large number of substance-abusing offenders. This study uses data from more than 800 substance-abusing offenders in a multisite, NIDA-funded project to determine whether methamphetamine abuse in the past 30 days was associated with increased HIV risk behavior either prior to incarceration or nine months after release from an in-prison substance abuse treatment program. The findings indicate that offenders who used methamphetamine prior to and after incarceration and treatment report higher levels of HIV-risk behaviors compared with offenders with no such use. These patterns of high-risk behavior associated with methamphetamine use among offenders may indicate a need for specialized treatment and prevention initiatives within the criminal justice system.

In “Applying Classification and Regression Tree Analysis to Identify Prisoners with High HIV Risk Behaviors,” Frisman and colleagues utilize novel statistical methods to examine the characteristics of inmates who engaged in high-risk behaviors prior to incarceration. This study employs data collected through a case management study in the CJ-DATS initiative to analyze the characteristics of prisoners; the authors employed recursive partitioning techniques to better identify groups at varying levels of HIV risk behaviors. Recursive partitioning, a technique seldom used previously, offers a useful method for identifying subpopulations at elevated risk

for HIV risk behaviors, and may provide a novel approach for identifying those offenders most in need of HIV prevention services. Providing evidence-based risk profiles could lead to tailoring programs to particular behaviors, and this is a potentially effective approach to HIV prevention.

Paralleling the work of Frisman and colleagues, in “Substance Use, Mental Health Problems, and Behavior at Risk for HIV: Evidence from CJDATS” Pearson and colleagues examined the relationship between substance abuse, mental health problems and HIV risk in a sample of offenders discharged from prison and referred to substance abuse treatment programs. Data from 34 sites in the CJ-DATS initiative were analyzed. Among parolees referred to substance abuse treatment, self reports for the six-month period before the arrest resulting in their incarceration revealed frequent problems with both substance use and mental health. The article focuses on examining and testing whether HIV risk behaviors were significantly associated not only with substance abuse, but also with mental health disorders, possibly with a significant interactive effect of comorbidity. Comorbid substance abuse and mental health disorders affect large segments of the offender population in the U.S., and this study contributes to an emerging literature on the implications of comorbid conditions for HIV-related risk behaviors.

“Partner Relationships and HIV Risk Behaviors among Women Offenders” by Knudsen and colleagues addresses the increasing HIV infection rate among women in general and female inmates in particular, and focuses on understanding the correlates of risky sexual behaviors among this at-risk population. Partner relationships, and particularly the extent to which women perceive they have power within these relationships, are important in understanding women’s sexual risk behaviors, and the examination of relationship power comprises a central focus of the Knudsen article. Logistic regression models of the associations between relationship power and unprotected sex appear to offer some support for the importance of power as a protective factor in reducing unprotected sexual behaviors among women at high risk for HIV. These findings suggest that relationship issues may be critically important to address in HIV prevention initiatives for highly vulnerable women inmates.

“Racial Differences in HIV/AIDS Discussion Strategies and Sexual Risk Behaviors Among Drug Abusing Female Criminal Offenders” by Oser and colleagues focuses on the disproportionate impact of HIV on African-American female inmates, and the role of heterosexual contact as the primary mode of transmission. It suggests that one possible explanation for this discrepant impact may be racial differences in the communication and negotiation strategies used by women to persuade potential sexual partners to engage in safer sexual behaviors. Data were collected from female inmates in three correctional institutions as part of the Reducing Risky Relationships for HIV (RRR-HIV) protocol within the CJ-DATS cooperative agreement. Negative binomial regression analyses were used to assess the associations of various interpersonal discussion strategies with unprotected sexual behaviors. These findings may aid in pinpointing effective partner communication strategies for incorporation into behavioral HIV intervention programs.

“HCV in Incarcerated Populations: An Analysis of Gender and Criminality on Risk” by Rhodes and colleagues notes that while studies have explored the prevalence and correlates of hepatitis C (HCV) infection in substance-using and incarcerated populations, these studies have not examined the attributes of criminal histories for those with HCV infection. Offenders vary in terms of their risk for recidivism based on their criminal history and criminal lifestyle factors. As such, this study examines HCV infection as it relates to criminal risk factors. These criminal risk factors include number of prior arrests, total time incarcerated, age of first arrest, and other experience with the criminal justice system. Given the disproportionate burden of hepatitis C infection found among substance-abusing offender populations, the identification of specific

risk factors is critical for examining policy issues regarding HCV service delivery within the correctional system.

“Predicting HIV/STD Risk Level and Substance Use Disorders Among Incarcerated Adolescents” by Rowe and colleagues points out that incarcerated adolescents are among the most vulnerable groups for sexually transmitted infection (STI) and substance abuse. The study they describe examines predictors of HIV/STI risk level and substance use disorders among juvenile justice-involved youth, and investigates the contribution of family variables to these problems among incarcerated adolescents. They used a comprehensive assessment strategy with data obtained from youth report, parent report, and laboratory confirmed STI testing, and the results show that substance use directly predicts HIV/STI risk level among incarcerated adolescents. Consistent with previous research, family conflict was found to be an important predictor of substance use disorders even after controlling for other factors. These findings suggest the need for integrated family-based interventions addressing delinquency, substance abuse, and HIV/STI-associated risk factors with juvenile justice-involved adolescents.

The final article in this special issue, “Arrest Histories of High-Risk Gay and Bisexual Men in Miami: Unexpected Additional Evidence for Syndemic Theory” by Kurtz, is not based on the NIDA CJ-DATS initiative, but nevertheless has relevance for the wider issues of HIV infection, drug abuse, and criminal justice involved populations. Kurtz points out that gay and bisexual men continue to suffer the highest burden of HIV/AIDS in the U.S., and that since the beginning of the epidemic, substance abuse has been one of the strongest predictors of sexual risk behaviors and seroconversion among this population. Recent research has focused on additional aspects of health risk disparities among gay and bisexual men, including depression and other mental health problems, childhood sexual abuse, and adult victimization, suggesting that these men are impacted by a syndemic of health risks. Interestingly, discussion of gay and bisexual men’s involvement with the criminal justice system is largely absent from the literature. This study describes the nature, extent and predictors of the arrest histories of a sample of gay and bisexual substance users at very high risk for HIV infection and/or transmission. These histories are surprisingly extensive, and are strongly associated with poverty, severe mental distress, substance abuse and dependence, and victimization. As the Kurtz article suggests, the involvement of gay and bisexual men in the criminal justice system warrants a stronger research focus because arrest represents yet another marker of health risks among this highly vulnerable group. HIV prevention initiatives in the criminal justice system have not traditionally included issues of relevance to gay men, and the research by Kurtz suggests that this emphasis is needed.

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