

WHAT IS SUBSTITUTION TREATMENT?

Part II

Effective treatment

In order to be effective, substitution treatment, as any other type of treatment, must be:

- based on the needs of prisoners;
- provided for the right period of time and at the right dose required by the particular person; and
- provided with continuity, upon imprisonment and also following release.

As mentioned above, effective treatment has many benefits for individuals by helping them stay alive; reducing the risk of infection, particularly with HIV and hepatitis; achieving abstinence or a stabilised pattern of use; stabilising their social life; improving physical health; and reducing criminal activity. It also benefits society by improving public health; reducing emergencies and hospitalisation; reducing the spread of HIV and other infectious diseases; reducing social welfare costs; and reducing costs to the criminal justice system.

Substitution treatment programmes vary in duration, dosage and scheme. Although much evidence (Zickler, 1999) indicates that substitution treatment, especially methadone treatment, is more effective when higher dosages are prescribed on a maintenance basis, many programmes focus on short-term detoxification with decreasing dosages.

Applying substitution therapy solely in the form of detoxification restricts its therapeutic potential. Substitution maintenance treatment aims to stabilise health and achieve social rehabilitation. As research indicates, for most opiate- dependent people (WHO, United Nations Office on Drugs and Crime and UNAIDS, 2004).

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into drug use, programmes should include strategies to engage and keep patients in treatment. Many patients need several years in treatment.

In 1990, the WHO Regional Office for Europe (1990) suggested standard terms for methadone treatment divided into four categories:

- short-term detoxification: decreasing doses over one month or less;
- long-term detoxification: decreasing doses over more than one month;
- short-term maintenance: stable prescribing over six months or less; and
- long-term maintenance: stable prescribing over more than six months.

In addition, distinguishing between low-threshold programmes and high-threshold programmes is important. The distinction between these types can be broadly summarized as follows.

Low-threshold programmes:

- are easy to enter;
- are oriented towards harm reduction;
- have as a main goal to relieve withdrawal symptoms and craving and improve people's quality of life; and
- offer a range of treatment options.

High-threshold programmes:

- are more difficult to enter and may have selective intake criteria;
- are abstinence-oriented (which could include abstinence from methadone);
- do not have flexible treatment options;
- adopt regular (urine) control;
- have an inflexible discharge policy (illegal opiate use not being consented); and
- include compulsory counselling and psychotherapy.

The concept of "low threshold" should not be regarded as synonymous with "low quality".

In general, low-threshold programmes are more successful in serving harm reduction purposes for both the addicted individual and society, by rapidly engaging and retaining people in treatment. For those with a chaotic lifestyle due to their drug habit such



programmes are associated with better treatment outcomes, and thus meeting the aims of substitution treatment.

Substitution maintenance treatment is more effective than other forms of treatment

Several arguments have been made against the implementation of MMT in prison settings. Some critics consider methadone as just another mood-altering drug, the provision of which delays the necessary personal growth required to move beyond a drug-centred existence. Some also object to MMT on moral grounds, arguing that it merely replaces one drug of dependence with another. However, research studies have shown that MMT has been found to be more effective than detoxification programmes in promoting retention in drug treatment, a reduction in drug related deaths and abstinence from illicit drug use. As well, while some have expressed concern about the feasibility of implementing MMT in prison settings, experience has shown that these difficulties can be overcome.

Applying substitution therapy solely in the form of detoxification restricts its therapeutic potential. Substitution maintenance treatment with the aim of health stabilization and social rehabilitation requires longer time lines. As research indicates, for most opiate dependent persons “the threshold of significant improvement is reached after about three months in treatment, with further gains as treatment is continued. Because people often leave treatment prematurely, and premature departure is associated with high rates of relapse into drug use, programmes should include strategies to engage and keep patients in treatment. Many patients need several years in treatment”. (WHO/UNODC/UNAIDS, 2004)

Given the often chronic nature of opiate addiction substitution treatment can be compared to other treatments that are effective in treating serious chronic relapsing conditions such as hypertension and diabetes. These diseases, like opiate dependence, are chronic, require daily treatment, and have a high risk of adverse effects if treatment is stopped.

It is recognised that addiction is a chronic disorder that is prone to relapse, even after significant periods of recovery, and an effective treatment must be of a continuous nature.



Yet, addiction treatment too often consists of multiple episodes of acute care, rather than a plan of continuing care that is agreed between the clinician and the patient.

Treatment criteria and treatment plan

Two internationally accepted diagnostic criteria cover drug dependence: the tenth revision of the International Classification of Diseases (ICD-10) (WHO, 1992) and the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 1994).

Opioid substitution maintenance therapy should be restricted to people who meet the clinical criteria for opioid dependence. However, restrictive regulations regarding the admission and inclusion criteria of a substitution maintenance therapy are counterproductive with regard to access to treatment and preventing HIV and hepatitis transmissions. Issues such as the maximum dose or maximum length of treatment should be left to the practitioner's clinical judgement, based on the assessment of the individual.

In principle, everyone who is opioid-dependent and in need of treatment and expresses a desire for substitution treatment can become stabilized under such treatment after appropriate assessment and treatment induction. However, it is recommended that the availability of treatment places is taken into account when adopting admission criteria. Age, length of opioid addiction, physical and mental health and personal motivation of the opioid-dependent person should all be considered. Some groups, such as pregnant women or people living with HIV or other illnesses, should be given priority. This, however, should not entail compulsory HIV-antibody testing.

Furthermore, since release from prison is associated with an increase in drug related death due to restart of drug use after a period of abstinence or reduced use (during which opiate tolerance may have been reduced) treatment should be prioritised to those about to be released from prison.

The individual treatment plan will depend on the objectives of the treatment, which are established on the basis of the resources available, the needs and wishes of the respected



person and the professional opinion of the doctor. Issues to consider when establishing a treatment plan include:

- client goals;
- current circumstances;
- available resources;
- past history of treatment outcomes; and
- evidence regarding safety, efficacy and effectiveness.

Opioid dependence is associated with a range of medical, legal and psychosocial problems. A person is suitable for substitution treatment if the individual and social harms associated with the opioid use are likely to be reduced by entering into treatment. Additional problems should be addressed from the very beginning, either by the programme itself or through referral to an appropriate service.

Risks and limitations

The most significant risk of methadone and other opioid agonists is overdose, which can be fatal. Research evidence (Verster & Buning 2003) indicates that the highest risk of overdose is when methadone substitution treatment is begun. Low doses are therefore recommended at the beginning of treatment. However, once a stable dose is achieved (after about two weeks), the risk of overdose death is substantially reduced compared with the risk before treatment.

There are some other negative aspects of substitution treatment. The most important is the fact that, in most cases, a person has to receive treatment for a long period of time. The long-term aspect negatively affects both public spending and the individual person. The drug user becomes a long-term patient who depends on the medication and often also on the person who prescribes it. In some cases this dependency can lead to a passive attitude where the user adopts through a state of “learned helplessness” to adopt a “sick role”.

Furthermore, the dependency on the medication and the associated stigma surrounding it might cause difficulties when patients want to move from one place to another or simply travel and take their medication with them after being released.



There are potentially serious negative effects that need to be brought to patient's attention before they start treatment so that they can give informed consent to treatment. However, the benefits of substitution treatment clearly outweigh these potential negative effects, both for the individual and for society.

Polyvalent drug use

Clear and transparent protocols and guidelines should be in practice regarding the use of several other drugs of prisoners when incarcerated. In particular benzodiazepines, barbiturates, and alcohol which are posing severe health risks for substitution treatment. In these cases the continuity of substitution treatment should be thoroughly discussed from case to case. The options should ideally be considered within a multi-professional team and – if available – together with the drug counselling service of the prison. Future plans and achievements should be determined and agreed upon, taking into account the prisoner's wishes and resources.

Political leadership and clear policies and protocols

In order to harmonise substitution treatment in prisons in one country it is of utmost importance to have comparable treatment standards of how to conduct this treatment in prisons. This is important in order to have comparable regulations once a prisoner is being referred to another facility.

In prison, protocols and practices of substitution treatment are often more oriented towards the institution's needs and requirements rather than each person's needs and wishes. For instance, the approximately five minutes required for supervising the intake of buprenorphine (sublingual) is regarded as excessively time-consuming. Instead, methadone is prescribed.

Drug users may complain about changes in their substitution drug and see double standards with regard to what happens in the community. Clear communication with the prisoner is obligatory when intending to replace one substitution drug with another.



Methadone

Methadone (methadone hydrochloride) is the predominant substitution drug used inside and outside prisons. It is a synthetic opioid agonist that has an effect similar to that of morphine. Methadone is well absorbed from the gastrointestinal tract, irrespective of formulation type (syrup versus tablet). It has very good bioavailability of 80–95%. The estimated elimination half-life of methadone is 24–36 hours, with considerable variation across individuals (10 to 80 hours). This pharmaceutical profile makes methadone useful as a substitute opioid medication, because it allows oral administration, single daily dosage and achievement of steady-state plasma levels after repeated administration with no opioid withdrawal during a usual one-day dosing interval.

Some patients experience side effects. The most common side effects include increased perspiration, constipation and disturbances of sleep, reduced libido (sex drive) reduced power of concentration as well as a potential for weight gain. Such undesirable side effects generally occur at the beginning of treatment and ameliorate over time. In some patients these side effects persist over longer periods of treatment, but mostly remain without medical consequences. In total, these side effects affect less than 20% of patients taking methadone substitution therapy.

Methadone is a safe medication with no lasting deleterious physical or physiological effects. Contrary to what is popularly assumed, it has no direct damaging effects on bones, teeth or organs (opioids do restrict saliva production, which in turn can lead to dental caries). However, for some patients, detoxifying from methadone might be very difficult and protracted.

Methadone is a cheap medication; it is easy to deliver to the prisoner and the intake can easily be supervised. In most of the cases, only little information is given to patients about the substitution drug. This might be due to the assumption of providers that everything about the medication is already known by experienced patients. However, this is not always the case.



Box 2: Methadone: the barest basics – a guide for providers

Source: Newman (2003; slightly modified and adapted by the authors and members of the editorial board.)

General comments

To the greatest extent permitted by local laws and regulations, methadone should be provided pursuant to the same professional and ethical standards that apply to all other health services. Providers should encourage the availability of a broad range of treatment approaches and sources of care and assist in referring and transferring drug users upon request.

The vast body of experience with the use of methadone in the treatment of opioid dependence should be utilised to the maximum. It is accessible through the professional literature, web-based resources or direct consultation with colleagues. Methadone maintenance – even when provided over a period of decades – is not associated with adverse effects on any organ of the body.

People’s lives can be chaotic at the start of treatment, which warrants a relatively greater degree of supervision and structure. Any constraints, however (such as on take-home medication), should be reviewed on an ongoing basis and relaxed or removed as stability is achieved.

Dosage

General: start low, go slow – but aim high

- First, do no harm: estimates of the degree of dependence and tolerance are unreliable and should never be the basis for starting doses of methadone that could, if the estimation is wrong, cause overdose.
- There is no moral value associated with either “high” or “low” doses,
- Methadone should not be given as “reward” or withheld as “punishment”.

Specific

- Dosages should be increased and decreased gradually. Both for safety and comfort, smaller changes (such as 5 mg at a time) at wider intervals (such as every five days) should be utilised when people are at relatively lower dosage levels (less than 60



mg per day), whereas larger and more frequent changes (such as 10 mg every three days) will generally be safe at higher levels.

- In general, higher maintenance doses are associated with better therapeutic outcomes than are lower doses; the range optimally effective for most people is 60–120 mg per day.
- When there are subjective complaints of “methadone not holding”, consider dividing – as well as increasing – the daily dose; this may be particularly relevant for people who are pregnant and/or receiving antiretroviral therapy.

Ancillary services

- The more that can be offered the better, but such service should not be mandatory.
- One of the major obstacles to the effectiveness of methadone treatment is the widespread stigma associated with the condition of dependence, the person being treated and the treatment. Drug users should be supported in dealing with this stigma, and providers should seek every opportunity to educate the public (including, perhaps most importantly, health care colleagues).

Maintaining continuity of care

- To the greatest extent possible, arrangements to continue methadone should be made for people upon entering institutions (such as police detention, arrest house, hospital or prison) or returning from them to the community.
- Unless there is unequivocal documentation that higher doses of methadone were given in the previous setting, the dosage guidelines recommended for new drug users should be applied.

Urine toxicology and serum methadone levels

- The value of these and other laboratory tests must be weighed against their costs and the potential benefits of enhanced treatment services the funds could otherwise support. Clinical guidelines in many countries insist on a drug testing prior to the commencement of substitution treatment.
- Observing the act of urination is demeaning and usually antithetical to an optimal physician-patient relationship.

Therapeutic objectives

- Treatment goals might relate to heroin and other drug use, HIV risk behaviour, relationships, employment, housing, etc. – but they should be determined



collaboratively by the clinician and drug user and generally not imposed by the treatment provider.

Informed consent – special considerations in addiction treatment

- The drug user must be informed at the start of treatment if the clinician's primary obligation is to the state or some other third party – such as to a court, employer, family member, etc. Even if this is not the case, in many countries drug users will not believe that their confidentiality will be protected, and this view – whether justified or not – may affect the therapeutic relationship.
- The drug users must be advised of the specific causes for involuntary termination and the appeal mechanism(s) available to challenge such terminations. Drug users considering voluntary termination of treatment must be informed of the possibility of subsequent relapse. Users who have chosen voluntary termination should be encouraged to reduce dosages at their own pace rather than accept forced dose reduction intervals.

As mentioned above, findings have consistently demonstrated significant benefits associated with both methadone maintenance and, more recently, buprenorphine maintenance treatment.

In view of the high relative value of drugs in prison, it is recommended that all substitution agents are administered to patients in prison under supervised consumption conditions. The presence of a secondary clinician or other responsible person can serve to ensure that the medication is not diverted.

Buprenorphine

Buprenorphine is a prescribed medication with weaker opioid agonist activity than methadone. Buprenorphine is not well absorbed if taken orally, and the usual route of administration in treating opioid dependence is therefore sublingual. With increasing doses of buprenorphine, the opioid effect reaches a plateau. Consequently, buprenorphine is less likely than either methadone or heroin to result in opioid overdose, even when taken with other opioids at the same time. The effectiveness of buprenorphine is similar to that of methadone at adequate doses, in terms of reduction in illicit opioid use and improvements in psychosocial functioning. However, buprenorphine may be



associated with lower rates of retention in treatment. Buprenorphine is currently more expensive than methadone.

Buprenorphine is acceptable to heroin users, has few side effects and is associated with a relatively mild withdrawal syndrome. When used in opioid substitution therapy for pregnant women with opioid dependence, it appears to be associated with a lower incidence of neonatal withdrawal syndrome.

The main disadvantage of buprenorphine therapy in the prison setting is that because it can take between five and ten minutes for the tablet to be absorbed sublingually, there is a risk of removal and subsequent sale. Experience shows that such a practice can place the user who is prescribed such medication at risk of harassment and bullying to remove their medication. Some prisons will crush the medication prior to administering as there is no evidence that crushing alters the bioavailability of the drug. Many prisons directly observe the consumption of buprenorphine. However such a practice is very labour intensive due to the time taken for the drug to be absorbed sublingually and therefore the prescribing of combination of naloxone and buprenorphine is becoming more widespread in prisons as an alternative.

A combination product of buprenorphine with a small amount of naloxone (4:1 ratio) has been developed to reduce potential diversion and misuse. Naloxone is poorly absorbed sublingually, which limits its pharmacologic effect. However, if the tablet is crushed and used intravenously by an opioid-dependent person, the naloxone is bio-available and can precipitate severe opioid withdrawal, which can potentially deter further such abuse by this route.

Sustained – release morphine

Sustained-release morphine is seen as a valuable contribution to substitution treatment in some countries (Australia, Austria, Bulgaria, the Netherlands, Slovenia, Switzerland and the United Kingdom). Some studies have reported that the use of oral sustained-release morphine leads to improved well-being of the people maintained on morphine compared to those receiving methadone maintenance due to a better side effect profile. In particular, sustained-release morphine is easy to use (once daily), and the users report



better concentration, no major mood disturbances, no weight gain and a better drive.

Providing individualized patient care in the prison treatment setting can be a significant challenge. The high numbers of users requiring treatment in a setting where the supply of illicit drugs is markedly reduced can mean that protocols and practices of ST are oriented more to the institution's governance requirements rather than each patient's needs and wishes. For instance, it takes approximately 5 minutes for the supervision administration of buprenorphine (sublingual). This practice is both time-consuming and allows for a potential for diversion of the medication. Therefore methadone is often prescribed in the prison as first line. However some users can perceive such a practice as not equivalent to that offered in the community. Therefore replacing one substitution drug with another obviously needs to be clearly communicated to prisoners.

Antagonist treatment: Naltrexone

If a person abstains from opiate drugs, then therapy with naltrexone can be started in prisons or prior to release from prison. Naltrexone is a pure opiate antagonist and, as such, is not considered a substitution medication agonist. However, it has recently received considerable attention when used for ultrarapid detoxification under general anaesthesia a practice that is not without risk to the patient. In addition to its use as a rapid detoxification agent, Naltrexone has also been used for decades as a longer-term blocking agent (full opiate antagonist) in maintenance treatment.

The opioid antagonist naltrexone may be used as part of relapse prevention programmes. A single maintenance dose of naltrexone binds to opioid receptor sites in the brain and blocks the effects of any opioid taken for the next 24 hours or can be taken in a double/triple dose three times a week. It produces no euphoria, tolerance or dependence. Patients generally require 5-10 days of abstinence before induction onto naltrexone (the length of time abstinent is dependent upon the length of half-life of the opioid that was regularly taken prior to starting naltrexone).

A Cochrane review on the effectiveness of naltrexone maintenance treatment (Kirchmayer et al., 2002; Minozzi et al., 2006) did not find evidence for its effectiveness



in maintenance therapy. However, a trend in favour of treatment with naltrexone was observed for certain target groups (especially people who are highly motivated).

The effectiveness of naltrexone treatment clearly hinges on compliance with treatment, active psychosocial support, and the motivation to take the medication each day or every second day.

In summary the data does support this treatment approach for those who are highly motivated and when used in conjunction with various psychosocial therapies.

For more detailed information on clinical guidance for pharmacological treatment of opioid dependence (including in prison), please make reference to the WHO publication “Guidelines for the Psychosocially Assisted Pharmacological Treatment of Opioid Dependence”, 2009, available at

http://www.who.int/substance_abuse/activities/treatment_opioid_dependence/en/

This publication cover items such as:

- patient guidance for clinicians
- choice of treatment approach
- dosage of substances
- initiation and maintenance criteria, etc.



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