

Linking Medical Care With Drug Abuse Treatment Stems Tuberculosis Among HIV-Infected Drug Users

By **Robert Mathias**, NIDA NOTES Staff Writer

Injecting drug users with HIV/AIDS can be treated successfully for tuberculosis (TB) in methadone treatment programs that provide comprehensive medical care, according to NIDA-supported research. Integrating medical care and drug abuse treatment also has been effective in preventing new cases of TB from developing among HIV-positive patients, the research indicates.

"A key to dealing successfully with infectious diseases, such as TB and HIV, among drug abuse patients is the linkage of primary care and drug abuse treatment in a drug abuse treatment setting," says Dr. Paul A. Coulis of NIDA's Center on AIDS and Other Medical Consequences of Drug Abuse. "In places where this has been done, such as New York City, it has been effective, so we know it works," he says.

TB is a chronic and infectious lung disease. People with latent tuberculosis infection do not have symptoms, may not develop active disease, and cannot spread TB. However, if such individuals do not receive preventive therapy, they may develop active TB, which is contagious.

Research has shown that injecting drug users have high rates of latent tuberculosis infection. NIDA-supported studies among injecting drug users have shown that HIV can activate this latent TB infection and increase the risk that active TB will develop. In New York City, which was hard hit by the linked epidemics of HIV and TB during the mid-1980s and early 1990s, 30 percent of persons with active TB were injecting drug users, according to the Centers for Disease Control and Prevention (CDC).

Rates of TB have declined both nationally and in New York City since 1992. However, injecting drug users continue to be at high risk for HIV and tuberculosis. For example, about one-third of the 900 methadone treatment patients in the Montefiore Medical Center's Substance Abuse Treatment Program in The Bronx, New York, have HIV, and TB rates are much higher than they are in the general population, says Dr. Marc Gourevitch, who directs a NIDA-funded study of TB infection in drug users enrolled in the program. "Almost all the active TB cases we see among drug users in our program are among those who are HIV-positive," Dr. Gourevitch notes.

To respond to the complex health needs of its patients, the Montefiore treatment program used funding from NIDA and the Health Resources and Services Administration to begin providing medical care on site along with methadone treatment in 1989. In addition to general and HIV-related primary care, on-site services now include mental health and social support services; HIV testing and counseling; and TB testing, prevention, and treatment. "Our model has been to build comprehensive primary care services into the same site at which people are receiving their drug treatment to make it easier for them to get their medical care," Dr. Gourevitch says. This treatment model has enabled the program to achieve

excellent success in getting drug abuse treatment patients to complete the full course of TB therapy needed to curtail the spread of the disease, he says.

Patients must follow demanding medication regimens to prevent and treat TB. To complete the full course of TB prevention, injecting drug users with latent TB infection must take one medication, isoniazid, daily for up to a year. Patients with active tuberculosis require an initial hospitalization with a 4-medication regimen and then must take 2 to 4 medications daily or several times a week for up to a year. Failure to complete the full course of TB treatment can spawn an even more deadly form of the disease, one that is resistant to tuberculosis medications.

In 1989, the Montefiore treatment program implemented a strategy called directly observed therapy (DOT) that was designed to increase patients' adherence to TB therapy. With DOT, treatment personnel observe patients taking each dose of their TB prevention and treatment medications. Now a widely accepted TB treatment practice, DOT, along with improved management of TB cases to ensure completion of a full course of therapy, has been credited by the CDC as playing a major role in the overall reduction in TB rates in the United States since 1992 (see "[The Rise and Fall of TB in the United States](#)"). Methadone treatment programs offer an ideal setting to implement DOT and ensure that injecting drug users complete the full course of treatment because patients are coming in daily for their methadone anyway, Dr. Gourevitch says. "It's a natural process to administer the anti-TB medications and methadone at the same time under direct supervision," he says.

Directly observed tuberculosis prevention and treatment are voluntary at Montefiore. No incentives are offered for participating in supervised preventive therapy, and methadone is not withheld if drug abuse treatment patients do not accept TB therapy. "Yet, almost everyone opts for observed therapy because it eliminates the hassle of having to remember to take TB medications at other times of the day," Dr. Gourevitch says.

Research conducted by Dr. Gourevitch shows that a high percentage of patients receiving directly observed prophylaxis and treatment in the context of their methadone treatment adhere to and complete TB therapy. In one study, more than 80 percent of 114 eligible patients had completed or were still receiving prophylaxis or treatment at the end of a 2-year period. Additional research by Dr. Gourevitch indicates that completion of TB prophylaxis was associated with a 75 percent reduction in the TB rate in this high-risk population and that providing on-site directly observed prophylaxis is cost-effective in terms of preventing the costs of treating active TB.

"What we've learned is that having primary care integrated with drug abuse treatment is a very effective way to treat and prevent various diseases among drug users," concludes NIDA's Dr. Coulis.

Sources

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