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## Evidence for action on HIV/AIDS and injecting drug use

# POLICY BRIEF: REDUCTION OF HIV TRANSMISSION THROUGH DRUG-DEPENDENCE TREATMENT

## BACKGROUND

**D**rug-dependence treatment aims at improving the health and quality of life of persons with drug dependence through achieving abstinence from drug consumption, reduction in morbidity and mortality caused by or related to high risk behaviors associated with drug consumption, and providing access to services and opportunities to achieve the highest possible level of physical, mental and social well-being.

## APPROACHES TO TREATMENT

The treatment of drug dependence involves pharmacological (including substitution maintenance therapy), and psychosocial interventions.

### Substitution treatment

Substitution treatment entails the administration under medical supervision of a prescribed medicine with similar action to the drug of dependence. Such treatment is available for the management of a range of substance dependence syndromes. Nicotine replacement therapy for tobacco smokers is the most widely used substitution treatment. However, most substitution programmes targeting illicit drug users are primarily for opioid-dependent persons. Medicines prescribed for substitution treatment are used for both medium-term to long-term maintenance and detoxification or withdrawal. Maintenance programmes involve the provision of a prescribed medicine for a long period of time, usually more than six months. Detoxification programmes tend to be linked with longer-term non-pharmacological drug treatment. They continue for periods ranging from about 10 days to a few months and substitute drugs are prescribed in decreasing doses until a drug-free state has been reached.

Most substitution medicines are taken orally on a regular basis and significantly reduce the rate of HIV/AIDS risk behaviour, such as needle or syringe sharing. They stabilize the health and social environment

of drug users before longer-term goals are worked on, e.g. withdrawal or abstinence-based treatment. Globally, the most widely employed substitution medicine among illicit drug users is methadone, prescribed in maintenance doses at around 60–80 mg per day for the treatment of opioid dependence in many countries. Another medicine for substitution maintenance therapy of opioid dependence is buprenorphine [1]. Levo alpha acetyl methadol (LAAM) is also been used but there are concerns about its possible side-effects on cardiac functions, and it has, therefore, been withdrawn from the European market. Tincture of opium is used in some Asian countries for the detoxification of opium-dependent individuals.

Substitution treatment could be an important component of community-based approaches because it is generally provided on an outpatient basis. Moreover, high rates of retention of patients are achieved and an opportunity is provided for individuals to deal with major health, psychological, family, housing, employment, financial and legal issues while undergoing treatment. With few exceptions the provision of substitution treatment has largely been implemented in specialized drug-dependence treatment programmes, separated from general health services. Participation in substitution treatment programmes provides opportunities for early diagnosis of other health problems, HIV testing and counselling, and referral for additional services. Furthermore, because of the high rate of retention in treatment, such programmes offer opportunities for AIDS treatment, care and support.



## Abstinence-based treatment

Abstinence-based or drug-free treatment programmes vary considerably in their settings (residential, outpatient, self-help groups) and orientation. They are usually based on the principle that a structured drug-free setting and abstinence-oriented interventions provide an appropriate context, in which to address the underlying causes of drug dependence and behaviour. These programmes assist clients in relapse prevention and developing appropriate skills and attitudes for making positive changes towards drug-free lifestyles. In abstinence-based treatment programmes, drop-out rates are relatively high during the first three months but then decline significantly. Self-help or mutual support groups espouse a disease concept of drug and alcohol dependence with the promise of recovery, but not cure, for those who adhere to it. They usually emphasize the importance of reconstructing relationships with other people and the desirability of helping other individuals who are dependent on alcohol or other drugs. One of the benefits of self-help or mutual support groups is that they provide a mechanism for promoting alternative social networks that do not support drug use.

## Behavioural interventions

Behavioural interventions may be delivered in the context of abstinence-based or substitution maintenance treatment approaches. They include the provision of psychotherapy, psychosocial support and counselling to encourage behavioural and emotional change. Behavioural interventions support lifestyle adjustments, reduce risk behaviour, e.g. the sharing of injecting equipment and high-risk sexual behaviour, and enhance skills for coping with factors that could trigger drug use or a relapse.

## EVIDENCE

A review of the effectiveness of drug-dependence treatment in the prevention of HIV/AIDS among injecting drug users was commissioned by WHO. It covered over 100 studies in a variety of settings with different methodologies. All drug-dependence treatment modalities were found to have the potential for reducing the risk of HIV transmission. Consequently, drug dependence treatment was an important component of all HIV/AIDS prevention programmes for injecting drug users because of its capacity to reduce:

- ▶ drug use in general;
- ▶ the frequency of injecting;
- ▶ levels of associated risk-taking behaviour.

There is a large body of scientific evidence on the effectiveness of substitution treatment vis-à-vis HIV/AIDS and behaviour related to drug use, as outlined below.

- ▶ Numerous studies have yielded consistent and strong evidence that substitution treatment is associated with substantial reductions in illicit opioid use, criminal activity, deaths attributable to overdoses, and risk behaviour related to HIV transmission [2,3].
- ▶ There is evidence indicating that methadone maintenance treatment improves the overall health status of drug users infected with HIV [4].
- ▶ Substitution maintenance treatment is more effective than no treatment, placebo and detoxification alone in retaining drug users in treatment and reducing heroin use [5].
- ▶ Substitution maintenance treatment is associated with higher earnings, improved levels of employment and social functioning, e.g. a return to employment and education.

The scientific evidence is reflected in the growth in provision of substitution maintenance treatment services in most countries of the European Union and in some countries of Eastern Europe, Asia and the Americas, mirrored by a reduction in HIV transmission rates or the maintenance of low seroprevalence levels. The review also found that investment in drug-dependence treatment, particularly substitution maintenance treatment, was cost-effective in comparison with the costs of later treatment of HIV/AIDS and related diseases. The scientific evidence clearly suggests that substitution treatment is the most effective option for opioid dependence treatment related to HIV transmission and the care of drug users with AIDS. Substitution maintenance therapy also offers opportunities for anti retroviral treatment of drug users with AIDS.

<sup>1</sup> Schottenfeld RS, Pakes JR, Oliveto A, Ziedonis D, Kosten TR. Buprenorphine vs methadone maintenance treatment for concurrent opioid dependence and cocaine abuse. *Archives of General Psychiatry* 1997;54(8):713-20.

<sup>2</sup> Ward J, Mattick RP, Hall W. The use of methadone during maintenance treatment: pharmacology, dosage and treatment outcome. In: Ward J, Mattick RP, Hall W, editors. *Methadone maintenance treatment and other opioid replacement therapies*. Amsterdam: Harwood Academic Publishers; 1998. p 205-38.

<sup>3</sup> Sorensen JL, Copeland AL. Drug abuse treatment as an HIV prevention strategy: a review. *Drug and Alcohol Dependence* 2000;59(1):17-31.

<sup>4</sup> Weber R, Ledergerber B, Opravil M, Siegenthaler W, Luthy R. Progression of HIV infection in misusers of injected drugs that stop injecting or follow a programme of maintenance treatment with methadone. *British Medical Journal* 1990;301(6765):1362-5.

<sup>5</sup> Mattick RP, Breen C, Kimber J, Davoli M. Methadone maintenance therapy versus no opioid replacement therapy for opioid dependence (Cochrane review). In: *The Cochrane Library* 2002; Issue 4.

## POLICY AND PROGRAMMING IMPLICATIONS

Given the evidence on the effectiveness of drug-dependence treatment for HIV/AIDS prevention among injecting drug users, it is strongly recommended that a full and comprehensive range of high-quality treatment services be established in affected communities and that as many injecting drug users as possible have access to them. The high risk of HIV transmission associated with drug use requires the application of all possible measures aimed at behavioural change. Drug-dependence treatment with all its variations is a critical element of comprehensive HIV/AIDS prevention and care among injecting drug users.

Many policy-makers opt for drug-dependence treatment that is exclusively abstinence-based, because it is easy to accept, less challenging and politically less sensitive than other approaches. However, policy and pro-

gramme development should take into account that drug dependence is a chronic and often relapsing condition. The achievement of abstinence is usually a lengthy and difficult process for many drug users, because numerous social and psychological factors have to be addressed. Stabilizing treatment strategies such as substitution maintenance therapy for opioid dependence can help to define and structure this process, and reduce harms related to drug use, e.g. the transmission of HIV.

The extent of the HIV/AIDS epidemics among injecting drug users in various parts of the world urgently demands the development of community-based health and social services, and of drug-dependence treatment programmes that are incorporated into general health care and welfare services.

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For specific information regarding drug-dependence treatment, please contact the WHO department of Mental Health and Substance Abuse: [msb@who.int](mailto:msb@who.int)

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