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Opioid Substitution Treatment in Custodial Settings

A Practical Guide

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List of Abbreviations	
AIDS	Acquired Immune Deficiency Syndrome
CPT	Centre for the Prevention of Torture and Inhuman or Degrading Treatment or Punishment
DSM	Diagnostic and Statistical Manual of Mental Disorders
EMCDDA	European Monitoring Centre on Drugs and Drug Addiction
EU	European Union
HIV	Human Immunodeficiency Virus
ICD	International Classification of Diseases
IDU	Intravenous drug users
MMT	Methadone Maintenance Treatment
NGO	Non governmental organisations
RCT	Randomised controlled trial
ST	Substitution Treatment
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNODC	United Nations Office on Drugs and Crime
WHO	World Health Organization
WMA	World Medical Association

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Introduction

In many parts of the world, Europe, Asia, and North America opioid dependent people are over-represented in prisons. In these regions they represent about one third of the prison population and up to 80% in some countries such as in Central Asia. In sub-Saharan Africa, the problem is emerging, while in Latin America the main dependency is to cocaine.

Prisons are not the right place for treating drug dependent men and women, and countries should develop policies for alternatives to imprisonment. As long as these alternatives have not been developed and implemented, prison authorities are faced with this specific population, in need of treatment, care and support. Research has shown that substitution therapy is the most effective way to treat opioid dependence, to reduce the risk of HIV and hepatitis C transmission, and to reduce the risk of overdose.

Like all persons, prisoners are entitled to enjoy the highest attainable standard of health. This right is guaranteed under international law in Article 25 of the United Nations Universal Declaration of Human Rights and Article 12 of the International Covenant on Economic, Social, and Cultural Rights. The international community has generally accepted that prisoners retain all rights that are not taken away as a fact of incarceration, including the right to the highest attainable standard of physical and mental health. Loss of liberty alone is the punishment, not the deprivation of fundamental human rights. States therefore have an obligation to implement legislation, policies, and programmes consistent with international human rights norms and to ensure that prisoners are provided a standard of health care equivalent to that available in the outside community.¹

The need for access to treatment for opioid dependence in prison was internationally recognised more than ten years ago. In 1993 WHO issued guidelines on HIV infection and AIDS in prisons, stating that “Drug-dependent prisoners should be encouraged to enrol in drug treatment programmes while in prison, with adequate protection of their confidentiality. Such programmes should include information on the treatment of drug dependency and on the risks associated with different methods of drug use. Prisoners on methadone maintenance prior to imprisonment should be able to continue this treatment while in prison. In countries in which methadone maintenance is available to

1 UNODC-UNAIDS-WHO Framework for HIV AIDS prevention, treatment, and care in prison (2006).

opiate dependent individuals in the community, this treatment should also be available in prisons”.

The guide is based on the expertise of scientists and medical doctors/psychiatrists/healthcare professionals working in the field of substitution treatment in prisons. Relevant international literature and databases have been reviewed in order to develop the best evidence based guidance. The publication follows the guidance and recommendations of several international publications such as the WHO Regional Office for Europe: Health in Prisons. A WHO guide to the essentials in prison health, the UNODC/UNAIDS/WHO framework for HIV prevention, care, treatment and support in prison settings, as well as the WHO/UNAIDS/UNODC Evidence for actions technical paper: Interventions to address HIV in prisons – Drug dependence treatment.

Who this guide is for

This guide on opiate substitution therapy in prisons is to support prison doctors, contracted doctors, prison health care workers, prison administration, NGOs and others in delivering or supporting substitution treatment to opioid dependent prisoners.

Drug dependence has to be treated as a severe disease and everyone has a part to play to ensure the best treatment for prisoners and also to ensure that drug related harm is kept as low as possible. Applying the recommendations in this guide will contribute to a healthier prison for prisoners with drug dependence with satisfying roles for staff members and a marked reduction in the harm that drug use in prisons can create.

The essentials and important first steps

Although individuals committed to particular parts of the prison service can do much, we strongly believe that a healthier prison for drug dependent prisoners can only be achieved if all staff are involved, including senior staff members who determine the ethos of the prison as a whole.

Changes should be introduced with continuity in mind. Although single-issue and often externally funded initiatives and pilot projects can achieve much, projects will be more effective in the longer term if the prison health system is based on the principles of a sustainable approach, if sound policies are in place based on explicit principles that lead to effective practice by well-supported and trained staff.

Sustainability can best be achieved if strong links are created between prison health care services and the health services of the local community and if they

work in close cooperation. Such collaboration will help to prevent prisons from being used as default health care services.

Many essential components are required to achieve a healthier prison for drug dependence, including political leadership, management leadership and leadership by each staff member. Health care staff members have a special role to play, but prisoners also have a role, and community support is very important.

Experience in several countries of Europe has drawn attention to the problems that often arise if prison health services are provided separately from the country's public health services. These include difficulty in recruiting professional staff and inadequate continuing education and training. It is now strongly recommended that prison health services work closely with national health services and health ministries, so that the prisons can provide the same standard of care as local hospitals and communities. Indeed, as the WHO Moscow Declaration on Prison Health as a Part of Public Health acknowledged, the government ministry responsible for prison health should, where possible, be the ministry responsible for public health services.

Leadership by each member of the staff

A healthier prison for drug dependence cannot be created without the contribution of each member of its staff. Given the current health problems in prisons, staff members need to know and understand what the health problems are for drug users, how infections can spread, how they can be better controlled to decrease harm and how health and well-being can be promoted.

Physicians, nurses and other professionals working in prisons have a unique leadership role in producing a healthier environment for drug dependent prisoners. They should start from a sound basis of professional training in which issues such as confidentiality, patient rights and human rights have been fully covered and discussed. They should also have some knowledge of epidemiology, of how diseases spread and of how lifestyles and socioeconomic background factors can influence ill health. They should also be aware of human nutrition and of the importance of exercise and fresh air in promoting health. They should be alert to potential threats to health and able to detect early signs of mental health problems as co-morbidity is an often related condition for drug dependence.

Partnerships for health

One of the central pillars of health promotion is the concept of empowerment: the individual has to be able to make healthier choices and has to be allowed

to do so. In health promotion in prisons, this approach is difficult to implement in prisons. It is therefore important that as much empowerment as possible be built into the prison regime.

One area that has been found to be important is providing health information to prisoners. Fact sheets should be made available for prisoners with drug dependence, explaining what the prison health service can provide and providing advice as to how the prisoner can best cope with such an illness while in prison. If written fact sheets will not be effective, because of language barriers or poor literacy, alternative ways of sharing information should be used, such as the use of videos and other visual aids or health discussion groups with a trained health worker. It is most important to encourage peer-based HIV prevention, education, counselling, and care initiatives. Increasing the role of prisoners in developing and providing health programmes and services increases the capacity of prisons to respond to HIV. The support to the development of peer-based education initiatives and educational materials designed and delivered by prisoners themselves is particularly crucial for populations with low literacy levels, where face-to-face educational interventions are critical. The development and support of self-help and peer-support groups that raise the issues of HIV, hepatitis C from the perspective of prisoners and drug users themselves should be encouraged.

Apart from availability of maintenance substitution therapy a number of harm reduction measures should be available such as clean syringes and needles and equipment for disinfection especially to avoid spread of blood borne disease from piercing and tattooing. A system for tattooing by professional tattooist should be considered.

Regular contact with local community services and the involvement of voluntary agencies can assist greatly in promoting health and well-being in prisons as well in ensuring the continuity of care, both when entering prison and upon release from prison. Where possible, prisoners should be connected to key community services before leaving prison, such as probation or parole, social services and the provision by a Dr. of ongoing opiate substitute prescribing. For previous drug dependent prisoners this can avoid overdose related deaths after release.

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Key points

- It is estimated that approximately one third of the prisoners are opiate dependent, and many more are experienced in drug use. In several prisons, this amounts to three quarters of the prison population.
- Prisons are extremely high-risk environments for blood borne virus transmission because of overcrowding, poor nutrition, limited access, continued illicit drug use (“hygienic relapse”), unprotected sex.
- All forms of drug dependence treatment have the potential to influence the risk of HIV and hepatitis C transmission, but substitution treatment programmes have the greatest potential to reduce injecting drug use and the resulting risk of spread of infection.
- *The position paper WHO, UNODC and UNAIDS* recently published on substitution maintenance therapy concludes that providing substitution maintenance therapy of opioid dependence is an effective strategy for preventing HIV/AIDS that should be considered for implementation as soon as possible in communities at risk of HIV infection.
- Opioid substitution maintenance treatment has expanded substantially in the European Union in the past 5–10 years.
- The prescription for substitution therapy and administration of opioid agonists to persons with opioid dependence – in the framework of recognised medical practice approved by competent authorities – is in line with the 1961 and 1971 Conventions on narcotic drugs and psychotropic substances. Given the existing evidence of the growing problems of injecting drug use, HIV/AIDS and hepatitis C in prisons in Eastern Europe and in the countries of the former Soviet Union, it is clear that the time to act is now. A failure to implement effective drug treatment and HIV and hepatitis C prevention measures could result in further spread of HIV and hepatitis C infection among IDUs, the larger prison population, and could potentially lead to generalized epidemics in the local non-IDU population.
- IDUs who do not enter treatment are up to six times more likely to become infected with HIV than injectors who enter and remain in treatment.
- The death rate of people with opioid dependence in methadone maintenance treatment is one-third to one quarter the rate for those not in treatment.

- Similar to in the community, making substitution treatment available to prisoners has the potential of reducing injecting and syringe-sharing in prisons. In addition, prisoners participating in methadone maintenance treatment have lower readmission rates than those not participating.
- Recidivism among substance misusing prisoners: Between 70 and 98 % of those who have been imprisoned for drug-related crimes and not treated during the course of their incarceration relapsed within the year following release.
- The most common form of substitution treatment is methadone maintenance treatment. Methadone has been used to treat heroin and other opiate dependence for decades. The more recently developed buprenorphine is also quite common in some countries. Both have been proven to greatly reduce the risk of HIV infection by reducing opioid use, drug injection, needle-sharing and improving the health and quality of life of opiate-dependent people.
- Providing methadone maintenance treatment is therefore an effective strategy for preventing HIV and hepatitis C transmission that should be implemented as soon as possible in communities (including prisons) at high risk of HIV infection.
- Research has shown that methadone maintenance treatment is more effective than detoxification programmes in promoting retention in drug treatment and abstinence from illicit drug use.
- The health services for individuals in prisons or correction houses should be equivalent to those provided outside the correctional system.
- Continuity of care is required to maintain the benefits of methadone maintenance treatment.
- Before methadone maintenance treatment is started, participants must be provided with relevant information, especially on the risk of overdose and the potential risks of multiple drug use and interaction with other medications.
- Before starting treatment, the drug user should be informed about the primary physician's obligations to the state, to the prison and to the prisoner.

I. Background

There are an estimated 13.2 million injecting drug users worldwide, and at least 10% of all cases of HIV infection worldwide result from unsafe injecting behaviour – in countries in Eastern Europe and central Asia, up to 90%.

Many drug users spend years of their lives going in and out of prison. Generally, prisoners are often from the poorest sectors of society and consequently already have worse health than other social groups. Being in prison commonly exacerbates existing health problems, especially with vulnerable groups such as drug users.

Prisons are extremely high-risk environments for HIV transmission because of overcrowding, poor nutrition, limited access to prevention measures, continued illicit drug use and unprotected sex.

- Injecting drug users are vulnerable to infection with HIV and other blood borne viruses as a result of sharing or reusing injecting equipment and drug solution, sexual contact with other injecting drug users and high-risk sexual activity. There is a high level of injecting use amongst men and women prior to their arrival in prison. Female drug users may be more likely to use their partner's injecting equipment and often have difficulty in negotiating low-risk sexual practices and condom use. Injecting drug users are relatively more likely to be involved in the sex industry.
- Injecting drug use is now the dominant mode of transmission of hepatitis C virus. Infection with hepatitis C virus results in chronic infection in at least 50–85% of cases. About 7–15% of chronically infected people progress to liver cirrhosis within 20 years, and of these, a proportion will subsequently develop liver cancer.
- The costs of law enforcement, court time and imprisonment together contribute substantially to the social costs associated with opioid dependence.
- On release, prisoners with opioid dependence are at risk of relapse and overdose.

Between 70% and 98% of the people who have been imprisoned for drug-related crimes and not treated during the course of their incarceration relapse within the year following release.

To reduce drug use and its harm in prisons, prison systems should encourage drug users not to use drugs at all; and if they continue to use, not to inject; and if they inject, not to share injection equipment.

Providing both drug dependence treatment and harm reduction programmes in prison is therefore essential (Stöver et al. 2007).

A consensus is growing that drug dependence treatment can be effective in prison if it responds to the needs of prisoners and is of sufficient length and quality and if aftercare is provided upon release.

There are many types of drug dependence treatment, but they basically fall into two categories: substitution treatment and abstinence-based programmes.

All forms of drug dependence treatment influence the risk of HIV transmission, but substitution treatment programmes have the greatest potential to reduce injecting drug use and the resulting risk of spread of infection.

II. What is substitution treatment?

Substitution therapy (agonist pharmacotherapy, agonist replacement therapy or agonist-assisted therapy) is defined as the administration under medical supervision of a prescribed substance, pharmaceutically related to the one producing dependence, to people with substance dependence, for achieving defined therapeutic aims.

Opioid substitution treatment (OST) is a form of health care for heroin and other opiate-dependent people using prescribed opioid agonists, which have some properties similar or identical properties to the ones of heroin and morphine on the brain and which alleviate withdrawal symptoms and block the craving for illicit opiates. Examples of opiate agonists are methadone, levo-alpha-acetylmethadol, sustained-release morphine, codeine, buprenorphine (a partial agonist-antagonist) and, in some countries, diamorphine. Most of these substances, except for diamorphine, are characterised by a long duration of action and the absence of “rush”.

Antagonists, which reverse the effects of other opiates, are also used in treating opiate dependence. They occupy the same receptor sites in the brain as opiates and therefore block the effects of other opiates. However, they do not stop craving. If someone takes an antagonist and takes an opiate afterwards, the euphoric effects of the opiate are nullified as they cannot act on the brain. If the antagonist is taken after the opiate, an opiate-dependent person will immediately go into opiate withdrawal (so antagonists are contraindicated for people who have not been detoxified from opiates). Naltrexone is the opioid antagonist most commonly used in treating opiate dependence. Naloxone is only used for the emergency reversal of opiate overdose situations. Buprenorphine is a partial agonist-antagonist and is being used increasingly to treat opiate dependence. There are combinations of naloxone with buprenorphine (1:4 ratio) to prevent the abuse of the medication via injection.

Table 1: Differences between agonists and antagonists

Agonists (methadone, levo-alpha-acetylmethadol, long acting morphine and heroin)	Antagonists (naltrexone and naloxone)
Substitution treatment	Blocking or aversion treatment
Have some actions similar to opiates	Block the action of opiates
Stimulate opiate reception	Block opiate reception
Alleviate or stop craving for opiates	Do not alleviate or stop craving for opiates
Do not produce a rush (except for diamorphine)	Do not produce a rush
Can produce or maintain physical dependence	Do not produce physical dependence

Substitution treatment is valuable because it provides an opportunity for dependent drug users to reduce their exposure to high-risk behaviour and to stabilise in health and social terms before addressing the physical adaptation dimension of dependence. Substitution treatment is generally considered for people who have difficulty in stopping their drug use and completing withdrawal. It is desirable for substitution drugs to have a longer duration of action, or half-life, than the drug they are replacing to delay the emergence of withdrawal and reduce the frequency of administration. This allows the person to focus on normal life activities without the need to obtain and administer drugs. Further, substituting prescribed medication for an illicit drug helps in breaking the connections with criminal activity while supporting the process of changing lifestyle.

Good quality treatment should be:

- ongoing, in keeping with treatments for other chronic illness (e.g. antiviral/antiretroviral treatment);
- able to address the multiple problems that are risks for relapse – such as medical and psychiatric symptoms and social instability;
- well integrated into society to permit ready access for monitoring purposes and to forestall relapse.

Other characteristics of good models include:

- the adequacy of the period of time available for treatment;
- the availability of close links to community health and drug services; the amount of retraining provided for the physicians and nurses involved;
- and the extent to which the views of the prisoners themselves have been considered.

As pointed out by the joint position paper of WHO/UNODC/UNAIDS (2004) on Substitution maintenance therapy in the management of opioid dependence and HIV/AIDS prevention “no single treatment is effective for all individuals, therefore services should be sufficiently varied and flexible to respond to the needs of clients, their severity of dependence, personal circumstances, motivation and response to interventions. The rational management of opioid dependence calls for the balanced combination of pharmacotherapy, psychotherapy, psychosocial rehabilitation and risk reduction interventions.”

Seeking an equivalence of health care in the community and in prison this outlined diversity of treatment approaches needs to be transferred into the prison setting.

The main goals of substitution treatment

Although the ultimate goal of treatment may be to get people to stop using drugs, the main aims of substitution treatment are based on the concepts of public health and harm reduction. The aims of substitution treatment are:

- to assist people in remaining healthy until, with the appropriate care and support, they can achieve a drug-free life or, if they cannot or want to quit the programme, be in treatment for years or even for their lifetime;
- to reduce the use of illicit or non-prescribed drugs;
- to deal with problems related to drug misuse;
- to reduce the dangers associated with drug misuse, particularly the risk of transmitting HIV, hepatitis B and C virus and other blood borne infections from injecting and sharing injecting paraphernalia;
- to reduce the duration of episodes of drug misuse;
- to reduce the chances of future relapse to drug misuse;
- to reduce the need for criminal activity to finance drug misuse;
- to stabilise the person where appropriate on a substitute medication to alleviate withdrawal symptoms;
- to improve overall personal, social and family functioning; and
- to reduce the risk of drug-related death, particularly on the point of release from prison.

Evidence of the benefits of substitution treatment²

The most common form of substitution treatment is methadone maintenance treatment. Methadone has been used to treat heroin and other opiate dependence for decades. The more recently developed buprenorphine is also quite commonly used in some countries (for more details about these and other substitution agents, see table 1 and 2). Both have been proven to greatly reduce the risk of HIV infection by reducing drug injection and improving the health and quality of life of opiate-dependent people.

Community substitution treatment programmes have rapidly expanded since the mid-1990s. Today, more than half a million drug users receive substitution treatment worldwide. Substitution treatment has expanded substantially in the European Union in the past 5–10 years. Today, all European Union countries have substitution treatment programmes in some shape or form, although countries vary considerably in the extent and nature of the treatment accessibility and quality. Substitution treatment in its different forms has established itself as a widely accepted harm reduction and treatment measure for opiate-dependent individuals in the community (Council of Europe, 2001).

In a common position paper, WHO, the United Nations Office on Drugs and Crime (UNODC) and UNAIDS (2004) stated the following.

Substitution maintenance therapy is one of the most effective treatment options for opioid dependence. It can decrease the high cost of opioid dependence to individuals, their families and society at large by reducing heroin use, associated deaths, HIV risk behaviours and criminal activity. Substitution maintenance therapy is a critical component of community-based approaches in the management of opioid dependence and the prevention of HIV infection among injecting drug users.

The prescription of substitution treatment and administration of opioid agonists to people with opioid dependence – in the framework of recognised medical practice approved by competent authorities – is in accordance with the 1961 Single Convention on Narcotic Drugs and the 1971 Convention on Psychotropic Substances.

Ample data support the effectiveness of substitution treatment programmes in reducing high-risk injecting behaviour and in reducing the risk of contracting HIV. Substitution treatment is the most effective treatment available for heroin-dependent injecting drug users in terms of reducing mortality (the death rate

2 Please see full overview: Stallwitz & Stöver 2007

of people with opioid dependence in methadone maintenance treatment being one third to one quarter the rate for those not in treatment), heroin consumption and crime. Drug users have considerable criminal involvement before entering treatment, with these levels reduced by about half after one year of methadone maintenance treatment. Benefits are greatest during and immediately after treatment, but significant improvement remains for several years after treatment. Reductions are most marked in drug-related criminal behaviour. Many of the concerns raised about substitution treatment have been shown to be unfounded. In particular, substitution treatment has not been shown to be an obstacle to ceasing drug use, and in fact, substitution treatment has been found to be more effective than detoxification programmes in promoting retention in drug treatment programmes and abstinence from illegal drug use. Substitution treatment is a cost-effective method of treatment, comparing favourably in terms of cost-effectiveness with other health care interventions, such as therapy for severe hypertension or for HIV infection and AIDS. According to several conservative estimates, every Euro invested in programmes may yield a return of between four and seven Euros in reduced drug-related crime, criminal justice costs and theft alone. When savings related to health care are included, total savings can exceed costs by a ratio of 12:1. Injecting drug users who do not enter treatment are up to six times more likely to become infected with HIV than injectors who enter and remain in treatment (National Institute on Drug Abuse, 2000).

Finally, people who are on substitution treatment and who are forced to withdraw from methadone because they are incarcerated often return to narcotic use, often within the prison system and often via injection. It has therefore been widely recommended that prisoners who were on substitution treatment outside prison should be allowed to continue this treatment in prison (United Nations Office on Drugs and Crime, UNAIDS and WHO, 2006).

In prisons, as in the community, substitution treatment, if made available to prisoners, has the potential of reducing injecting and syringe-sharing. The WHO (1993) *Guidelines on HIV infection and AIDS in prisons* therefore recommend: "Prisoners on methadone maintenance prior to imprisonment should be able to continue this treatment while in prison. In countries where methadone maintenance is available to opiate-dependent individuals in the community, this treatment should also be available in prisons." Similarly, the Dublin Declaration on HIV/AIDS in Prisons in Europe and Central Asia (Lines et al., 2004) states:

Article 1: Prisoners have a right to protect themselves against HIV infection.

Prisoners living with HIV/AIDS have a right to protect themselves from re-infection and/or co-infection with hepatitis C and/or TB. Therefore, States have a responsibility to provide free access to methadone and other substitution treatments to prisoners in those countries where these treatments are provided in the community. This must include both the ability of people who are already on such a treatment to continue it when incarcerated and the ability to initiate substitution treatment during incarceration. Countries that have not legalised or implemented substitution treatments should do so.

Worldwide, an increasing number of prison systems are offering substitution treatment to prisoners, including prison systems in Australia and Canada, some systems in the United States, most of the systems in countries of the European Union and systems in other countries, including Indonesia and the Islamic Republic of Iran. In Spain, 18% of all prisoners, or 82% of problem drug users in prison, receive this treatment.

Substitution treatment programmes also exist in prisons in the new Member States of the EU, although they often remain small and benefit only a small number of prisoners in need. Finally, an increasing number of systems in the eastern part of the WHO European Region have started substitution treatment programmes, such as the Republic of Moldova or Kyrgyzstan, but substitution treatment remains unavailable in prisons in other countries in the region. Initially, substitution treatment in prisons was often made available only to inmates living with HIV or with other infectious diseases or pregnant women. Provision generally remains insufficient and below the standards of substitution treatment in the community. In many countries, substitution treatment is still likely to be discontinued when people on treatment enter prison. A treatment gap persists between those requiring substitution treatment and those receiving it.

Some prison systems are still reluctant to make substitution treatment available or to extend availability to the prisoners who were not receiving it before incarceration. Some consider methadone or buprenorphine 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 substitution treatment on moral grounds, arguing that it merely replaces one drug of dependence with another. Other reasons for resistance to substitution treatment include:

- the fact that prisons are supposed to be drug-free;
- the fear that the substitute drugs may be diverted and sold;
- a lack of understanding of drug dependence as a chronic disease;
- limited space and lack of resources and personnel in many prisons;
- the cost of substitution treatment and the additional organisational tasks required to implement it,
- anxiety that substitution treatment will destabilise the prison.

Patient and persistent outlining of the strong evidence of the advantages that substitution treatment can bring both to prisoners and to the institution as a whole is the best way to overcoming these barriers. Specialist clinicians may need to keep hold of the fact that knowledge of the enduring and recurrent nature of drug dependence is not widespread among medical or managerial colleagues in prison. Moreover, substitution treatment often appears to the lay person to be more likely to exacerbate rather than ameliorate the health and social problems associated with drug dependence. The specialist should therefore listen to and understand the misgivings of colleagues, whilst continuing to educate and advocate on behalf of drug users who merit this straightforward and economic form of treatment that has been proven to potentially improve and extend life.

Some prisoners are also reluctant to benefit from substitution treatment in prisons, either because they lack information about the benefits of substitution treatment or because they want to hide their drug use (one reason being that they fear prejudice and disadvantageous treatment if seen as a drug user), which is impossible if they receive substitution treatment.

If there were reliably effective alternative methods of achieving enduring abstinence, substitution therapy could indeed be seen as inadequate. However, there are no such alternatives (Dolan & Wodak, 1996).

The majority of heroin-dependent patients relapse to heroin use after detoxification; and few are attracted into, and retained in drug-free treatment long enough to achieve abstinence. Any treatment [such as substitution treatment] which retains half of those who enrol in treatment, substantially reduces their illicit opioid use and involvement in criminal activity and improves their health and well-being is accomplishing more than “merely” substituting one drug of dependence for another.

In recent years, evaluations of prison substitution treatment programmes have provided clear evidence of their benefits. Studies have shown that, if dosage

is adequate (at least 60 mg of methadone) and treatment is provided for the duration of imprisonment, such programmes reduce drug-injecting and needle-sharing and the resulting spread of HIV and other blood borne infections. In addition, they have additional and worthwhile benefits, both for the health of prisoners participating in the programmes and for prison systems and the community.

- Substitution treatment positively affects institutional behaviour by reducing drug-seeking behaviour and thus improving prison safety. Prison systems providing substitution treatment benefit, among other things, by reducing withdrawal symptoms on admission (which are often accompanied by self-harm or even suicide attempts), alleviate anxiety upon entry, reducing drug trade and increasing the productivity of prisoners on substitution treatment.
- Re-offending is significantly less likely among the prisoners who receive substitution treatment.
- Substitution treatment in prison significantly facilitates entry and retention in post release treatment compared with prisoners enrolled in detoxification programmes.
- Although prison administrations often initially raise concerns about security, violent behaviour and diversion of prescribed drugs, these problems emerge less often than without the implementation of substitution treatment programmes.
- Both prisoners and correctional staff report how substitution treatment positively influences life in prison.
- Substitution treatment offers daily contact between the health care services in prison and the prisoners, a relationship that can serve as baseline for raising further health issues and a linkage with other strategies for preventing HIV transmission.
- There is evidence that abrupt cessation of substitution treatment once imprisoned increases the risk of self harm and suicide.

In Canada, the federal prison system expanded access to methadone maintenance treatment after evaluation demonstrated that methadone maintenance treatment positively affects release outcome (reduced re-incarceration). Participants in such a treatment programme were less likely to commit crimes and return to prison. This is important because the cost of the institutional substitution treatment programme may be offset by the cost savings of offenders successfully remaining in the community for a longer period of time than equivalent offenders not receiving such treatment.

In addition, substitution treatment can help to reduce the risk of overdose for those nearing release (Dolan et al. 2005 follow-up randomised controlled trial (RCT) = no deaths post-release in methadone maintenance treatment group, 17 deaths in control group] . Many prisoners resume injecting once released from prisons but do so with an increased risk for fatal overdose as a result of reduced tolerance to opiates. Extensive research has noted a large number of deaths during the first weeks after discharge from prison that are attributed to drug overdose. Following a UK study of 51,590 releases from prison (Farrell & Marsden 2005), it has been estimated that approximately 35% of all male drug-related deaths and 12% of all female drug related deaths are from prisoners recently released from prison custody. This points to the utility and necessity of prison through care of drug treatment to counteract such risk situations and highlights the importance of substitution treatment not only as a strategy for preventing HIV transmission in prisons but also as a strategy to reduce overdose deaths upon release.

Kinlock et al. (2007) found in a randomised clinical trial of methadone maintenance for prisoners that methadone maintenance initiated prior to or immediately after release from prison appears to have beneficial short-term impact on community treatment entry and heroin use.

Taken together, this evidence – and the importance of providing care and treatment in prisons equivalent to that available outside – provides compelling reasons for prison systems to introduce substitution treatment. Box 1 provides an example of instructions for the treatment of drug users in Slovenia (Kastelic et al., 2001).

Box 1:

Example: General instructions for treating drug users in prisons in Slovenia

The health services for individuals in prisons or correction houses should be equivalent to those provided outside the correctional system.

The professional independence of counsellors and therapists from security services is very important.

Close cooperation between the professionals in prisons and in the communities have to be established.

Addicted individuals must have the option for treatment upon their entry into the prison system (harm-reduction programmes, substitution treatment, detoxification or drug-free treatment).

They must have the option to be treated in community programmes.

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),

... 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.

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 psycho-social 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.

Substitution agents

Table 2: Description of substitution agents

Medication	Frequency	Optimal dose recommended	Route of administration	Overdose risk	Withdrawal	Notes
Methadone	Every 24 hours	60–120 mg/day	Oral (syrup, tablets) Injectable	+++	+++	Optimal dose level dependent on subject: it can be <60 mg or >120 mg according to individual variability.
Buprenorphine	Every 24 or 48 or 72 hours	8–24 mg/day	Sublingual	+ (with additional drugs)	+	Start 6–8 hours after the last heroin intake or on appearance of withdrawal symptoms. If the person was previously using methadone, methadone has to be tapered until 30 mg/day and buprenorphine can be administered at 48 hours after last methadone dose or on appearance of withdrawal symptoms.
Buprenorphine + Naloxone (4:1 ratio)						
Sustained-release morphine	Every 24 hours	300–1200 mg/day	Oral (capsules)	+++	++(+)	Provided in some prisons when provision of methadone or buprenorphine is contraindicated or when these substances are not tolerated
Diamorphine	2–3 times every 24 hours	400–700 mg/day	Injectable Smokable	+++	+++	Only available in clinical trials
Levo-alpha-acetylmethadol (LAAM)	Every 48–72 hours	70–120 mg 3 times per week	Oral	+++	+++	Not available in EU and concerns regarding safety
Levo-methadone	Every 24 hours	40–60 mg/day	Oral (syrup)	+++	+++	Available only in Germany
Codeine			Oral (syrup, tablets)	++	+++	Only in Germany for maintenance treatment

Source: adapted from the *European methadone guidelines* (Verster & Buning, 2000).

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

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.

Source: Newman (203; slightly modified and adapted by the authors and members of the editorial board.)

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.

III. Substitution treatment in prisons

Initiation of substitution treatment in prisons

Historically there has been limited availability of opiate substitution treatment in prisons. However the principle of equivalence with health care offered in community settings would suggest that substitution treatment should be available and accessible to all prisoners according to their health needs. Since many prisoners experience immediate relapse after release they should have an informed choice of either detoxification or maintenance.

Given the often relapsing/remitting nature of opiate dependence, detoxification alone is only effective in producing long-term change for a minority of users. The benefits of substitution treatment programmes can be maximised by:

- retaining clients in treatment;
- prescribing higher rather than lower doses of methadone;
- orientating programmes towards maintenance rather than abstinence;
- offering counselling, assessment and treatment of both psychiatric co-morbidity and social problems;
- using and strengthening the therapeutic alliance between clinician and patient to reduce the use of additional drugs.

There are three scenarios where it may be appropriate to initiate users onto opiate maintenance in the prison setting. These are:

- immediately upon admission to prison;
- during the sentence;
- a period of time before release.

Several studies have shown that there is an extremely high risk for drug using prisoners to relapse and overdose shortly after release. Overdoses on release and suicides in prisons were key elements in some countries to integrate ST in prisons. In order to avoid relapse and overdose post prison release, it is recommended that the prisoner is maintained on a small stable dose until released.

Also there is an extremely high risk for drug using prisoners to relapse and overdose shortly after release.

Overdoses on release and suicides in prisons were key elements in some countries to integrate ST in prisons.

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Detoxification

Some drug users are successful in achieving a permanent state of abstinence whilst in prison. However, detoxification alone is seldom effective in producing long-term change for the majority of drug users. The benefits of methadone maintenance programmes can be maximised by retaining clients in treatment, prescribing higher rather than lower dosages of methadone, orientating programmes towards maintenance rather than abstinence, offering counselling, assessment and treatment of psychiatric co-morbidity, and social treatments and strengthening the therapeutic alliance between clinician and patient to reduce the use of additional drugs.

It depends on several factors whether detoxification programmes or continuity of substitution therapy is offered/applied in prisons.

Institution related factors are e.g. lack of resources and/or personnel, which results in a limitation of the treatment places available, poor knowledge, lack of supporting regulations and guidelines, dependence on the development of substitution treatment in the community, opposing substitution policy for the prison setting or restrictive substitution policy outside in the communities.

Patient-related factors: Sometimes prisoners wish to detoxify quickly and become completely drug free; they do not wish to have contacts with drugs and drug users anymore or to hear or talk about dependence and drug related problems. They either intend to utilise imprisonment as a drug free period or wish to start a new life and be ready and 'clean' upon their release from prison. However doctors and nurses can sometimes be opposed to such a goal when they feel that the prisoner's timescales for detoxification are too rapid, too ambitious and therefore not realistic. Relapse with a risk of overdose are likely to happen, in particular when detoxification occurs too fast.

One key element is to choose an individual approach in that sense that the doctor explains clearly to the patient the advantages and disadvantages of a quick versus a long detoxification.

Relapses after detoxification are extremely common and detoxification on its own therefore rarely constitutes adequate treatment of substance dependence. The options include managing withdrawal on admission as gradual detoxification, proceeding to abstinence-oriented treatment or proceeding to long-term substitution maintenance. Successful outcome of interventions requires that they are as client-tailored as possible and applied by using a case-by-case approach.

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It is important to accept that drug users are a very heterogeneous population. Their needs may be different according to the stage they are at in their drug using career, their level of self-efficacy and their degree of social support. Such factors may contribute to the preference of a faster rather than a slower reduction scheme. The treatment needs may also be different for women than they are for men.

Dosing and supervision of intake

As there is no such a thing as average dosage, dosage questions should be left up to the doctor-patient-relationship and should be adjusted according to individual needs. However, there should be the possibility and sufficient time to negotiate the needs of the patients to either reduce or increase dosage.

Each patient presents a unique clinical challenge, and there is no way of prescribing a uniform best methadone dose as a 'gold standard' for all patients to achieve a specific blood level. Clinical signs and patient-reported symptoms of abstinence syndrome, and continuing illicit opioid use, are effective indicators of dose inadequacy. There does not appear to be a maximum daily dose limit when determining what is adequately 'enough' methadone in MMT.

The dose has to be adjusted to a level that can reduce craving and then block any use of heroin as an euphoriant.

For dosages and more detailed regime suggestions (short or long term detoxification or maintenance) please refer to the EuroMethwork Methadone Guidelines (<http://www.quest4quality.nl/euromethwork/>)

In contrast to community treatment settings, relatively low dosages might be sometimes sufficient in the prison setting for two reasons

1. in the prison the universal supervision of intake guarantees an almost 100% consumption of the substitute medication and
2. the amount of other drugs taken is substantially reduced compared to the situation in the community.

Research indicated that the average substitute dose varied considerably in prisons (from 30 to 70 mg). In contrast to community practice, some doctors believed that low doses were sufficient on the basis that 100% intake was guaranteed and that the amount of other drugs used is significantly lower in prison.

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Prisoners should be informed about the dose they are prescribed unless they specifically request not to know.

The supervision of intake (of methadone either in liquid or tablets) is organised in different ways, done either by nurses or guards, depending on how and where the substitution drug is dispensed: either within the medical unit or on the cells/wards. This is to ensure that the substance is swallowed completely. In most cases, control is carried out by letting patients talk afterwards.

In some setting the guards dispense the medication, when there is no medical staff on duty.

There is a consensus that the intake of substitution drugs (as well as the intake of other psychoactive substances, antidepressants etc.) has to be supervised in order to make sure the drug has been swallowed adequately and to avoid other prisoners blackmailing patients in methadone programmes to sell or provide their portion, and finally to avoid overdoses from prisoners with no opiate tolerance.

Dispensing of buprenorphine may require quite some time.

Urine controls

The assessment and consequences of medically ordered urine controls vary considerably.

Urine analysis is an issue that has been much debated in the field. Although urine controls are a vital part of the initial medical assessment of the patient (for confirmation that the patient is actually using opiates), they are often used as a form of control over patients to see if they are not continuing to use illegal drugs with their medication. Many professionals question its effectiveness as a positively contributing factor to the success of treatment. It is argued that the information can also be obtained by asking the patient, which would save a lot of time and money. It goes without saying that this requires a good patient-doctor relationship which is based on respect and mutual trust.

However, it is also argued that a positive urine sample should never be a reason for discontinuing treatment, since this is the evidence for symptoms of the condition the patient is being treated for, i.e., their drug dependence.

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Dropping out of substitution programme

If a patient abuses or manipulates the substitution medications, in some programmes he/she can be excluded from the substitution programme. However, it is very important that the patient has been included in the substitution programme for a sample period of time, and that his/her dosage was high enough.

Some other programmes exclude patients because of being physical or even verbal violent against co-patients or staff. In this case the dosage should be tapered gradually.

Substitution treatment should never be a kind of reward for good behaviour or withheld as punishment but a part of a normal treatment within a variety of medical and psychosocial options.

The role of psycho-social care

The combination of physical, psychological and social dimensions contribute to the complexity of drug dependence. In order to successfully treat the disease and overcome drug dependence, it is necessary to address both, the physical and psychosocial dimensions of the disease. For many dependent drug users this may entail substantial physical, psychological and lifestyle adjustments – a process that typically requires a lot of time.

Substitution treatment, therefore, must not only deal with the opiate addiction on its own but also with psychiatric, medical and social problems.

Psycho-social care is therefore regarded as an additional and necessary part of treatment to support the medical part of the substitution treatment in prison.

Co-prescription of benzodiazepines and use of other drugs

The use of other drugs is widespread among drug users, mostly to bridge the gap between the lack of availability of the preferred opiate (merely heroin) use. The using patterns often constitute an additional dependence with severe syndromes and problems in detoxification.

People with opioid dependence and IDUs frequently use a range of psychoactive substances in addition to opioids, including alcohol. Research has shown that the use of cocaine in combination with opioids is, in particular, a factor that is associated with treatment failure. In addition, where drugs such as cocaine are used by injection, the effectiveness of opioid substitution therapy in managing

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risk behaviours is reduced. At the same time, research evidence indicates that when individuals with opioid dependence are retained in treatment, levels of use of cocaine are reduced, along with levels of opioid use.

Box 3: Substitution guidelines for penal institutions in Austria

(Adapted from Pont J, Spitzer B, Resinger E, 2005)

Purpose of substitution:

1. Emotional and physical stabilisation of severely opiate addicted individuals
2. Minimisation of drug related crime and debt
3. Reduction of intravenous opiate consumption and of transmissible diseases (hepatitis B/C and HIV/AIDS).

Substitution strategies:

- A) Long-term substitution: for months, years or for life-time
- B) Interim substitution: substitution on temporary basis until a well planned treatment and withdrawal.
- C) Reduction substitution: substitution medication is carefully reduced step by step.

Substitution medication: use only drugs that are effective for at least 24 hours and are administered orally once a day:

1. Methadone is prepared and administered “magistraliter” as a syrup in order to make intravenous usage more difficult. The dependence potential is very high. The average oral maintenance dosage is around 40–100 mg a day. A dose exceeding 120 mg is not recommendable. Introductory dose: 30–40 mg daily, boosting by approx. 10 mg per week; tapering by 5–10 mg per week
2. Buprenorphine is a partial opiate agonist and antagonist to be administered sublingually once a day. Daily dose ranges between 8 mg and 32 mg. In contrast to other substitution drugs, patients remain rather lucid. This creates problems for those patients who clear-minded cannot stand themselves due to their psychosocial co-morbidity. The major reported side-effect is headache. When switching from pure opiate agonists to buprenorphine, it is important to stop the agonist for one day before starting buprenorphine, in order not to cause acute opiate withdrawal symptoms.

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3. Slow release morphines are administered as tablets or capsules. The average morphine dose is around 600 mg per day, the highest recommended dose being approx. 800 mg. Patients on anti-retroviral therapy sometimes require a dose of up to 1200 mg due to drug interactions. The introductory dose is 200mg, boosted or tapered by 30–60 mg per week. The range of side effects attributable to retarded morphine is less than with methadone (less depression, less apathy, less increase in weight).

Drug interactions

With all opiate medications, interactions must be taken into consideration, in particular those due to competitive inhibition or induction of cytochrome P 450: The antibiotics ciprofloxacin, erythromycin, clarithromycin, oral contraceptives and SSRI (especially fluvoxamin) increase the opioid effect, while the HIV virostatics nevirapine, efavirenz, nelfinavir/ ritonavir and zalcitabine decrease it.

Obligatory agreements with the patient:

1. Declaration of consent and registration at the addictive drug monitoring department
2. Visual monitoring of the administration
3. Consumption control by means of urinalysis
4. Regular care support by treatment consultants
5. Exact information about substitution medication and the dangers of misuse and of accompanying consumption of other drugs

Indications for substitution:

1. The patient is already on substitution treatment when entering the penal institution
2. The patient has been dependent on opiates prior to imprisonment, and cannot withdraw inside the penal institution
3. The patient became dependent on opiates during imprisonment, and in spite of several withdrawal therapies, has not succeeded in becoming clean.

Security measures:

1. Exact control of administration of the substitution medication by medical staff
2. Obligatory random urine tests by medical staff

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Ethical basics of substitution:

Addiction is a chronic recurring illness. The optimal goal of therapy, cure, hardly ever is achieved. Modern addiction therapy is increasingly based upon the term harm reduction, i.e. reducing suffering, completed by precise clarification and treatment of psychosocial co-morbidities. When choosing substitution medication, cost awareness is of course an issue, i.e. methadone is the first choice. In case of severe side-effects of methadone, a switch to another better tolerated medication is to be considered. Patients successfully on substitution before imprisonment should continue the same medication in prison. Relapses should not lead to termination of substitution treatment as relapses are inherent in addiction. Instead, they should lead to a reassessment whether the treatment can be optimized. In particular, it should be clarified whether the medication dosage is sufficient. If relapses continue to occur in spite of a higher dosage, it might be necessary to switch to a different substitution drug. However, if a patient repeatedly misuses or diverts the prescribed substitution drugs he should be gradually withdrawn from the substitution program as obviously he is lacking the necessary motivation and discipline.

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IV. Some basic information about treatment

Information users require

The absolute condition for an effective start of substitution treatment is to provide the user with relevant information, in particular on the risk of overdose, which should include the following:

- the delay of a peak effect of the substitute drug (methadone 2–4 hours);
- the accumulation of the substitution drug over time resulting in a greater effect (methadone over 3–5 days or more), even on a fixed dose;
- the risks of multiple drug use while in substitution treatment, especially other opiates, cocaine, benzodiazepines and alcohol; and
- the potential interaction with other medication.

In addition, users need information about substitution treatment and drugs in general and about particular rules and expectations. Drug users often do not understand the goals pursued with the substitution treatment, nor do they have enough information about the specific medication used or the rules they have to follow. Prisoners should be asked to sign an informed consent form once they have clearly understood all relevant information.

Anonymity and confidentiality of treatment

Every prisoner should know before getting any sort of treatment the primary physician's obligation: to the state, to the prison or to the prisoner.

Although securing anonymity and confidentiality within a prison is difficult, attempts have been made to administer substitution drugs in a way that protects prisoners, either by putting all drug users together in one wing or delivering substitution drugs discreetly with other pharmaceuticals.

Other prisoners and staff should not be made aware that a prisoner is a drug user or in substitution treatment. The fear is that if somebody knows about the drug dependence, it will lead to consequences for the actual sentence in terms of disadvantages (such as access to work, qualification or jobs), prejudices, loss of privileges or simply the negative attitude of staff and other prisoners. Moreover, the drug users fear pressure from other prisoners who wish to participate in the substitution treatment in terms of smuggling substitution drugs.

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However, informing properly trained guards and other staff involved in work with the prisoner can be useful, particularly in the observation of patients with particular vulnerability due to co-existing mental health problems. Shutting guards completely out of the psychosocial and health care support also seems to build barriers between the different professionals and sometimes enhances prejudices and misunderstandings about the prisoner and drug use. Hence, basic cooperation, information and training of prison staff, including guards, are needed to ensure that staff members have positive or at least better attitudes towards drug users.

Privileges

Patients on substitution treatment who follow the rules in their therapeutic agreement should be able to enjoy all the same privileges as other prisoners. Decisions regarding flexible release should be made based on the therapist's individual judgement. Flexible releases should be planned and performed gradually.

Take-home dosages can be given as privileges for visits or periods of leave outside prison that are longer than 24 hours. The prisoner receiving the substitution treatment must be able to continue with such treatment and must have the possibility of being included in other programmes after release.

The physician decides about patient's ability to work for those included in substitution treatment programmes in prisons.

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Box 4: Continuing opiate maintenance between the community and prison treatment settings

Patients who are on opiate maintenance therapy prior to admission to prison should have their medication continued inside prison. However there are many barriers to such continuity of care. The most significant barrier is that many patients have their maintenance therapy interrupted if they spend time in police custody prior to prison. This can result in significant loss of opiate tolerance. Wherever possible users should have their opiate maintenance therapy continued at their prescribed dose whilst held in police custody. One exception to this principle is when the user is intoxicated at the point in time when he/she is due their daily dose of maintenance drug (note if patients are arrested intoxicated this should not be the reason for withholding maintenance therapy). Also if the user enters police custody outside of normal working hours when it is not possible to confirm with the community drug/pharmacy service the user's reported dose (typically at the weekend) then the dose administered in the police cell after physician's examination should not exceed 30mg and should only be given following confirmation of recent use by an on-site urine or oral fluid sample that is positive for opiates.

There is a need for a joined up approach to ST in the criminal justice system as currently even where prisons are offering ST most police forces do not provide ST or withdrawal treatment. This can be particularly problematic where detainees do not go direct to prison but to Police Arrest Houses where they can stay in some countries for up to 6 months (or even longer) and then to prison.

Another difficult situation is when detainees go to the arrest house, then to prison and then back to arrest houses to attend court for example and then back to prison. Generally police are under the Ministry of the Interior while prisons are under the Ministry of Justice which makes in some countries cooperation even harder.

ST should be negotiated with community agencies, police, courts, prisons and probably Ministry of Health in order to provide seamless substitution treatment provision for those with problematic drug use.

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For users admitted to first night prison reception purporting to take methadone maintenance therapy, confirmation of their dose, level of supervision and time of last consumed dose should be sought from the community drug service/pharmacist. If such confirmation can be obtained that the user has received their full dose supervised within the last 48 hours then the user should be provided with maintenance therapy at the dose level he/she received in the community. However, obtaining such confirmation is often not possible as patients are admitted to prison outside of normal working hours. In such circumstances the initial dose of methadone after physician's examination should not exceed 30mg (for other low/uncertain users until the confirmation is received). However for those admitted claiming to be taking a high dose of methadone, it could be necessary to offer a period of intense observation where emerging withdrawal symptoms can be monitored and the dose titrated accordingly.

Users' involvement

Ongoing contributions from drug users are valuable in order to improve the quality of health care; most prisoners have had previous, personal experience of prison health care and substitution treatment inside prison and in the community (either detoxification or maintenance).

Acknowledging and integrating prisoner's experiences and expertise in involving drug users in developing, designing and delivering interventions is critical to increasing their appropriateness and reach.

Support groups or educational programmes should be established or incorporated into the overall HIV treatment programme for injecting drug users. Former injecting drug users often have unique success in educating and motivating current injecting drug users to take steps to access effective care.

The link with treatment of blood borne viruses (e.g. HIV/AIDS, HBV, HCV) and other infections (e.g. TB, STIs)

Substitution treatment offers opportunities for improving the delivery of anti-retroviral therapy to opioid users living with HIV. Substitution treatment enables opioid-dependent drug users to stabilise their lives and avoid or manage many of the complications of injecting drug use. It is therefore seen as an essential component in strategies for retaining active injecting drug users in

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treatment. It also provides additional entry points for scaling up antiretroviral therapy, improves drug adherence and increases access to care.

Substitution treatment programmes can be of great importance to injecting drug users living with HIV by:

- offering HIV testing for injecting drug users;
- referring them to HIV services;
- liaising with HIV services regarding treatment and care;
- preparing injecting drug users for treatment with antiretroviral therapy;
- stabilising an injecting drug users' drug dependence to a point where he or she is able to engage in antiretroviral therapy
- dispensing antiretroviral therapy in conjunction with opioid substitution treatment;
- monitoring and managing the side effects of antiretroviral therapy;
- monitoring and managing interaction between methadone or buprenorphine and antiretroviral therapy; and
- supporting individual and family through the lifelong commitment to antiretroviral therapy.

This daily contact with substitution treatment programmes has potentially huge advantages for access and adherence to antiretroviral therapy.

Substitution treatment offer in all stages of the criminal justice system

Substitution treatment may also play an important role in police detention and pre-trial detention institutions. Those addicted to heroin or other opioids and being caught and arrested by the police and brought to police detention houses may face severe withdrawal symptoms. These may influence the information given to the police and may also prolong the stay in these facilities. Substitution treatment should be offered as a form of through care, which provides stability to the health status of offenders both physical and mental. Risks over overdose by using drugs in these facilities after a short period of detoxification may also be very harmful, as the opioid addicts lose the opiate tolerance within days, which then may lead to increased risks. In how far substitution treatment may also contribute to a decreased risk of suicide or self harm have not been studied yet. But a positive impact on these phenomenons mostly occurring within the first weeks of imprisonment is quite likely.

The same accounts for institutions of pre-trial detention and remand prisons. Therefore existing substitution treatments should be continued in police deten-

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tion and pre-trial detention centres and remand prisons. Moreover home leave, holidays etc. are periods in which basic rehabilitation steps are being undertaken, but also the risk for relapse is increased. ST also provides stability in terms of overdose-prevention.

Special considerations for women

Women tend to have a different experience than men with both drug dependence and treatment. Major issues are related to the high levels of both physical and mental comorbidity of women with opioid dependence, and these need to be taken into account in providing treatment. Women with opioid dependence often face a variety of barriers to treatment, including lack of financial resources, absence of services and referral networks oriented to women and conflicting child-care responsibilities.

Effective substitution treatment of opioid dependence can substantially improve obstetric, prenatal and neonatal outcomes. Opioid substitution maintenance therapy also has an important role in attracting and retaining pregnant women in treatment and ensuring good contact with obstetric and community-based services, including primary care.

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V. Future perspectives

In order to ensure that prisons provide a level of care equivalent to that provided outside,

- a major expansion of care for blood borne and sexually transmitted infections is needed in many countries to meet the needs of prisoners,
- substantial efforts have to be made to improve the quality of services and
- better links and continuity of care are needed between prisons and the range of community-based services.

The 2002 Consensus Statement on Prisons, Drugs, and Society (WHO Regional Office for Europe and Pompidou Group of the Council of Europe, 2002) recognizes that:

- drugs and prisons have to be seen in the wider social context;
- people move between prisons and the community;
- imprisonment should not mean more punishment than the deprivation of liberty;
- prisons must be safe, secure and decent places in which people live and work; and
- people working in prisons must work within the law as it stands.

Given the existing evidence of the growing problems of injecting drug use and HIV/AIDS in prisons and of the effectiveness of substitution treatment, the time to act is clearly now. Failure to implement effective drug treatment, including substitution treatment, and measures to prevent HIV transmission will result in further spread of HIV infection among injecting drug users, the larger prison population, and ultimately, in the community outside prisons.

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VI. Medical ethics aspects of opiate substitution treatment programmes in prisons

There are three reasons why it seems appropriate to discuss ethical implications of opiate substitution treatment in prison, a treatment as solidly based on scientific evidence as any other accredited medical treatment and that is in line with WHO and UN recommendations [WHO, United Nations Office on Drugs and Crime and UNAIDS, 2004] and with many national legislations:

- 1) Drug addiction is subject to strong ideological and cultural conceptions. The adverse influence of ideological conceptions on treatment approaches and treatment goals of drug addiction brings addicted patients in a position that their access to treatments and the choice of treatments often are decided on ideological rather than medical considerations.
- 2) To avoid misuse and diversion of opiates, the prescription of opiates underlies strong legal regulations that impair confidentiality and for the same purpose the delivery of opiates to addicted patients affords control measures that add a peculiar coercive component to the patient-physician relationship.
- 3) Both above statements become all the more complex in the ethically challenging interaction between prisoner patient and prison doctor as well as in the totalitarian institution prison [Pont J, 2006].

In the following ethical aspects of opiate substitution in prison will be explored on the basis of the principles of medical ethics in prison as established in the European Prison Rules [Council of Europe 2006], in the Standards of the European Committee for the Prevention of Torture (CPT) [Council of Europe 2004] and in several other internationally consented documents by the UN and the World Medical Association. The essence of medical ethics in prison and of the quoted documents can be summarised as follows:

- A) The primary task (the sole *raison d'être*) of the prison doctor and the other health care workers is the health and well-being of the inmates. [Council of Europe 1999, Penal Reform International 2001]
- B) The seven essential principles for the practice of prison health care, as set out by the CPT standards are:
 1. Free access to a doctor for every prisoner
 2. Equivalence of care

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3. Patient consent and confidentiality
4. Preventive health care
5. Humanitarian assistance
6. Professional independence
7. Professional competence

It is important that prison physicians and health care workers stick to these principles and that they are made known to and accepted by the whole prison community, i.e. the prisoners, the staff and the prison administration. Compliance with these principles promotes the confidence of the inmates to the medical care in prison, leaves no doubt as to the doctor's medical professionalism and ethics, prevents misunderstandings and provides guidance in situations of conflicts.

It seems to be perfectly natural that the primary task of the prison doctor is the health and well being of the inmates but, as every health care practitioner in prison knows, it has to be continuously fought for and this is true also for the implementation and realisation of opiate substitution programmes in prisons. Prison administrations and non-medical staff, if not adequately informed on the evidenced benefits of this treatment, focus on the risks of misuse and diversion of opiates and tend to counteract substitution programmes. In keeping with A) it is due to the prison doctor to provide this information, help the security staff and administration to understand the goals of the treatment, overcome any misconceptions and enable that way opiate dependent prisoners to have access to proper opiate supported treatments.

Prisoners may be ordered to undergo urine tests for drug metabolites by the security staff for safety and security grounds. Urine tests are also a component of treatment contracts in many opiate substitution treatment programmes. Doctors and health care workers caring for inmates might be asked to carry out clinical urine analyses by the security staff as well when there are concerns over a prisoner's safety. Keeping in mind A) and the importance of trust and confidence of their inmate patients, doctors and health care workers caring for prisoners must never participate in drug testing for security reasons. It is of utmost importance that inmates are clearly informed about the difference between urine testing for security reasons and for therapeutic reasons and that the results of urine analyses within the substitution treatment programme are kept strictly confidential, serve only for treatment recommendations and will never cause punishment. These results should only ever be disclosed beyond the clinical team with the patient's express consent and where it can be deemed to be in the best interest of the prisoner to do so.

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Another important principle of current treatment concepts for drug dependent patients fits well with the wording of A): The treating physician must not only take care that the agreed-on treatment goals – both in the short and in the long run – are achievable for the individual patient but also that the physician's own ideas on human dignity and way of living do not sway the treatment goals set with the patient. It is the health and well-being of the inmate patient what is the task of therapy and not necessarily the adjustment of the patient's way of life to the therapist's life style.

The claim for access and equivalence – the first two points of B), the essential principles of the CPT – of opiate substitution treatment in prison has already been raised by the WHO in 1993 (WHO 1993) and has been underlined since repeatedly (Lines R et al 2004). There are still European countries where opiate substitution maintenance programmes are run in the community but not in prisons and sometimes in jails and prisons there is even no opiate supported detoxification available. Any abrupt opiate withdrawal – particularly methadone withdrawal – without opioid support ("cold turkey") amounts to medical malpractice and is absolutely incompatible with medical ethics and medical professionalism!

The number of opiate substitution treatment programmes in prisons in Europe and elsewhere has increased considerably during the last decade but there still prevails a gap between prisoners requiring substitution maintenance treatment and those receiving it (Stöver/Casselmann/Hennebel 2006). This gap denotes not only a shortcoming of treatment options and harm reduction chances for the individual prisoner patient but also a threat to public health: of all the places where drug users inject drugs, prisons are those where injecting is associated with the highest risk of transmission of blood borne viruses. This high-risk situation translates into a greater than equivalent need of harm-reducing strategies in prison than in the community (Lines 2006).

In several countries more than one opioid medication is now used in opiate substitution programmes. Not only for the ethical principle but for very practical reasons equivalence between community services and prisons and between prisons should be aimed at also in this concern in order to avoid changes of treatment in the most sensitive phases of imprisonment, prison transfer and release from prison.

Access to opiate supported treatment and equivalence must also be sought for female drug users in prison. Due to the low numbers of female prisoners in comparison to males, in many countries there exist far fewer services and treat-

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ment chances for female prisoners. Given their comparatively greater physical and mental co-morbidities and their higher HIV prevalence rates, female drug users in prison might need greater than equivalent treatment options than their male counterparts. Due to their specific experiences with addiction and its treatment they might also need different treatment patterns. Substitution treatment plays an important role in pregnancy and peri-natal care of opiate dependent women by reducing the risks for mother and child.

Access to uninterrupted continuation of opiate substitution maintenance treatment at a community treatment service after release is of crucial importance considering the excessive mortality of drug users in the first two weeks after release from prison that is caused predominantly by drug overdose (Christensen et al. 2006). Besides pertinent education of pre-release prisoners, continuity of substitution treatment in the community must be thoroughly planned and arranged in good time by the prison health care team prior to the release of the prisoner.

Consent of the adequately informed patient – “informed consent” – is a prerequisite to any treatment containing adverse side effects and/or risks of which there are several in prescribing opiates. Due to the complexity of opiate substitution treatment in medical, legal and psychosocial terms, many substitution programmes do not rely on verbal or written informed consent of the patient, but opt for a formal contract to be signed by the patient and the therapist. It should be kept in mind that there are few if any other treatments where a contract is required from patients and this might add an element of coercion and mistrust to the patient-physician relationship. On the other hand, a contract underlines the agreed-on obligations of patient and therapist to be mutually reminded or demanded and, if this is an individually tailored contract which is explained and discussed properly, it will enhance the understanding of opiate substitution and the individual treatment programme and treatment goals, but should never be used punitively. A recent survey (Stöver/Casselmann/Hennebel 2006) showed clearly that there is a need to improve understanding in patients by better information.

Minimal requirements of information before entering a patient into a substitution programme might include the following:

- Any obligation the physician has toward a third party that impairs confidentiality (notification to authorities according to the law or to the court) but also all those areas where the patient can count on strict medical confidentiality

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- The rationale of opiate substitution treatment
- The obligations of the patient and the therapist as agreed
- The individual current treatment goal as elaborated with the patient
- Risks, unwanted side effects and possible restraints
- What is likely to happen if the patient deliberately stops treatment
- How to deal with relapses
- What might cause the termination of the participation in the substitution treatment

Given the long term treatment nature of opiate substitution treatment and the adaptations of treatment goals and changes of treatment strategies in time, information, informed consent and/or contract must continuously be adapted: “continuous informed consent”.

The patient is asked also to consent to control measures like the check of the oral cavity after ingestion of the substitution drug in order to attempt avoiding misuse and diversion of opiates, which is given special importance in prison. This is to be regarded as part of the treatment programme and should be carried out by the medical staff and not by the custodial staff. The same is true, if urine analyses are included in the programme the results of which have to be kept strictly confidential and serve only for therapeutic and never for disciplinary decisions. But, as mentioned earlier, medical staff should never carry out or participate in body searches or urine analyses that are ordered by the custodial staff for security, i.e. non-medical reasons.

Confidentiality for prisoners participating in opiate substitution programmes is often limited for legal and for practical reasons: National law requires notification of persons who are prescribed opiates in most countries. In prison, the supply and delivery of opiate substitution drugs as well as the shortage of medical staff often requires the inclusion of and cooperation with security officers, a measure that hampers strict medical confidentiality for drug users. Comprehensive drug treatment needs interdisciplinary cooperation where sharing of information and records is unavoidable and in the interest of the patient. Every member of the treatment team is to be bound by professional confidentiality. It is of great importance that patients are well informed as to who will have access to their records, who is included in professional confidentiality and where are the de facto limitations of confidentiality.

Drug users in prison are interested to conceal their drug dependence for several reasons: they anticipate disadvantages in terms of placement, privileges and access to work; they fear prejudices and discrimination both by inmates and by

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staff – and sometimes even by health care workers! – and they can become victims of pressure and blackmailing as soon as their drug dependence is known to others. When participating in substitution treatment programmes they are often pressed to divert the prescribed drugs to the black market in the prison.

For all these reasons every endeavour should be made to protect drug users and participants of opiate substitution programmes in prison by maintaining good standards of confidentiality and by getting rid of discriminating regulations, behaviours and attitudes against them. In particular, the participation in an opiate supported treatment programme must never lead to any discriminating disadvantage while serving the prison term.

As to preventive health care, opiate substitution maintenance treatment represents the classical example of an effective prevention and harm reduction measure for the individual opiate drug user as well as for the society inside and outside prison walls: the abundant evidence on prevention of mortality, morbidity, personal suffering, social instability and criminal activity is well documented and a preventive impact on HIV and Hepatitis B and C transmission by reducing high-risk drug injecting behaviour in prison is more than likely.

Humanitarian assistance as quoted by the CPT relates to particularly vulnerable prisoners. In a sense drug users in prison belong to the group of vulnerable prisoners as they rank low in the prisoner hierarchy, face prejudices by inmates and staff, run the risk of getting into debt with subsequent threats of bullying, violence, coercive sex work and pressure to divert prescribed drugs. Some of these problems can be avoided by keeping strict confidentiality and providing appropriate treatment of the drug dependence but often sensible placement changes and additional protective measures may become necessary: Encouraging prisons to see this treatment as a “normal” part of prisons routine and in line with other medical treatment interventions offered will certainly make life of drug users in prison easier.

Juveniles, female drug users, especially pregnant drug using women, and members of ethnic or cultural minorities are in need of additional protection and assistance. There is an increasing number of foreign-language speaking drug users in European prisons who need interpreter services during assessment and counselling. Beyond language barriers, the wide-spread psychiatric co-morbidities and cognitive impairment in imprisoned drug users poses additional challenges to treatment of drug dependent prisoners.

In fear of misuse and risks, regulations and decrees by national health authorities or by prison administrations have been trying repeatedly to limit professional

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independence in opiate substitution maintenance treatment by narrowing indication boundaries or by lowering the maximum doses or length of treatment. Apart from the fact, that state authorities have no say in indications or doses of treatments, experience has shown that lower threshold programmes, higher doses and longer treatments have been yielding better results. Issues such as the indication to treat, the maximum dose and the length of the treatment should be left to the experienced drug therapist's judgement based on the individual assessment of the patient and mutual agreement.

There seems to be a need to improve the information to patients, that substitution treatment in prison is a medical treatment independent from custodial measures: In a recent survey (Stöver/Casselmann/Hennebel 2006) this treatment was sometimes perceived by prisoners to be a favour or reward to good behaviour from the prison rather than a health treatment from the medical service. The clarification is particularly important in those patients who are sentenced by the court to undergo treatment for addiction while serving their prison term.

Any treatment of drug dependence requires solid professional competence. Given the complex nature of opiate substitution treatment in prison, the responsibility of individual assessment and treatment planning and the obligation to keep fatal risks and unwanted side effects as low as possible, every health care team in prison that offers opiate substitution treatment should involve a doctor specialised in substance dependence treatment.

Opiate substitution should be seen as one part in a range of treatment offers for drug users and should enable or facilitate the inclusion of drug users to further treatment options. However, as has been shown by the quoted survey [Stöver H, Casselmann H, Hennebel L, 2006], in a majority of prisons there is a lack of psychosocial care due to shortage of resources, in which case substitution treatment tended to be just a prescription of opiates that caused considerable dissatisfaction both to patients and to doctors.

In order to minimize diversion and misuse of opiates, control measures are unavoidable. These include the inspection of the oral cavity after administering the prescribed opiate and in many substitution programmes also urine analyses for drug metabolites periodically. These checks should be carried out by the medical staff and under conditions that uphold confidentiality. Research has been unable to demonstrate that urine testing is a reliable effective way of monitoring drug use. A therapeutic, open and trusting relationship is likely to produce a more accurate and productive indication of drug-using patterns.

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The direct visual control of urinating is humiliating and not compatible with a respectful patient-relationship. Results of urine tests must be kept confidential and should serve solely for clinical decisions.

In order to improve the quality of opiate substitution programmes in prisons, health care teams should

- try to become appropriately staffed
- have an interdisciplinary approach to drug treatment programmes
- adhere to examples of best clinical practice
- monitor and evaluate treatment results by adequate recording
- ensure continuity of care for patients to be transferred or released
- consult service users and incorporate their views when developing services
- be responsive to the diverse needs of all drug users in prison
- engage in training of medical and non-medical staff
- communicate regularly with health care teams of other prisons and of community based services involved in treatment of drug users
- undergo regular supervision and
- participate in research for optimisation of treatment.

Opiate supported treatment of drug users in prison is a valuable and scientifically well evidenced treatment option with a proven harm reducing effect on individual health and public health. Thus, it is highly recommendable in terms of medical ethics. Those who uphold ethical reservations against prescribing drugs that maintain the dependence of drug users and who accredit only abstinence as treatment success in drug dependence should reassess whether this sublime treatment goal, rarely to be achieved in the short run, outweighs the tangible reduction in mortality, morbidity, personal suffering, social instability and criminal activity in opiate substitution maintenance treatment.

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