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Director's Column

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Drug Abuse Research Helps Curtail the Spread Of Deadly Infectious Diseases

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Research has consistently demonstrated that drug abusers will reduce the drug-use and sexual behaviors that put them at risk for HIV and other blood-borne infectious diseases.

Drug abuse plays a central role in the spread of infectious diseases that threaten our Nation's health. Injection drug use now accounts for about one-third of all new cases of AIDS reported in the U.S. each year, according to figures from the Centers for Disease Control and Prevention. Other statistics show that drug abuse is strongly linked to the spread of hepatitis, tuberculosis (TB), and syphilis and other sexually transmitted diseases. To address this major public health challenge, NIDA has long supported a broad program of research on drug abuse and infectious diseases. ([More information on drug abuse and infectious diseases](#))

Over the last decade, NIDA-funded researchers have developed and evaluated a range of interventions to reduce the spread of HIV among drug abusers, their sexual partners, and their children. Drug abuse treatment and community-based outreach and education programs have consistently demonstrated that drug abusers will reduce the drug-use and sexual behaviors that put them at risk for HIV and other blood-borne infectious diseases and that these changes in behavior lead to declines in new HIV infections. For example, one study of heroin addicts conducted by NIDA-supported researchers at the University of Pennsylvania in Philadelphia found that injecting drug users (IDUs) in a methadone treatment program contracted HIV at one-sixth the rate of addicts who were not in treatment.

NIDA-supported researchers also have contributed to meeting the serious public health challenge posed by the re-emergence of TB in the last decade. HIV became prevalent among IDUs in the mid-1980s and transformed the latent TB infection that has always been widespread in this population into the contagious form of the disease. NIDA-supported epidemiologic, community, and treatment research among drug users at high risk for HIV and TB played an important role in a coordinated Federal and State initiative that led to the implementation of effective strategies to prevent and treat TB. As a result, from a peak of 26,673 cases in 1992, new TB cases fell to an all-time low of 19,851 in 1997. (For

more information, see "[Linking Medical Care With Drug Abuse Treatment Stems Tuberculosis Among HIV-Infected Drug Users](#)," *NIDA NOTES*, Volume 13, Number 3)

Early data from a NIDA-supported study by scientists at National Development and Research Institutes, Inc., in New York City indicate that a substantial portion of heroin snorters become injectors, engage in a high level of risky drug-use and sexual behaviors, and begin to contract hepatitis C soon after they start injecting drugs.

NIDA's TB and HIV research has demonstrated that providing medical care to IDUs in conjunction with drug abuse treatment can curb the spread of infectious diseases. NIDA now is promoting further research to identify factors that support or hinder linkages between drug abuse treatment and primary medical care among a variety of populations, particularly women and racial and ethnic minorities.

NIDA-supported research also has developed approaches that can check the spread of infectious diseases among the approximately 85 percent of IDUs who are not in treatment. For example, one long-term study in Baltimore providing directly observed preventive therapy and a variety of health care services in one convenient setting virtually eliminated new TB cases among out-of-treatment IDUs.

We now are developing additional research initiatives to add drug abuse treatment to vans that provide comprehensive medical services in neighborhoods with large populations of out-of-treatment heroin addicts. We believe these coordinated mobile clinics may lead to further reductions in drug abuse and infectious diseases in this population.

Noninjection drug use also fosters the spread of infectious diseases. For example, smokers of crack cocaine, particularly women who exchange sex for drugs, are at high risk for infection with HIV, hepatitis, TB, and sexually transmitted diseases. In addition, it appears that many heroin users who begin by snorting that drug sooner or later progress to injection drug use with its attendant risks. Early data from a NIDA-supported study by scientists at National Development and Research Institutes, Inc., in New York City indicate that a substantial portion of heroin snorters become injectors, engage in a high level of risky drug-use and sexual behaviors, and begin to contract hepatitis C soon after they start injecting drugs. By also shedding light on the complex individual and social factors that contribute to transition from noninjection to injection drug use, this study will help us develop new approaches to forestall the progression to injection drug use and infectious disease. (See "[Heroin Snorters Risk Transition to Injection Drug Use and Infectious Disease](#)".)

While we have made much progress in preventing and treating infectious diseases among drug abusers, the continued high prevalence of diseases such as HIV/AIDS and hepatitis in this population indicates that much remains to be done. Therefore,

NIDA recently established the Center on AIDS and Other Medical Consequences of Drug Abuse. Headed by Dr. Henry Francis, the Center is coordinating a multidisciplinary program of research on the full spectrum of critical health issues associated with drug abuse. Components of the program include tracking the extent and progression of infectious diseases among drug users, assessing the effect of illicit drugs on the immune system, linking drug abuse treatment and medical care, and developing new educational and behavioral strategies for drug abusers who are not in treatment. Ultimately, the program will generate new strategies for reducing the spread of infectious diseases. (For additional information, see "[New NIDA Center Will Address Health Issues Associated With Drug Abuse](#)," *NIDA NOTES*, Volume 13, Number 5.)

Because drug abuse and infectious disease have implications for many areas of biomedical research, the Center also is fostering collaborative research efforts with other institutes of the National Institutes of Health (NIH), government agencies, and private sector groups. Currently, NIDA supports more than 10 interagency and interinstitute studies involving drug abuse and infectious disease.

For example, the Women and Infants Transmission Study being conducted by NIDA, the National Institute of Allergy and Infectious Diseases, and the National Institute of Child Health and Human Development is investigating mother-to-infant transmission of HIV. NIDA also is participating in a new, congressionally mandated NIH research initiative that is responding to the health problems associated with hepatitis C. Approximately 4 million Americans are infected with this virus, which can cause chronic liver disease that results, in many cases, in death due to cirrhosis and liver cancer. NIDA-supported research will be critical to the success of the NIH initiative because of the major role injection drug use plays in the transmission of this insidious infection.

In the years ahead, drug abuse and infectious disease will continue to pose challenges to the Nation's health. NIDA's broad program of research on the medical consequences of drug abuse will continue to provide the scientific knowledge needed to overcome those challenges with multifaceted public health responses.

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