

# METHADONE MAINTENANCE TREATMENT

*Methadone maintenance treatment (MMT) can help injection drug users (IDUs) reduce or stop injecting and return to productive lives. However, its use is still sometimes publicly controversial and many factors limit the effectiveness of MMT services. New federal regulations, which have overhauled the MMT system, promise a more flexible approach and improved delivery of these needed, life-saving services.*

## Opiate Addiction Is a Major Individual and Public Health Problem

It is estimated that at least 980,000 people in the United States are currently addicted to heroin and other opiates (such as oxycontin, dilaudid, and hydrocone). They risk premature death and often suffer from HIV, hepatitis B or C, sexually transmitted disease (STDs), liver disease from alcohol abuse, and other physical and mental health problems. It is estimated that 5,000-10,000 IDUs die of drug overdoses every year. Many are involved with the criminal justice system.

A 1997 National Institutes of Health (NIH) report estimated the financial costs of untreated opiate addiction at \$20 billion per year. These costs, combined with the social costs of destroyed families, destabilized communities, increased crime, increased disease transmission, and increased health care costs, mean that opiate addiction is a major problem for affected individuals and society.

## Methadone Maintenance Treatment Is the Most Effective Treatment for Opiate Addiction

Methadone is a synthetic agent that works by "occupying" the brain recep-

tor sites affected by heroin and other opiates. Methadone:

- blocks the euphoric and sedating effects of opiates;
- relieves the craving for opiates that is a major factor in relapse;
- relieves symptoms associated with withdrawal from opiates;
- does not cause euphoria or intoxication itself (with stable dosing), thus allowing a person to work and participate normally in society;
- is excreted slowly so it can be taken only once a day.

Methadone maintenance treatment, a program in which addicted individuals receive daily doses of methadone, was initially developed during the 1960s as part of a broad, multicomponent treatment program that also emphasized resocialization and vocational training.

*Methadone maintenance treatment has important benefits for addicted individuals and for society.*

These benefits include:

- reduced or stopped use of injection drugs;
- reduced risk of overdose and of acquiring or transmitting diseases

such as HIV, hepatitis B or C, bacterial infections, endocarditis, soft tissue infections, thrombophlebitis, tuberculosis, and STDs;

- reduced mortality – the median death rate of opiate-dependent individuals in MMT is 30 percent of the rate of those not in MMT;
- possible reduction in sexual risk behaviors, although evidence on this point is conflicting;
- reduced criminal activity;
- improved family stability and employment potential; and
- improved pregnancy outcomes.

Using commonly accepted criteria for medical interventions, several studies have also shown that MMT is extremely cost-effective.

## Key Issues in Effective Methadone Maintenance Treatment

### Dose

Most patients require a dose of 60-120 mg/day to achieve optimum therapeutic effects of methadone. Compared to those on lower doses, patients on higher doses are shown to stay in treatment

longer, use less heroin and other drugs, and have lower incidence of HIV infection. Some patients need even higher doses for fully effective treatment.

Studies of methadone effectiveness have shown a dose-response relationship, with higher doses more effective in reducing heroin use, helping patients stay in treatment, and reducing criminal activity. Despite compelling evidence that doses need to be determined on an individual basis, that higher doses are more effective, and that doses of 60-120 mg/day are required for most patients, some clinics administer fixed doses to all patients and provide less than optimal doses.

#### *Length of treatment*

Studies have shown that good outcomes from substance abuse treatment are unequivocally contingent on adequate length of treatment. A research-based guide on the principles of substance abuse treatment, released in 1999 by the National Institute on Drug Abuse (NIDA), notes that "For methadone maintenance, 12 months of treatment is the minimum, and some opiate-addicted individuals will continue to benefit from methadone maintenance treatment over a period of years." Despite this fact, the majority of MMT patients leave before 1 year, either because they drop out, the clinic encourages them to leave, or they are discharged for not complying with program regulations. Most of those who discontinue MMT later relapse to heroin use. This illustrates the difficulty of the addiction recovery process and the fact that individuals may need multiple episodes of treatment over time.

#### *The need to tailor treatment to subgroups of IDUs and to individual patients*

IDUs come to MMT with a broad range of issues and problems in addition to their drug addiction. For example, about 40 percent of patients entering methadone treatment use cocaine or crack as well as heroin; perhaps a

quarter also abuse alcohol. Studies have shown that 67-84% of MMT patients have been infected with hepatitis C. About 10 million people in the U.S. have co-occurring substance abuse and mental disorders; more than 40 percent of those with addictive disorders also have mental disorders. IDUs frequently have unstable living situations and may need multiple social services. Treatment programs tailored to the specific needs of patients can respond more effectively to these varied types of patients.

#### *Continued use of heroin, cocaine, alcohol, and other drugs*

It is relatively common for MMT patients to continue using heroin, other drugs such as cocaine or marijuana, and alcohol after admission to treatment. This reflects the long history of use, the complexity of patients' situations and reasons for using drugs, and the biological basis of addiction. Many patients in treatment do not have complete control over their addictions at all times. Realistic expectations of treatment reflect the understanding that recovery is a day-to-day process with occasional relapses.

### **The Regulation and Administration of MMT has Undergone a Radical Change**

#### *The context for change*

Despite 30 years of experience and widespread acceptance by addiction specialists and health agencies, MMT has sometimes been publicly controversial in the U.S. and other countries. Critics have cited the belief that methadone treatment merely substitutes one addiction for another and that achieving a drug-free state is the only valid treatment goal. Misunderstandings about the nature of drug addiction (not seeing it as a biomedical condition) are part of the reason why MMT has sometimes been met with limited acceptance by communities, health care providers, and the public. Critics opposed to expanding

MMT programs also express concerns that they may be a magnet for crime and drug dealing and that patients will divert methadone (sell it to supplement their income or buy or sell it to help friends in withdrawal). As a result, the use of methadone to treat addiction has been heavily regulated and strictly controlled in this country. For example, until now, MMT has been delivered only through specially licensed clinics, called Opioid Treatment Programs.

These regulations and controls have meant that MMT programs have had limited flexibility and ability to respond to the needs of patients, including in such key areas as dose and length of treatment. The regulations also have limited the number of physicians who are available to treat heroin addiction and the settings and locations in which treatment can occur.

#### *The change*

In May 2001, the U.S. Department of Health and Human Services (DHHS) announced a new system for regulating and monitoring MMT. Under this new system, oversight responsibility for MMT in the United States shifted from the Food and Drug Administration (FDA) to the Substance Abuse and Mental Health Services Administration's Center for Substance Abuse Treatment (CSAT).

This new system represents a fundamental change in the approach to substance abuse treatment and in the federal government's role in ensuring effective and accountable MMT programs. It relies on accreditation of MMT programs by independent organizations and states, in accordance with treatment standards that have been developed by CSAT over the last 10 years.

These standards reflect current knowledge about the nature of opiate addiction as a chronic brain disease and the principles underlying effective long-term, comprehensive treatment. The standards are based on "best practice guidelines" and

emphasize improving quality of care in areas such as individualized treatment planning, increased medical supervision, and assessment of patients. The new system continues to accommodate community concerns, however, by retaining regulations that are designed to reduce diversion of methadone.

The designers of this new approach believe that shifting to an accreditation approach will significantly improve care for IDUs by:

- improving access to and quality of MMT programs;
- allowing for increased professional discretion and medical judgment in designing treatment plans based on individual needs, especially in managing methadone doses and length of treatment, and whether withdrawal from medication is possible or desirable;
- helping to move MMT closer to the mainstream of health care practice (this increase in the range of settings may increase MMT in physicians' offices and increase interest by hospitals and HMOs in providing these services);
- improving oversight and accountability and helping to promote state-of-the-art treatment services; and
- enhancing patient rights and patient responsibilities.

### To Learn More About This Topic

Read the overview fact sheet in this series on drug users and substance abuse treatment – “Substance Abuse Treatment for Injection Drug Users: A Strategy with Many Benefits.” It provides basic information, links to the other fact sheets in this series, and links to other useful information (both print and web).

Visit websites of the Centers for Disease Control and Prevention ([www.cdc.gov/idu](http://www.cdc.gov/idu)) and the Academy for Educational Development ([www.health-strategies.org/pubs/publications.htm](http://www.health-strategies.org/pubs/publications.htm)) for these and related materials:

- *Preventing Blood-borne Infections Among Injection Drug Users: A Comprehensive Approach*, which provides extensive background information on HIV and viral hepatitis infection in IDUs and the legal, social, and policy environment, and describes strategies and principles of a comprehensive approach to addressing these issues.
- *Interventions to Increase IDUs' Access to Sterile Syringes*, a series of six fact sheets.
- *Drug Use, HIV, and the Criminal Justice System*, a series of eight fact sheets.

### Visit these websites:

- The Substance Abuse and Mental Health Services Administration, to learn more about the new federal regulations governing methadone treatment programs: [www.samhsa.gov/news/news.html](http://www.samhsa.gov/news/news.html) (click on Archives of News Releases and scroll down to the two May 18, 2001 releases)
- The Addiction Treatment Forum, which publishes newsletters and other information on substance abuse and addiction research, therapies, news: [www.atforum.com/](http://www.atforum.com/)
- The American Methadone Treatment Association: [www.americanmethadone.org/](http://www.americanmethadone.org/)

See the October/November 2000 and January 2001 issues of the *Mt. Sinai Journal of Medicine*. The 14 papers in these two theme issues focus on a wide range of issues related to methadone maintenance treatment and its impact on IDUs, including those infected with HIV or hepatitis C. *Mt. Sinai Journal of Medicine* 2000;67(5&6) [www.mssm.edu/msjournal/67/6756.shtml](http://www.mssm.edu/msjournal/67/6756.shtml) and 2001;68(1) [www.mssm.edu/msjournal/68/681.shtml](http://www.mssm.edu/msjournal/68/681.shtml)

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Department of Health and Human Services

<http://www.cdc.gov/idu>

Through the Academy for Educational Development (AED), IDU-related technical assistance is available to health departments funded by CDC to conduct HIV prevention and to HIV prevention community planning groups (CPGs). For more information, contact your CDC HIV prevention project officer at 404-639-5230 or AED at (202) 884-8952.