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Patient-treatment matching and opioid addicted patients: 
Past methods and future opportunities

Eric C. Strain

Summary

Patient-treatment matching (PTM) is a proactive process in which individual characteristics of a patient are addressed by specific aspects of a treatment modality. While there is considerable interest in PTM for substance abuse disorders, there has been relatively little work showing its efficacy for addictions in general, and virtually no systematic work on PTM for persons with opioid dependence. This paper addresses three assumptions that underlie the idea of PTM: that meaningful subtypes of patients can be reliably identified, that distinguishably different types of treatment are available, and that those treatments can be provided reliably. Different approaches that are relevant to studying PTM are then briefly reviewed: the Addiction Severity Index, the Transtheoretical Model of Behaviour Change, the subtyping of patients, and the American Society of Addiction Medicine’s Patient Placement Criteria. The paper concludes by outlining possible future directions for research on PTM, especially with respect to opioid dependence.

Key Words: Addiction - Matching - Opioid Dependence
- Patient-treatment Matching

Introduction

Patient-treatment matching (PTM) can be defined as a process in which the individual characteristics of a patient are in some way addressed by specific aspects of a treatment modality. Interest in such matching is motivated by at least three beliefs: 1) that outcomes for the patient will be improved by such matching, 2) that treatment services will be improved by the development of programme aspects that have a particular emphasis for a specific target population, and 3) that treatment resources will
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be used more efficiently under such a system.

The goal of this paper is to discuss PTM, especially as it relates to persons with opioid dependence. However, there has been relatively little research on PTM for this particular population of substance abusing patients. For this reason, other addictions (most notably alcohol) are also included when they can provide models that might be useful for studying opioid dependence and PTM.

There are three primary sections to this paper. The first section discusses key assumptions that underlie the concept of PTM. This is then followed by a summary of four different approaches that either explicitly or implicitly involve PTM. While not a comprehensive review of these approaches, this section is meant to highlight the primary theoretical elements of each model, and the relative strengths and weakness of each. The final section then addresses future directions and opportunities for the study of PTM, especially as it relates to the treatment of patients with opioid dependence.

If PTM for opioid addicted patients can be shown to work, then it holds the promise of providing benefit for three different groups that have a stake in substance abuse treatment. For patients, effective PTM would provide needed treatments while not occupying them with treatments they do not need. For providers, effective PTM would allow staff to develop expertise in particular areas and techniques, and to feel a greater sense of accomplishment and success as a greater proportion of their patients do well. And finally, for society the more efficient use of treatment resources holds the promise of the opportunity to react more patients with a disorder, or to shift resources to other areas of need such as prevention and early intervention.

Assumptions behind the concept of patient-treatment matching

It is important to recognize that there are three key assumptions that underlie the concept of patient-treatment matching.

The first of these is that we can reliably identify meaningful subgroups or typologies of opioid dependent patients. Such identification can consist of personal attributes such as basic demographic measures, psychological features, historical aspects of their personal or family life, somatic characteristics, or combinations of these various elements of the person. It is relatively easy to successfully define subtypes of patients (e.g., high versus low scores on a personality inventory, family history positive versus negative for alcohol dependence). However, the utility of such groupings for opioid dependent patients (whether they are meaningful) is also important, and success in this respect is less clear. A further discussion of the identification of subtypes of persons with substance use disorders, and opioid dependent persons in particular, is provided later in this paper.

The second assumption is that we can create distinguishably different treatments for opioid dependent patients. For this assumption there is clearer evidence of success. The field of opioid dependence treatment has at least three different maintenance pharmacotherapies generally available (buprenorphine, methadone, and naltrexone),
and different levels of service are also available (such as maintenance medication treatment, medically supervised withdrawal on an outpatient and inpatient basis, residential treatment, group therapy, outpatient counselling). While treatments move in and out of favour (for example, therapeutic communities), in general for many countries there are several different treatments for opioid dependence available at any given time, and in many cases there are important differences between treatments that distinguish one from another. It is important to note that good treatment services are not static, and rarely apply a single approach for all patients or the same approach over time for a single patient (25). However, in general this assumption regarding Patient-Treatment Matching for opioid dependence – that there are distinguishably different treatments – appears to be an appropriate one.

The last assumption is that these treatments can be delivered reliably. This suggests that the treatments can be operationalized, that health care workers can be trained to deliver them reliably, and that fidelity in delivery can be maintained over time. For non-pharmacological interventions, the field of alcoholism has developed different modalities of treatment that appear to fulfil these criteria (most notably, in project MATCH) (6). While there have been some similar efforts in the field of opioid dependence treatment, such as manualization of contingency management procedures, cognitive-behavioural therapy, and other treatment modalities, there is still considerable heterogeneity in the treatment community for even relatively straightforward treatments such as methadone maintenance. While standardized, reliable treatments for opioid dependence should be possible, there is considerable opportunity for the research and treatment fields to make progress in this area.

These three assumptions – reliable identification of meaningful subgroups of patients, distinguishable different treatments, and the reliable delivery of these treatments – are essential to recognize in any discussion of PTM. The next section describes some of the more common approaches that have been used to study PTM in the field of substance abuse.

**Models of patient-treatment matching**

There are essentially four models of patient-treatment matching that have been proposed and studied in the addictions research field.

**PTM Using the Addiction Severity Index (ASI)**

The Addiction Severity Index (ASI) is a commonly used interviewer-based assessment instrument that provides quantitative information about problems in seven areas of functioning particularly relevant to patients with substance abuse disorders: medical, psychiatric, employment, legal, family/social, drug and alcohol problems (24, 27, 30); this instrument has good reliability and validity (21, 28). In addition to specific rates of behaviour (e.g., use of a drug in the past 30 days), the ASI provides interviewer severity ratings and summaries (or composite scores) for each of the seven domains
One area of interest in PTM has used results from the ASI to examine specific services that address areas of high need as identified by high composite scores. This line of work has generally looked at mixed groups of substance users (i.e., it has not restricted study groups to patients with only a specific primary substance of abuse, such as opioids). For example, an important study with the ASI examined 97 patients with a variety of substance use problems being treated in four different programmes, and randomly assigned subjects to either usual care services or matched services based upon ASI composite scores (26). Matched patients received at least three sessions from a professional for their particular needs as identified by ASI. The study results found matched patients did better on a variety of outcomes, and concluded that providing specific treatments within a programme (rather than matching programmes with patients) should be considered. However, it is important to note that this study did not appear to control for dose of treatment – that is, was is more of the specific services that made a difference, or just more of any service?

Other studies have also looked at using ASI results to match substance-using patients with different types of treatment. In particular, several studies have looked at the value of using the ASI to match with high versus low structured individual drug counselling (14, 36, 37). Results from these studies have been mixed, with some showing outcomes consistent with value to PTM – that PTM works – while others do not show such an effect.

While there are a limited number of studies utilizing the ASI for purposes of PTM, there is evidence that supports the utility of this approach, and it has appeal – it intuitively seems like it should work. However, results have not been consistently positive, and this topic would benefit from at least two further refinements in future studies. First, it would be good to have adequate controls in such studies, and second, it would be valuable to know the cost versus benefit of such enhanced services. Despite the wide use and acceptability of the ASI, it is somewhat surprising that there is not more research examining its use in PTM.

**PTM and the Transtheoretical Model of Behaviour Change**

The Transtheoretical Model (TTM) of Behaviour Change was initially proposed by Prochaska and DiClemente in the 1980s as a system for understanding a person’s readiness to change (10). While the model includes five “stages of change” which have gained wide interest (precontemplation, contemplation, preparation, action and maintenance), other components such as the processes of change (which broadly encompass cognitive/experiential and behavioural groupings), and the context of change are also critical for understanding the overall behaviour change experience for given individual.

The TTM has been studied with a wide variety of disorders (33), although the most common substance use disorder studied has probably been smoking (for example, see (9, 31, 32, 34)). There has been some work examining the model in patients with opioid dependence, and especially those in methadone treatment (5), with unclear value as to
their utility to predict treatment outcome (4).

The TTM provides an exceedingly well-developed and refined system for characterizing patients; the stages of change are intuitively clear and attractive, and research with several other conditions suggests the model is not unique to a single disorder but is characterizing a more fundamental and general characteristic of human behaviour. While the Transtheoretical Model of Behaviour Change holds great interest and promise, for purposes of the present discussion its primary weakness is that it has been insufficiently studied in opioid patients, especially with respect to its efficacy as a means for PTM. However, its use of a dynamic rather than static perspective for understanding patients is attractive, as it acknowledges that persons with opioid dependence can be at widely different points along a continuum of readiness to change and hence engage in and benefit from treatment. In addition, the mature state of its use for other substance use disorders suggests it may hold promise as a fruitful area of investigation with respect to opioid dependence.

**PTM and Subtypes of Patients**

There have been several attempts to categorize substance-abusing patients into various typologies. Most of this work has been in persons with alcohol dependence, which may provide a useful model for studying subtypes of opioid dependent patients. There is a rich and extensive history on identifying subgroups of patients with alcoholism (15, 16), and while this work in the alcoholism field has often focused upon unidimensional definitions of typologies, such as persons with a positive versus negative family history of alcoholism, more recent research has utilized multiple dimensions and more sophisticated statistical analyses to define clusters of patients with a particular typology that is not theory driven. Most notable in this regard has been the work of Babor and colleagues, who have used cluster analysis to identify what they have defined as Type A and B alcoholics, with the latter a more severe form of the disorder (2). Additional studies in alcoholics have replicated this finding (11, 35), and this distinction may have implications in alcoholism treatment matching and outcome (23). Other typologies of alcoholism have also been investigated and may be promising, and the distinction of early versus late onset may be particularly relevant in this regard (17, 18, 22).

However, similar work in the field of opioid dependence (or even the more general area of illicit drug use) has not been conducted, or is quite limited (3, 12). Needed is the ability to reliably identify subgroups of opioid dependent patients in which the grouping is relatively homogeneous, and for whom differences between groupings are large. While some typologies of opioid dependent patients can be reliably identified – such as groupings based upon demographic features like sex or age – it is not always clear how valuable such groups are with respect to treatment outcomes (with a few possible exceptions, such as the pregnant opioid dependent patient). Clearly, further efforts at reliably identifying meaningful subgroups of opioid dependent patients are needed, and the atheoretical approach inherent in the technique to cluster analysis may be particularly useful to examine for opioid dependent patients.
PTM Using the American Society of Addiction Medicine (ASAM) Patient Placement Criteria

There has been considerable interest in the United States with the development of criteria that could be used for determining the appropriate treatment services for a patient \(^{(13)}\). While such criteria were primarily developed by managed care companies initially, the American Society of Addiction Medicine (ASAM), a professional organization of physicians with interest in addictive disorders, has published its own such criteria \(^{(1)}\). The ASAM Patient Placement Criteria (PPC) has gained widespread use within the United States.

The PPC define different levels of services such as outpatient, intensive outpatient, inpatient, and opioid (methadone) maintenance treatment. In addition, the criteria include six attributes of the patient (such as recovery environment, treatment acceptance/resistance, and biomedical conditions and complications) that need to be assessed in order to determine the appropriate level of treatment service. The PPC then provide a series of tables that are meant to aid the evaluator in determining the appropriate level of service based upon the severity of the patient’s presentation.

While there is considerable use and interest in the PPC, there is still a relatively limited database to support the reliability of the criteria, and there have been no studies yet published showing the PPC are efficacious. The application of the criteria can be complicated \(^{(20)}\), and a computerized form of the PPC which utilizes elements from different established standardized assessments such as the ASI has been developed \(^{(38)}\). This is an important step for studying the utility of the criteria, but at present the lack of controlled studies with the PPC limits the strength of recommendation that can be made for their use with opioid dependent patients.

Summary of PTM Models

Each of the four models reviewed here has strengths as mechanism for creating an effective and useful system of patient-treatment matching, and the strengths across models are at times complementary. However, one liability is that, in general, these models tend to emphasize the study of patient evaluation rather than treatment evaluation; this may reflect, in part, that often systems were not developed specifically for patient-treatment matching, but rather for some other purpose and then have been used to study PTM. Perhaps the clearest exception to this is the ASAM Patient Placement Criteria, which has attempted to provide definitions for both patients and treatments, and has been developed for optimizing PTM. However, the PPC can be unwieldy and ambiguous – reflecting, perhaps, the underlying difficulties in developing an effective patient treatment-matching tool. Finally, even this brief review of each of these approaches highlights the considerable opportunity for study of each particular matching system with substance using patients, and especially those who are opioid dependent.
PTM and opioid dependence: Future directions and opportunities

While some patient-treatment matching research has been conducted in the fields of alcoholism and other drug use disorders (most notably, cocaine use disorders) \(^{(7, 8, 23, 26, 29)}\), there is virtually no work that has specifically examined matching for patients with opioid dependence. The one exception to this is the pregnant woman with active opioid dependence, in which the clear recommendation is that she be maintained on methadone throughout the pregnancy \(^{(19)}\).

Given the relative lack of research on PTM for opioid dependent patients, there are ample opportunities to study this important clinical topic. In particular, there are three questions that should drive a research agenda on PTM for opioid addiction:

1. Can we identify meaningful subgroups of opioid dependent patients? The alcoholism field is clearly further along in this regard. Particular interest could focus upon the use of cluster analysis techniques in an effort to replicate Babor’s multidimensional A/B Typology for opioid dependent patients. In addition, subtypes defined through unidimensional characterizations, perhaps analogous to the early versus late onset of alcoholism, would be valuable to explore. Other approaches noted above, such as the use of the Transtheoretical Model (TTM) of Behaviour Change, the six dimensions of the ASAM Patient Placement Criteria (PPC), and components of the Addiction Severity Index (ASI) such as its composite scores, need to be examined for potential utility in identifying meaningful subgroups of patients. Subtypes that incorporate different elements from each of these approaches, such as capitalising upon the dynamic elements of the TTM, the quantitative results of the ASI, and the comprehensive nature of the PPC, may be especially useful to pursue.

2. Can we better operationalize the delivery of different treatments for opioid addiction? Guidance from the alcoholism field can be of value here, too, as Project MATCH provides evidence that non-pharmacological treatments can be standardized and administered on a large-scale basis. While the opioid dependence treatment field has multiple treatments available, there is considerable variability between providers in the delivery of these treatments. It should not be difficult to better operationalize at least some of these treatments (e.g. methadone maintenance, buprenorphine maintenance), and the field is making steady progress in this area. Just as subtypes of patients need to be better defined and operationalized, so, too, should subtypes of treatment. This will require consensus and particular involvement of the treatment field. Governmental agencies also have a valuable role to play in encouraging the standardization of treatment delivery.

3. Is there efficacy in matching subgroups of patients with subtypes of treatments? This is of course, the key question of interest. However, making an effort to answer this question at present may be premature. Without methods for meaningful identification of patient types, and standardization of treatment delivery, it is not possible to address whether patient-treatment matching
really works. While the payoff for effective PTM would be great – for patients, providers, and society – studies that show a negative outcome for PTM of opioid dependent patients may inappropriately discourage the field if such studies are conducted before the first two questions have been adequately addressed.

Summary and Conclusions

This is not meant to be a comprehensive review of patient-treatment matching, but rather to highlight some of the questions that are necessary to answer to move this concept forward as a viable clinical tool. While not addressed above, it should also be noted that there are other areas of patient-treatment matching that may be determined to be productive and valuable – most notably, genetic studies that may aid in identification of particular persons that are more likely to respond to one versus another pharmacotherapy. This line of research is extremely interesting, and certainly may also demonstrate new opportunities for tailoring treatments to specific patients. However, the same types of questions noted above will persist – what is the phenotype of the subtype of patients identified genetically, and do we have distinguishably different treatments that can be reliably tested with that subtype?

Patient-Treatment Matching is an extremely attractive concept. It suggests an added level of sophistication in the treatment process – especially a heightened awareness of the particular needs of patient, and the provision of services that are customized to that person. Throughout the field of addictions there is interest in this idea, although there is relatively little of an evidence base that specific patient populations will respond to a particular treatment intervention. This is not meant to suggest the idea is at fault, but rather highlights the need for well-controlled study in this area. Given the variety of treatments available for persons with opioid dependence, and the impact of this disorder on patients, their families, and communities, opioid dependence is a disorder that would be particular useful for study in the area of patient-treatment matching. While such work may be challenging to conduct, positive outcomes would have the potential to markedly impact the treatment community and society in a positive way, and most importantly, significantly improve the lives of patients.

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References


Medicine, Chevy Chase, Maryland.


Index. J Subst Abuse Treat. 9 199-213.


30. NIDA (1985): Guide to the Addiction Severity Index: Background, Administration, and Field Test Results, NIDA, Rockville, MD.


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**Master of Puppets**

End of passion play, crumbling away
I’m your source of self-destruction
Veins that pump with fear, sucking darkest clear
Leading on your death’s construction
Chorus
Taste me, you will see, More is all you need
You’re dedicated to, How I’m killing you
Come crawling faster, Obey your master
Your life burns faster, Obey your master, Master
Master of puppets, I’m pulling your strings
Twisting your mind and smashing your dreams
Blinded by me, you can’t see a thing
Just call my name, ‘cause I’ll hear you scream
Master, Master
Just call my name, ‘cause I’ll hear you scream
Master, Master
Needlework the way, never you betray
Life of death becoming clearer
Pain monopoly, ritual misery
Chop your breakfast on a mirror
Master, master Where’s the dreams that I’ve been after?
Master, master You promised only lies
Laughter, laughter All I hear and see is laughter
Laughter, laughter Laughing at my cries
Fix me
Hell is worth all that, natural habitat
Just a rhyme without a reason
Never-ending maze, drift on numbered days
Now your life is out of season
I will occupy, I will help you die
I will run through you, Now I rule you, too

_Metallica, 1987_

Drug addiction is often misinterpreted, when described from the outside, as a condition of enslavement by some unidentified outer power, or else as an inner lack of self-supporting strength. The pleasure paradox, consisting in an increasing drive towards a progressively more and more strongly hated object, is usually neglected. Otherwise, the meaningless concept of a self-destructive instinct is hypothesized. In the song quoted above, the subjective experience of being mastered like a puppet by an overwhelming force is the core of the addictive experience, before and beyond any social or criminal issues. In fact, the self-perpetuating dynamics of addiction take shape as the betrayal of whatever pleasure was being pursued through substance use (“Where is the dream that I’ve been after?”).

The pathway leading to addiction is described as a needlework. Users are unaware that they are moving step by step towards the loss of their freedom, while the substance is building up addiction by “running through” their brains. The resulting addiction corresponds to a rigid bond, allowing no opportunity to “betray” the substance. On behavioural grounds, the image of laughter answering the addict’s increasing sufferings gives an impression of how progressive decay is counteracted by an enduring excitement, which viciously drives the addict towards the next fix.

*(Comment by Matteo Pacini, Pisa, Italy, EU)*
Methadone patients' sexual dysfunctions: Clinical and treatment issues

Jean-Jacques Déglon, Jean-Louis Martin and Rachel L. Imer

Summary

Opiates are known to cause loss of libido, erectile and ejaculatory dysfunctions among men, and lack of menstruation and sterility among women. Over the last 30 years, several research studies have shown low testosterone levels causing sexual dysfunction in many heroin addicts or patients treated with opiates (morphine and methadone). Unfortunately, only a few studies on the sexual dysfunctions of patients following a substitution treatment with methadone have become available. We must take these difficulties seriously, as they prevent the development of intimate affective relationships, so inhibiting the social rehabilitation process of these patients.

This article provides an overview of recent research studies on the various causes of sexual dysfunctions for patients in substitution treatment, the benefits and risks associated with hormonal replacement therapies, and the value and limitations of bromocryptin prescription, while emphasizing the role of prolactin in sexual dysfunctions.

Evaluations of several hundreds of men and women treated at the Phenix Foundation in Switzerland are presented. The sexual dysfunctions that these patients present with are defined by considering the many psychological, psychiatric and neurobiological factors involved.

Based on the successful findings of a recent French study comprising the short-term prescription of Viagra, a new hypothesis is put forward on the possible natural increase of testosterone levels after comprehensive treatment involving testosterone level evaluation before and after Viagra prescription, psychosocial counselling and medical supervision.

It is hoped that those of our patients who resume sexual activity after months of abstinence will naturally increase their levels of testosterone, thanks to the stimulation of the psyche and of the hypothalamo-hypophyso-testicular axis. The main advantages of this approach seem to lie in enhancing the social rehabilitation of our patients by helping them regain self-confidence and reducing the pressure to perform, along with the fact that patients can gradually quit taking the medication.

Key Words: MMT - Sexual dysfunctions - Pharmacological treatment

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Over the last 30 years, several research studies have shown sexual dysfunction in many heroin addicts or patients treated with opiates (morphine and methadone), with low testosterone levels.

Opiates are known to cause loss of libido, erectile and ejaculatory dysfunctions among men, and sterility and lack of menstruation among women.

As early as 1975, Cicero et al. (2) demonstrated that 29 patients treated with methadone showed testosterone levels 43% lower than those of the 42 subjects in their control group. The ejaculatory volume of methadone-treated patients was 50% lower than that of patients in the control group. A Czech study conducted by Wilczek et al. (6) showed testosterone levels below the lower limit of the normality zone for 63% of men in a group of 101 heroin addicts, all waiting for admission to methadone treatment. Recently, Palha and Esteves (4) studied sexual dysfunctions among 101 heroin addicts, 61 men and 40 women. 75% of men and 68% of women complained about a moderate to sharp loss of libido. 71% of men and 60% of women indicated altered sexual arousal. 60% of men and women had difficulty in achieving an orgasm. Finally, 72% of men and 65% of women suffered from reduced sexual satisfaction.

Over the last 30 years, only a few studies on sexual dysfunctions with methadone-treated patients have become available. As a result, the importance of these difficulties and dysfunctions has been underestimated.

The main reason for this underestimation may be therapists’ uneasiness — their not daring to ask appropriate yet delicate questions. A secondary explanation may come from the fact that patients are unlikely to complain about their loss of sexual dactivity. They have few needs in this area and they seldom mind about their loss of sexual activity.

In 1998, we evaluated 378 patients in a substitution treatment programme with methadone at the Phenix Foundation. 62% of them complained of a moderate to sharp libido decrease, 50% of men suffered from occasional or regular ejaculatory dysfunctions and 28% from erectile dysfunctions.

These difficulties must be take seriously, as they prevent the development of intimate affective relationships, so inhibiting the social rehabilitation process of these patients. Those of our patients who experience erectile problems, don’t dare to try seducing women and end up isolating themselves and perpetuating the search for pleasure through drug use (alcohol, benzodiazepines, hashish, cocaine, etc.). This happens even if we would like to see them turn to human pleasures such as relationships, which are an important factor in promoting stability.

Libidinal troubles, the lack of sexual desire, the loss of arousal and erectile difficulties seem to be directly linked to the count of sexual hormones in the blood, especially testosterone in men.

For example, one patient who had a very low testosterone level admitted that he felt absolutely nothing when he saw a beautiful woman and felt indifference while watching a pornographic scene. After testosterone injections, his feelings of arousal
were restored and he experienced sexual desire and satisfactory erections.

Testosterone can be found in two forms in the blood: one is free (2.3%) and the other is linked to proteins. Only the free part is active and can reach the targeted organs. In the event of sexual dysfunctions, what must be done is to measure the amount of free testosterone in the blood.

Testosterone is produced in the Leydig cells of the testicles. The lutein hormone (LH) that comes from the anterior pituitary gland controls this production. The anterior pituitary gland is regulated by the gonadotropin-releasing hormone (GNRH) produced by the pituitary gland. It also controls the liberation of FSH (folliculo-stimulating hormone), which will in turn stimulate the Sertoli cells in the testicle producing the sperm.

The fall in testosterone levels in a large number of male patients taking methadone corresponds to an early andropause, which is a common clinical condition in elderly men, it often goes unrecognized and it is surprising that it is so rarely treated. Adam’s test allows a diagnosis of this state of andropause. It comprises the ten following questions:

1. Have you noticed a decrease in your sex drive?
2. Do you have less energy than you used to?
3. Have you noticed a decrease in your strength and/or endurance during an effort?
4. Have you lost weight?
5. Do you seem to have less enjoyment of life?
6. Do you feel sad and/or grumpy?
7. Are your erections less strong?
8. Have you noticed that your ability to play sports has decreased?
9. Do you fall asleep soon after dinner?
10. Has your performance at work deteriorated?

An indication that a patient’s testosterone levels should be tested is reached when the patient either answers yes at least three times during the test, or answers yes to questions 1 or 7. One can start with total testosterone then, if there has been a decrease, check the results by measuring the level of free testosterone. This should be done in the morning before the patient has had anything to eat, as that is the moment when testosterone levels reach their daily peak.

Older men, and those among our patients who have a testosterone level that is obviously low and who suffer from sexual dysfunctions, can benefit from a hormonal substitution treatment with a prescription of testosterone, whether in the form of tablets, injections or patches. The least expensive form, which is also covered by medical insurance, is its injection form (using Testoviron, for example), in most cases every two or four weeks.

The benefits given by this replacement treatment with testosterone are as follows: it allows an increase in sexual desire and performance, an improvement in mood and a sense of well-being, increased mental and physical energy, decreased irritability, fatigue
and nervousness, sleep quality improvement, bone density increase, and a reduction in
fat mass in favour of muscular mass and strength.

The long-term intake of testosterone is, however, known to aggravate pre-existing
prostate cancer. That is why such treatment should be preceded by a medical exami-
nation every two years, and by a measurement of levels of PSA, which is a specific
marker of prostate tumors.

Another problem is that in younger patients, depending on the dose administered,
injected testosterone may inhibit the secretion of hypophysial hormones, so inducing
a secondary, reversible risk of azoospermia and sterility.

Another hormone produced by the anterior pituitary gland, prolactin, leads to major
sexual dysfunctions if its levels exceed a certain limit (hyperprolactinemia). Hyper-
prolactinemia has a variety of causes — tumors of the anterior pituitary gland, the use
of neuroleptics, opiates or methadone, and some anti-depressants. The consequences
of hyperprolactinemia are erectile dysfunctions, with a loss of sex drive, in men, and
sterility, a loss of libido, and problems affecting menstruation, lactation, and orgasms
in women.

It should also be noted that the hypothalamus also produces dopamine, which
reaches the pituitary gland and sets up a powerful inhibitory effect on the secretion of
prolactin. It prevents the hyperproduction of prolactin by keeping its production at a
normal level.

Several studies have shown that opiates and methadone may act as dopamine in-
hibitors within the hypothalamus, although they stimulate dopamine in other areas of
the brain, such as the nucleus accumbens. The production of prolactin becomes less
blocked than before, due to the lower supply of dopamine, while concentrations of
prolactin rise, blocking the pituitary stimulation of the testicles. This explains the fall
in testosterone levels and the sexual dysfunctions that are experienced.

The indirect stimulation of prolactin levels brought about by opiates explains why
some patients who are taking methadone show high amounts of prolactin. Over the
longer term these systems adapt to methadone, which accounts for the normal prolactin
levels shown by patients who have been under treatment for several years. Patients with
high levels of prolactin should be treated for their hyperprolactinemia. For years now,
bromocryptin (BRC) has been prescribed in these cases. As a dopamine agonist BRC
stimulates dopamine, which inhibits prolactin production, so allowing a restoration of
the libido, with the reappearance of menstruation and erections.

In Italy, Tagliamonte treated 17 patients with bromocryptin. These patients were
already taking methadone and had a high level of prolactin, loss of libido and erectile
trouble. He observed an excellent good response with bromocryptin (5). Shindermann
and Maxwell too showed interest in bromocryptin treatment for patients taking metha-
done and suffering from sexual dysfunctions. They confirmed that patients usually
complain about their loss of libido and sexual difficulties, a factor that pushes them to
request a decrease in their methadone dosage, which leads to a higher relapse risk or a
risk of cocaine abuse. Their findings report an observation of an increase in prolactin levels for many patients. Bromocrypentin was prescribed to 13 men and 6 women complaining about anorgasmia and erectile problems, a loss of sexual interest, and a longing to achieve orgasms. The results show a significant improvement in over 50% of patients. 50% of women reported a net improvement in their libido, whereas 70% of men reported a moderate to good improvement in libido. 57% of them reported net or moderate improvement of orgasmic dysfunctions, and 50% reported an improvement in erectile functions. Neither age, length of time in treatment, or methadone dosage are significant indicators of success.

New dopaminergic agonists with fewer side-effects are now available to treat hyperprolactinemia. They include Bupropion (Zyban), an anti-depressant essentially prescribed for tobacco users wishing to quit, and Cabergoline (Dostinex), a selective agonist of the dopaminergic receptor D2, which leads to a sharp, prolonged decrease in prolactin secretion. It has an anti-Parkinsonian effect, and side-effects such as nausea, hypotension (dizziness) and headaches.

We ran hormonal analyses for 59 patients taking methadone at the Phenix Foundation. We did not find a rise in prolactin levels; only two patients (4%) had a prolactin level just above the maximum norm. But we did observe that LH concentrations fell slightly. The same pattern occured with FSH. This explains the low total testosterone levels for 51% of patients who showed results below the minimum norm. If the mean level of testosterone is set at 16 nmol/l at a mean age of 35 years, then 80% of patients showed lower levels. As for free testosterone, 66% of patients were below the minimum norm of 170 nmol/l. If we set the mean at a minimum of 300 pmol/l for patients aged 35 years, then 86% of patients had testosterone levels below that.

If the hypothalamo-hypophysary axis functions normally, one would expect an increase in LH and FSH, with a low testosterone level similar to that found during the andropause process. With a normal prolactin rate and FSH and LH abnormally slightly lower than usual, that is the sign that opiates have a direct inhibitory action on the hypothalamo-pituitary system. We are still without data able to explain the exact effect of methadone at this level, and the mechanism of methadone’s action in neuro-endocrinological terms also requires further studies.

Other factors interfere to explain sexual dysfunction with methadone-treated patients. The relationship between depression and sexual difficulties has been well defined. Yet, in general, populations of heroin addicts on methadone show a minimum of 30% of addicts suffering from depression that may be more or less advanced.

Sexual difficulties are frequent but often neglected with depressed patients. In general, depression and all types of anti-depressants can cause sexual dysfunctions. In men, one mainly observes a decrease in libido, difficulties with arousal, erectile dysfunction, and absent or late orgasm as well as ejaculatory problems. A low testosterone level partly explains these troubles. In women, the main findings are a decrease of libido, lack of lubrication and absence of orgasms.
In Zurich, J. Angst studied a group of 591 men and women for 15 years, conducting 5 interviews for each between the ages of 20 and 35. He pointed out that 26% of normal subjects had sexual difficulties, 45% of depressed patients not treated for depression complained about sexual difficulties and 63% of depressed patients complained about sexual difficulties as a side-effect of their treatment, particularly in the case of ejaculation problems (1).

Clayton and collaborators recently published a study carried out with 6,000 patients in monotherapy taking an anti-depressant. The prevalence of sexual dysfunctions was 37% for these patients with variable results depending on the type of anti-depressant. Bupropion (Zyban) led to sexual difficulties in only 22 to 25% of these cases; the percentage rose to 28% with nefazodone and 38 to 43% with all SSRIs (3).

Anti-depressants, particularly SSRI (serotonin reuptake inhibitors) can delay men’s ejaculation in a variety of ways, A multiplying coefficient for delay in ejaculation before and during treatment has been established. A placebo multiplies ejaculatory delay by 1.5, Fluvoxamine multiplies it by 1.9, Sertraline by 4, Fluoxetine by 6.6, and Paroxetine by 7.8. Fluvoxamine therefore has fewer side-effects on ejaculations while Paroxetine, which delays ejaculations the most, seems suitable for prescription to cure premature ejaculation problems.

Erectile difficulties deserve particular attention as they block our patients from developing new relationships with women. After an initial failure and out of fear of being impotent, many men give up any fresh attempt to seduce a woman. They then seek consolation in drinking beer, smoking pot, and taking benzodiazepines or even cocaine. It is important to find ways of treating this efficiently.

Before knowing about the physiological mechanisms of erection, it was estimated that 68% of erectile dysfunctions had a psychological cause, and that 29% were from organic causes, while 3% were attributed to undetermined causes. By now, these percentages have been inverted; it is currently estimated that 80% of erectile difficulties are caused by organic factors, only 17% by purely psychological causes and 3% by undetermined causes. Most frequently, when an organic cause is at the root of erectile dysfunctions, there is a psychological factor involved, the pressure to perform, which reinforces these difficulties.

Among the psychological factors involved with erectile dysfunctions, one can note anxiety, pressure to perform, depression, stress, existential and environmental problems (the couple, the family, and financial or professional issues), lack of information and ignorance about sexuality, and lastly a pre-existing psychopathology.

Erectile dysfunctions may otherwise be due to hormonal causes such as hypogonadism (insufficient secretion of testosterone by the testicle), due to a pathology of the testicle (surgery, trauma, cryptorchidy) or derive from a dysfunction of the pituitary gland (a tumor or trauma). Another hormonal cause, as noted earlier, may be hyperprolactinemia due to a pituitary gland tumor or the side-effects of neuroleptics.

Neurological, metabolic and arteriopathic causes have also been identified (diabetes, hypercholesterolemia, chronic renal failure, etc.) Other causes are linked with tissues
(cavernous fibrosis after prolonged priapism), trauma, La Peyronie disease (induration of the cavernous tissues) as well as consequences of intra-cavernous self-injections. In our patients’ cases, toxic causes are the main concern. It is well known that erectile dysfunctions are increased by tobacco use, and are twice as frequent with heavy smoking. Nicotine can cause arteriosclerosis in the penis’ arteries, lesions of the endothelium of small blood vessels, vasoconstriction of the arteries of the penis and contraction of smooth intra-cavernous muscular fibers, all leading to erection dysfunctions. Chronic alcoholism is also well known to cause erectile dysfunctions by acting directly on the testicle and leading to the hepatic degradation of testosterone. The chronic intake of cocaine may also cause sexual dysfunctions, as happens with opiates.

Of the different therapeutic options, sex psychotherapy shows little effectiveness. It has been observed that one third of the patients who are referred to a psychiatrist or psychologist fail to fix an appointment, one third quickly drop the therapy, and the last third show little improvement.

On the other hand, new molecules such as Sildenafil (Viagra) and two new medications, Tadalafil (Cialis, from Lilly) and Vardenafil (Levitra, from Bayer), soon to be put on the market, have given very encouraging results, particularly with those among our patients who suffer from erectile difficulties. A French study conducted last year by Dr. Pagin (Personal Communication) with heroin addicts treated with methadone is very interesting. He included in his study all his men patients with sexual difficulties (decreased libido, erectile or ejaculatory problems) who had been in treatment for less than 6 months, and been abstinent from drugs for at least three months, a category making up 45% of all his patients. Viagra was available at prescribed doses ranging from 25 mg to 150 mg for a month. 24 patients took part in this study. All these patients regained their sexual functions during the Viagra period and two thirds retained them afterwards without Viagra. The remaining third saw their dysfunctions reappear after stopping the Viagra treatment, but important psychiatric comorbidity was noticed in that group.

It has been shown that LH and testosterone secretions are stimulated when sexual activity, masturbation, or viewings of pornographic scenes start again. One can therefore postulate that those among our patients who regain sexual activity after months of abstinence will naturally increase their levels of testosterone thanks to the stimulation of the psyche and of the hypothalamo-hypophyso-testicular axis. We wish to confirm this hypothesis and take our French colleague’s study further, adding an analysis of testosterone levels before prescribing Viagra and one or two months after the resumption of sexual activity.

Viagra has the advantage that it allows patients to rapidly regain self-confidence and reduces the pressure to perform, another element that could explain the success of this therapeutic intervention and the fact that the patient progressively tapers off doses of the medication.

Finally, it is important not to underestimate the importance of psychological factors which reinforce sexual dysfunctions that require an ongoing psychotherapy, following
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a specific model. As stress is a further cause of sexual dysfunctions and low testosterone levels, social help should be provided to limit stress factors such as problems with accommodation, debts and finding a job.

In conclusion, the sexual dysfunctions that our methadone-treated patients present with are due to a variety of psychological, psychiatric and neurobiological factors. We must, therefore, provide multiple responses to achieve the best results.

References


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Unreported double frequency of heroin addicts visiting psychiatric services and addiction treatment services

Mercedes Lovrecic, Barbara Lovrecic, Mojca Z. Dernovsek, Rok Tavcar, and Icro Maremmani

Summary

The aim of this chart review was to find out the extent of unreported double frequency (UDF) and characteristics of patients. A total of 37 patients with heroin addiction who were treated simultaneously in both services (Mental Health Service [MHS] and Centre for Prevention and Treatment of Illegal Drug Addiction [CPT]) in the last 10 years (the period during which the two services have coexisted) were identified. Patients were interviewed and case records were analyzed. Sociodemographic and clinical data were collected and the AbSo instrument was used. Factor analysis was used to identify clusters of symptoms reported by patients and models of drug prescription in patients receiving or not receiving methadone. Lastly we studied Pearson’s correlation between identified symptomatological factors and identified models of drug prescription. In two thirds of our patients in the MHS, drug addiction was not recognized at first consultation. Patients tended to deny their drug-related problems and methadone maintenance. Depressive symptoms and anxiety were the features most commonly found in our sample, while psychotic symptoms were rare. There was poor cooperation between general psychiatric and addiction services, which led to addiction being underdiagnosed and withdrawal symptoms being mistreated.

Key Words: Psychiatric Services - Addiction Treatment Services - Unreported Double Frequency - Dual Diagnosis - Heroin Addiction

Introduction

Insufficient communication between general psychiatric and addiction services may lead to a phenomenon called unreported double frequency (UDF), which refers...
to the simultaneous attendance of the two types of service, while therapists are left uninformed (2). The reasons for UDF may be shame or manipulation (the acquisition of extra benefits and the prescription of additional medications).

UDF in patients with addictions is a well-known and widespread problem, but research is rare in this field because there are many issues to deal with: ethical considerations, legal complications, therapeutic relationships and insufficient collaboration between the health, social and psychiatric services involved (1, 3, 5-9).

As one of the authors (ML) started to work part time in two different outpatients settings (both located in the same town), one for the treatment of heroin addiction and one for general psychiatry, UDF was one of the main therapeutic challenges she had to face. The aim of this retrospective study has been to find out the incidence of UDF and the clinical and sociodemographic features of patients.

**Patients and methods**

A group of patients with heroin addiction who were treated simultaneously in both services (the Mental Health Service (MHS) and the Centre for Prevention and Treatment of Illegal Drug Addiction (CPT)) during the last 10 years (the period during which the two services have coexisted) was identified. Patients were interviewed and case records were analyzed.

Sociodemographic and clinical data were collected and the AbSo questionnaire was used (4). The AbSo is a multi-scale questionnaire comprising the following categories: physical health, mental health, substances abused, substance abuse and treatment history, social adjustment and environmental factors. Diagnoses were made according to ICD-10 criteria. Some patients only had heroin addiction (uncomplicated [UC] cases), while others also had other psychiatric disorders (double diagnosed [DD] patients). The differences between UC and DD were analyzed using t-tests and Chi-square tests. Factor analysis (principal component extraction method, varimax rotation) was used to identify clusters of symptoms reported by patients and models of drug prescription in patients receiving or not receiving methadone. Lastly, we studied Pearson’s correlation between identified symptomatological factors and identified models of drug prescription. We used the SPSS programme for all analyses.

**Results and discussion**

We identified 37 patients (30 males and 7 females, all of them Caucasian) with UDF. On average, patients were 33 years old (standard deviation=7.0, range 20-44). There were no statistically significant differences between patients with (n=19) and without (n=18) psychiatric comorbidity (p>.05).

In general, UDF patients were generated in two ways. After the CPT was established, 15 previous MHS patients started to visit that too; in addition, 22 patients who first started to visit the CPT later also showed up at the MHS. Almost half of the
UDF patients (n=19) had psychiatric comorbidity: personality disorders, depressive episode, anxiety disorders, psychosis and other disorders. There were no statistically significant differences between patients with and without comorbidity in the way they became UDF patients.

In case files at the MHS we found the following documented symptoms: depressive symptoms (in 13 [68.4%] DD and 5 [27.8%] UC patients, \( \chi^2 = 6.11, \text{df} = 1, p = 0.01 \)), anxiety (in 18 [94.7%] DD and 12 [66.7%] UC patients, \( \chi^2 = 4.74, \text{df} = 1, p = 0.02 \)), psychotic symptoms (in 6 [31.6%] DD patients and 1 [5.6%] UC patient, \( \chi^2 = 4.08, \text{df} = 1, p = 0.04 \)) and somatization (in 17 [89.5%] DD and 14 [77.8%] UC patients, \( \chi^2 = 0.93, \text{df} = 1, p > 0.05 \)).

As was to be expected, unrecognized drug addiction in UDF patients at first visit to the MHS was high both in DD (n=12 [63.2%]) and UC (n=12 [66.7%]) patients. When treatment at the MHS was resumed, diagnoses of drug addiction were made in a higher number of patients, but addiction still went unrecognized in 7 (38.9%) UC and 4 (21.1%) DD patients. These patients were treated “symptomatically”, on the basis of their leading psychiatric complaint, while the therapist was not aware of their status as recipients of methadone maintenance. We need hardly to say that such practice is unacceptable, because it corrupts the therapeutic relationship and can also lead to severe complications, such as drug interactions.

Ten (52.6%) DD patients and 6 (33.3%) UC patients were on methadone when UDF was discovered. The mean maximum dose of methadone did not differ significantly between DD and UC patients (67 vs. 42 mg, respectively, \( p > 0.05 \)).

Benzodiazepines were prescribed for 15 (78.9%) DD and for 12 (66.7%) UC patients, antidepressants in 9 (47.4%) DD and 3 (16.7%) UC patients, antipsychotics in 13 (68.4%) DD and 7 (38.9%) UC patients, while other medications were prescribed for 8 (42.1%) DD and 4 (22.2%) UC patients. Only the difference in the prescription of antidepressants was statistically significant (\( \chi^2 = 3.97, \text{df} = 1, p = 0.04 \)).

In Table 1 we study correlations between the symptoms reported by patients and the drugs prescribed by doctors.

Factor analysis revealed two sets of psychiatric symptoms. The first set (FPSY1) mainly comprises symptoms of anxiety, somatization, depressive mood and psychotic symptoms. The group of patients with this set of symptoms was treated in the CPT with methadone.

The second set of symptoms (FPSY2) was found in the group of patients who did not receive methadone and who showed depressive mood.

As to prescription patterns, we have found two models. The first model (FMED1) applies to patients who were receiving methadone and were mostly given a prescription of antipsychotics, followed by other unspecified drugs and benzodiazepines. The correlation between symptoms of withdrawal and this type of prescription pattern is marked in Table 1 by shading. Antidepressants and benzodiazepines were prescribed for patients with depressive mood, and this supplies the second model (FMED2).

The correlation between the first symptomatological factor (FPSY1) and the second
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The first model of drug prescription (FMED2) is statistically significant ($r=.55 \ p<.01$). The second symptomatological factor (FPSY2) significantly correlates with the first model of drug prescription (FMED1) ($r=.88 \ p<.01$).

We can assume that the patients who had withdrawal symptoms were treated with antipsychotics and other unspecified drugs and benzodiazepines. Patients with depressive mood who were not given a prescription of methadone received antidepressants and benzodiazepines.

**Conclusion**

To our knowledge this is the first detailed published study to explore the problem of UDF in clinical practice. The results are not encouraging. In two thirds of our patients treated at the MHS, drug addiction was not recognized at first consultation. Patients used to deny their drug-related problems and methadone maintenance. There was poor cooperation between general psychiatric and addiction services, which led to addiction being underdiagnosed and to withdrawal symptoms being mistreated.

### Table 1. Psychopathological and therapeutic dimensions, derived by factor analysis, of two groups of heroin addicts (with and without psychiatric comorbidity) attending both the MHS and the CPT.

<table>
<thead>
<tr>
<th></th>
<th>FPSY1</th>
<th>FPSY2</th>
<th>FMED1</th>
<th>FMED2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Symptoms</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depressive</td>
<td>.59</td>
<td>.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxious</td>
<td>.83</td>
<td>.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychotic</td>
<td>.41</td>
<td>-.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Somatization</td>
<td>.68</td>
<td>-.08</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Prescriptions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>.30</td>
<td>.41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antidepressants</td>
<td>.82</td>
<td>.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antipsychotics</td>
<td>.08</td>
<td>.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other medications</td>
<td>-.20</td>
<td>.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methadone maintenance</td>
<td>.25</td>
<td>-.88</td>
<td>-.82</td>
<td>.21</td>
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<tr>
<td><strong>Eigenvalue</strong></td>
<td>1.79</td>
<td>1.33</td>
<td>1.52</td>
<td>1.38</td>
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<tr>
<td><strong>Percentage of variance</strong></td>
<td>35.9</td>
<td>26.6</td>
<td>30.4</td>
<td>27.7</td>
</tr>
</tbody>
</table>

*FPSY1 and FPSY2 = Symptoms reported by patients
FMED1 and FMED2 = Drugs prescribed by doctors*
M. Lovrecic et al: Unreported double frequency of heroin addicts visiting psychiatric services and addiction treatment services

References


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Evaluation of effectiveness of drug treatment programmes
in Ukraine

Sergiy Dvoryak

TO THE EDITOR: During the last decade there has been a remarkable increase in heroin abuse and addiction in Ukraine. Most addicts are young, have been addicted for only a few years, and are living with their parents. The names of heroin addicts in Ukraine, especially those identified as HIV positive, must be recorded in an official register; even so, most cases are not in fact reported, so the total number is unknown. The incidence of drug-related disorders was 6.2 per hundred thousand in 1990 and became 20.8 in 2000, with a more than threefold increase; during the same period their prevalence increased by 3.2 times, from 41.0 to 158.7 per 100,000 of population. In Ukraine there are currently about 80,000 drug users. This figure only reflects the number of patients registered in state-recognized institutions. The estimated total number of substance abusers in Ukraine is about 560,000 (1). An overwhelming majority of these (97%) consists of heroin-injecting users.

The most commonly used treatment models in Ukraine can be grouped as follows:

1. Detoxification followed by the controlled administration of opiate antagonists like naltrexon (antaxon).
2. Long-term residential programmes like therapeutic community oriented towards producing stable changes in thinking, feeling and personal value systems.
5. Clinically based treatment oriented towards psychopharmacology.

In this study we evaluated the effectiveness of three programmes: 1) Buprenorphine detoxification followed by a short-term counselling programme; 2) Clinically based treatment organized around a medical centre for HIV/AIDS patients; and 3) An out-
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reach programme based on a drug-users’ self-support organization.

One tradition that persists in Ukraine is that of assessing the effectiveness of drug treatment by using a single indicator – the length of the abstinence period. A research group from the All-Ukrainian Narcology association organized a study of drug treatment effectiveness with the aim of finding a more effective method, one that might be recommended to all treatment centres.

In evaluating treatment outcome we used the following instruments:

- Addiction Severity Index (ASI), 5-th edition.
- Symptom Check List - 90 (SCL-90).
- Risk Assessment Battery (RAB).

These instruments were translated from English into Russian and adjusted according to the local cultural context.

The ASI gives an opportunity to obtain a great deal of common information about a patient. It is a well-structured interview developed to assess the range of problems seen in drug abusers. It combines objective and subjective data to produce ratings of problem severity in seven areas: medical, employment and support, drug use, alcohol use, legal status, family/social relations, and psychological status. In each of these areas the ASI produces severity ratings and composite scores, and each type of score has been assessed as to its validity and reliability. The ASI has demonstrated high levels of inter-rater, test-retest, and concurrent reliability. It was revised in 1992 in a fifth edition, which contains new items in existing sections to assess: route of administration; illegal activities; emotional, physical, and sexual abuse; quality of the recovery environment; and history of close personal relationships. This revision produced no changes in the composite scoring, so that comparability with previous editions can be maintained.

In our work we used the fifth edition of the ASI.

The SCL-90 makes it possible to evaluate the presence or absence of psychopathological symptoms. In many studies psychiatric severity has been shown to be the best predictor of the outcome of drug treatment, and the SCL-90 provides a more fine-grained assessment of this construct than is available when using the ASI alone.

The Risk Assessment Battery (RAB) provides a self-report assessment of drug use, injection-related risk behaviour, and sexual risk during the preceding six months. There are 38 close-ended items that cover issues of recent substance use, including frequency, needle sharing and cleaning, and condom use. We have found that responses on the RAB are equivalent to those collected by personal interview. Scores from the RAB were able to discriminate between cocaine and opiate abusers, and between those who seroconverted and those who remained seronegative.

Our experience has showed that the complete filling in of all questionnaires took almost 2 hours, and that most of our clients need an additional motivation for such intensive collaboration. In other words we have to pay our clients for allowing us the opportunity to get a complete assessment by using the full battery of interviews.

The ASI is a very informative interview that makes it possible to evaluate medical-psychiatric, narcological and social parameters. We used severity rating and composite
score. Composite score is a relatively flexible instrument and demonstrates changes that appeared during the first month. From our point of view the severity rating mostly allows the registration of long-term changes, which means that it is sensible to implement it for an evaluation of outcome only after 4-6 months.

SCL-90 allows a more flexible response to changes in status as the treatment proceeds. We could observe changes in some indices 3-4 weeks after baseline testing. It is possible to correct pharmacotherapy on the basis of the SCL indices and use them for psychiatry monitoring.

The RAB let us evaluate risk behaviour and gives an exact picture of changes in drug abuse.

Findings: The implementation of these methods of monitoring and evaluation is currently possible in Ukraine only within the framework of special studies and research that have their own financial resources, and allow all the stages of work with patients to be covered including payments that must be made to them for taking part in interviews and to reimburse their travelling expenses.

At the same time we advice practising physicians and narcology service providers to use the simplest ways of achieving effective evaluation. First of all there is possibility of using ASI-Light. This takes very little time, allowing a score profile to be obtained for each client in only 10-15 minutes. Then there is another option: clinicians can design their own list of questions for a quality evaluation of each scale in a client’s profile: medical, drug/alcohol, work, legal, family and psychiatry issues. It is important to take into consideration that clinicians in countries with limited resources will be unable to use standard instruments in regular practice over the longer term, but they should realize that a treatment outcome is not only expressed by a period of abstinence. Positive changes in use and in social areas can demonstrate the effectiveness of treatment interventions.

We presented our data and observations at an All-Ukrainian workshop, Implementation of new methods of psychosocial rehabilitation for drug addicts with the use of substitution therapy. Narcologists expressed keen interest in the possibility of using instrumental methods for the evaluation of treatment outcome. They displayed a readiness to implement the results of the study in their professional activities. Finally, recommendations on the implementation of the ASI for the evaluation of methadone treatment effectiveness were brought together in a draft document entitled Manual for Treatment and Rehabilitation of Opioid Dependency with Using of Methadone.

We found also that the three models evaluated by us displayed no clear differences in terms of their effectiveness or of the comparisons that should be undertaken after matching the baseline features of patients. More detailed work will be done on this in the later stages of this study.
References


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Bad Patients or Bad Treatment?

J. Thomas Payte

TO THE EDITOR: To CMG staff at all levels, interested patients & significant others, and anyone interested in quality patient care with favorable treatment outcomes:

Recently I was in communication with a methadone patient and his father involved in a struggle with a methadone program trying to get an adequate individualized dose of methadone. The last report I had suggested that resolution was still pending. Having dealt with many patient-program conflicts, as patient advocate and program physician, I have learned to avoid judgments without input from all perspectives. This correspondence is not an attack on any specific program, rather a condemnation of the practice of denying dose increases despite strong clinical indications that the current dose is not achieving optimal results for the desired period of time. This is a response to a chronic and recurring situation that affords a teaching opportunity. The situation I describe is not at all a rare occurrence.

I like to think that in the 40 years since I treated my first young couple addicted to heroin, that I have learned a few things. Occasionally I learn a valuable lesson that is not found in journals, policies, procedures, or guidelines. The purpose of this letter is to share that experience and it’s simple lesson.

In 1985 we were in the midst of a low-dose hysteria that was running though programs like the Sobig virus is running through computers today. I was not immune to this phenomenon and was trying to lower my maximum doses for take-home to 80 mg. At this point I can’t imagine why I wanted to do that, other than most programs were involved in the same pointless effort without a shred of scientific or clinical evidence to support such bizarre behavior.

In the midst of the frustration of patients complaining and doing poorly, I read an article in one of the addiction journals by Forrest Tennant and colleagues. What they did was to compare a group of really good, well-behaved patients with a group of very poor performers guilty of non-compliance, positive urines, and a host of sins committed against the methadone establishment.
Both groups were on 80 mg methadone daily. The simple test was to measure trough blood levels 24 hours after an observed dose. The average methadone levels for the good guys was over 400 ng/ml, while the bad guys averaged about \( \frac{1}{4} \) of that, with mean trough levels of about 100 ng/ml. In a rare moment of clarity it came to me…*Just maybe, the poor performers are not bad patients but are getting bad treatment!*

At that point I abandoned the pursuit of the lowest possible dose and adopted individualized adequate dosing, with occasional use of methadone serum levels to detect aberrant metabolism, etc.

Lesson number 2 occurred in the late 80’s when I admitted a patient who had been administratively discharged from another program. He had been considered non-compliant, had positive urines, and was thought to be lacking in motivation, etc. During his admission process I noted that, according to his history, he had never been stable on methadone and his drug use was most likely a form of self-medication’ rather than recreational.

His initial time in our program was dedicated to adjusting his dose to a level that would control craving and prevent withdrawal. This number turned out to be considerably higher than the maximum dose allowed in his former treatment program.

The outcome? Within a few weeks there was a complete turnaround with negative urines and improvement in all domains of the ASI (Addiction Severity Index). He became a model patient and quickly earned full take-home privileges.

Since that time I have had this experience reinforced many times with minor variations.

When faced with a ‘difficult’ patient, the first order of business is to **ENSURE THAT THE PATIENT IS RECEIVING AN ADEQUATE INDIVIDUALIZED DOSE**

In the simplest of terms an “adequate dose” is defined at that amount of methadone needed to suppress drug craving/hunger and prevent the onset of withdrawal for a time in excess of the dosing interval (usually 24 hours).

While doses in the 80 to 120 mg range are effective for a majority of patients, the actual range of individual adequate doses ranges from as little as 10 mg daily to, in rare cases, up to 500 mg, or more.

It is not my intention to imply that all methadone patient problems are dose related. I do strongly suggest that, as a first step, assurance that the dose is adequate will often correct the problem, and at a minimum, improve the chances of success of other strategies and interventions that will follow.

Before we label a patient as a “**bad patient**” we need to be certain that the problem is not **“bad treatment.”**

If you want to know if a patient is on an “adequate dose” simply ask how they are feeling, at various times of day in relation to the methadone dose (4, 12, and 24 hours after dosing). Having asked, then listen. The very first thing that Dr. Marie Nyswander taught was to “always listen to your patient, and you will never go wrong.” You have to be able to listen and to ask the questions to get you the answers and information to be able to make decisions to ensure that we are providing quality treatment.
Serum methadone levels will NOT provide this information (adequacy of dose).

I do hope you will consider the contents of this correspondence with an open mind. What is suggested here is really a simple step, which in many cases may be the only step in resolving the problem of a difficult patient.

Don’t be a Low-Dose program, don’t be a High-Dose program, be an Adequate Dose program.

Respectfully submitted in the interest of the best possible treatment for those we serve.

Received and Accepted September 12, 2003
Heroin Addiction and Related Clinical Problems

Mr. Brownstone

I get up around seven
Get outta bed around nine
And I don’t worry about nothin’ no
‘Cause worryin’ s a waste of my... time
The show usually starts around seven
We go on stage around nine
Get on the bus about eleven
Sippi ‘a drink and feeli’ fine
We been dancin’ with Mr. Brownstone
He’s been knockin’
He won’t leave me alone
No, no ,no, he won’t leave me alone
I used ta do a little but a little wouldn’t do
So the little got more and more
I just keep tryin’ ta get a little better
Said the little better than before
Now I get up around whenever
I used ta get up on time
But that old man he’s a real muthafucker
Gonna kick him on down the line
I used ta do a little but a little wouldn’t do
So the little got more and more
I just keep tryin’ ta get a little better
Said the little better than before
Shoved it in the bindle and I shot it in the middle
And it, it drove outta my mind
I should’ve known better, said I wish I never met her Said I,
I leave it all behind Yowsa!

Guns n’ roses, 1987

A key question has always been how the transition from sporadic use to habit occurs. Although a habit does not make an addiction, enduring exposure to an addictive substance is usually enough to ensure the onset of addiction. Drug users may go through periods of intense euphoria, or an escalation of opportunities and success, which is likely to couple increased substance use with a decrease in concerns about its possible consequences. A hypomanic phase, just like the one described in the song, is reinforced by the pleasure provided by the substance itself. The mechanism seems to break down when the pleasure is never enough, and one always feels below the threshold of well-being (“I just keep tryin’ ta get a little better, / Said the little better than before”). The circularity of addictive behaviour results in the deconstruction of whatever performance had been achieved before, since engagement with the substance depletes the person’s resources (“I get up around whenever / I used ta get up on time”). At this stage, users feel they have lost control, but sincerely believe they can get rid of their “monkey”: this absence of fear and a high level of self-confidence are the first true signs that the addictive turning point has been reached. The title of the album, “Appetite for destruction”, exactly sums up the addictive pleasure paradox.

(Comment by Matteo Pacini, Pisa, Italy, EU)
Opiate Dosage Adequacy Scale (O.D.A.S.):
A clinical diagnostic tool as a guide to dosing decisions

Francisco Gonzáles-Saiz

Methadone dosage is one of the main modulating factors involved in treatment effectiveness. Programmes where higher mean doses are prescribed are achieving better results in terms of patient retention, decrease in heroin consumption and reduction of addiction severity scores (1). On an individual level, however, the distinction between high and low doses is purely arbitrary, since response to a particular methadone dose can vary enormously from one patient to another. As with any other drug, variability depends both on pharmacokinetic factors (that mediate the relationships between doses and plasma levels) and pharmacodynamic factors (that mediate the relationships between plasma levels and effects). As a result, each patient should be provided with the most appropriate dose to ensure the optimum therapeutic effects.

An appropriate dose is usually considered as the dose that: a) suppresses the signs and symptoms of opioid withdrawal, b) reduces opioid-drug craving, and c) reduces the reward effects of illicit opioids (“blockade”) (5, 6). Assessing and adjusting methadone dosage for each individual patient should fundamentally remain a clinical process. The determination of serum methadone levels (SML) may, however, be useful in some cases.

In the clinical setting, an experienced physician will assess dosage heuristically. In the research field, several different scales have been used to examine items such as withdrawal (4), craving (2) and checklists with reported symptoms (3). Each of these scales, however, measures only one of the items that should be borne in mind when adjusting methadone dosage to optimum levels. For example, if doses are considered to be adequate when they cover withdrawal symptoms only, that will lead to an underestimation of the dose required.

For this reason we have devised the Opiate Dosage Adequacy Scale (ODAS). This is intended to provide a means to achieve a theoretical construct named “adequacy of dosage”. ODAS attempts to provide a clinical measurements of the degree to which a given methadone dose is “adequate” for an individual patient. In practical terms, a
methadone dose is considered as “adequate” when:

1. It suppresses the opiate withdrawal syndrome.
2. It significantly reduces opioid-drug craving in the subject’s most common drug-use situations or cues.
3. In the event of heroin consumption, the patient experiences none of the drug’s significant effects (“blockade effect” or cross-tolerance).
4. It produces no significant symptoms of overmedication.
5. It is associated with the reduction of continuing illicit opiate (i.e. heroin) consumption.
6. The patient perceives that the methadone dose “covers” his/her withdrawal symptoms over the 24 hour inter-dose period.

ODAS is a semi-structured clinical interview containing 10 items that address the six attributes named above. The answers to each of the questions are coded by Likert-type scores from 0 to 5. ODAS scores may be interpreted both quantitatively and qualitatively. First, they provide a total score from the weighted sum of individual item scores. The higher the total score, the greater the degree of “adequacy”. Secondly, at a certain cut-off point, each patient’s dose can be categorized as “adequate” or “inadequate”.

In our clinical experience with this scale, we have seen that, during the first few weeks of treatment, “adequate” scores rose steadily, in line with increases in methadone dosage, up to a value considered to be a maintenance dose. We have also seen, however, that a high percentage of these patients have total scores categorized as “inadequate” dosage. The reliability and validity of ODAS is currently under examination in two separate studies with samples from patients under treatment with either methadone or buprenorphine.

ODAS would enable the following hypotheses to be tested in a research setting:

1. Patients taking very different methadone doses may achieve similar scores on the “adequacy” scale (i.e. for some subjects, a dose of 100 mg/day would be “adequate”, whereas other patients only achieve “adequacy” at doses of 140 mg/day).
2. It is likely that higher total scores on the “adequacy” scale will be found among patients taking high doses of methadone.
3. If a wide-ranging sample of patients with “adequate doses” were selected, we would find a tighter-fitting correlation with SML. As in standardized weight and height tables, a range of variability for SML could be determined for each “adequate dose”.
4. The total ODAS score, used as an independent variable, would have a higher predictive power over the outcomes of methadone maintenance programmes (i.e. retention rate and heroin consumption) than the simple value of the methadone dose itself.

We hold a positive clinical view of this instrument and hope that the validation studies will confirm our hypothesis. If that is the case, then ODAS could become a useful clinical tool able to help physicians make informed dosage-related decisions.
References


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OPIATE DOSAGE ADEQUACY SCALE

(O.D.A.S.)

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- Date of the interview: __ / __ / __
- First name and family names of the patient: ______________________________
- Methadone dose during the last seven days: _______ mgs/day.
- Length of time on the current methadone programme: ___ weeks.
- Frequency of use of other substances during the last seven days: (state the number of days when any of the following were consumed)
  Cocaine: ___ ; Alcohol: ___ ; Cannabis: ___ ; Benzodiazepines: ___ ; Amphetamines: ___ ; Other (specify): _________
GENERAL INSTRUCTIONS

The ODAS is a brief semi-structured clinical interview whose purpose is to assess clinically how appropriate the dose of methadone prescribed in the context of the patient’s methadone maintenance program is for his or her individual needs. This instrument innovates by offering a more systematic and informed approach to the measurement of the construct referred to as the “adequacy” or the correctness of the methadone dose. Operationally, we interpret a methadone dose as being “adequate” when the patient: a) uses no heroin or uses it only occasionally; b) does not experience continuous opiate withdrawal symptoms (OWS) – if there are any, they are very mild; c) does not experience frequent episodes of craving for heroin – any craving present is very mild, d) in the event of heroin use, the patient does not experience its subjective effect – any effects are very mild (narcotic blockade or crossed tolerance); and e) does not experience continuous symptoms of overmedication – if any are felt, they are very mild.

The ODAS is designed to assess the degree of adequacy of the dose taken by the patient during the previous seven days or so. As a minimum, therefore, the patient has to continue on that same dose during this period. This will ensure that the patient has reached the steady state corresponding to that dose.

The ODAS clinical interview comprises 10 items that evaluate the six specific attributes or components of the construct “dose adequacy”: Continuous use of heroin (item 1); Narcotic blockade or crossed tolerance (item 2); Objective OWS (items 3a and 3b); Subjective OWS (items 4a and 4b); Craving for heroin (items 5a and 5b); and Overmedication (items 6a and 6b).

All the questions of the ODAS have the same structure. First the particular construct component that the question aims to evaluate is stated (in bold and italics). Then follows the main question in the item (in italics). However, given that this is a semi-structured clinical interview, it is not strictly necessary to formulate this question as literally presented here. The interviewer can paraphrase it to an extent considered appropriate at that time and in that context. The objective is for the patient to understand correctly the essence of the question being asked. To assist in ensuring this understanding, the main question is followed by one or more supplementary questions (shown in italics and preceded by a dash).

The expected usefulness of ODAS is not only clinical, in helping to optimize the methadone dose for each individual recipient, but extends to applications in the field of research. This instrument is only intended to provide an evaluation of the degree of adjustment of the dose. The decision on the need to modify the methadone dose, as a function of the assessment provided by the ODAS, is a clinical decision that will depend on many other factors, some of which may be raised and evaluated in the interview by utilizing the five Additional Items in the questionnaire. These items do not form part of the ODAS proper, so they have not been included in the quantitative scoring.

This is a preliminary version. The ODAS is currently in process of validation, as a result of which a few minimal changes may be made before the definitive version is ready. The procedure for obtaining the total scores from this interview will be reported
Heroin Addiction and Related Clinical Problems

When this study is complete.

1. Continuous consumption of heroin
   During the last seven days, how frequently have you used heroin?
   - Have you used heroin on any occasion during the last seven days?
   - If you have, on how many of the last seven days?
   - If you have been using heroin every day (or most days), how many times a day, on average, have you been using it?
   - On none of the last seven days ...........................................5.
   - On one, two or three of the last seven days..............................4.
   - On four, five or six days of the last seven days..........................3.
   - Once or twice every day.........................................................2.
   - Three or more times every day................................................1.
   
   >>>> CUT-OFF POINT: If a patient has not used heroin at any time during the last week (score 5 in questions 1 and 2), he or she should pass directly to question 3.

2. Narcotic blockade or crossed tolerance
   How intense was the effect you felt from the dose or doses of heroin that you used during the last seven days?
   - Your methadone dose during the last seven days was X milligrams per day. Have you felt the effect of the dose or doses of heroin that you used during the last seven days?
   - How intense was its effect?
   - Was the effect different from what you felt when you were not being treated with methadone?
   - Was the effect different from when you were taking a bigger or smaller dose of methadone?
   
   Show the patient CARD 1.
   Score: __/ (The score for this item is obtained by inverting the figure selected by the patient on the analogue-visual scale of Card 1: e.g. when a value of 1 is selected on the Card, this is equivalent to a score of 5 for this item, and so on, for each of the other items).

3a. Frequency of an objective OWS (Opiate Withdrawal Syndrome).
   Some people taking doses of methadone experience withdrawal symptoms such as: cramps and muscular pains, feeling your hair standing on end, a runny nose, wanting to cry, yawning, stomach cramps or diarrhea, palpitations, sweating, and generally feeling bad. These are symptoms that other people you are with can generally see.
   During the last seven days, how frequently have you felt any of these symptoms?
   - During the last seven days, have you felt withdrawal symptoms at
any time?
- **Have you had any symptoms such as .... and .....?** (at this point repeat to the patient the symptoms listed in the main question).
- **If you have, on how many of the last seven days did you have these symptoms?**

(To determine the presence of an objective OWS clinically, the patient must present two or more of the symptoms listed in the main question, unless the interviewer identifies some other clinical condition of the patient that provides clearer confirmation of an objective OWS.)

- On none of the last seven days.................................5.
- On one or two of the last seven days.................................4.
- On three to six of the last seven days.................................3.
- On each of the last seven days, once or twice a day..................2.
- On each of the last seven days, more than twice a day or very often........1.

>>> CUT-OFF POINT: If a patient has not presented at least two of these symptoms at any time during the last week (score 5 in questions 3a and 3b), pass directly to question 4a.

3b. **Intensity of an objective OWS**

*During the last seven days, how intense, on average, were the withdrawal symptoms you say you felt?*
- **On the occasions when you felt these symptoms, how intense were they, on average?**

Show the patient CARD 2.
Score: __/ (The score for this item is obtained by inverting the figure selected by the patient on the analogue-visual scale of Card 2: e.g. when a value of 2 is selected on the Card, this is equivalent to a score of 4 for this item, and so on, for each of the other items).

4a. **Frequency of a subjective OWS**

*Some people taking doses of methadone experience withdrawal symptoms such as anxiety, restlessness, irritability, difficulty in sleeping, tiredness, shivering, muscular aches and lack of appetite. These are symptoms that other people you are with generally cannot see.*

*During the last seven days, how frequently have you felt any of these symptoms?*
- **There are people receiving treatment with methadone who do not experience any serious withdrawal symptoms, but who nevertheless do not feel well. During the last seven days, have you felt any symptoms like ... or ...?** (at this point repeat to the patient the symptoms listed in the main question).
- **If you have, on how many of the last seven days did you have these symptoms?**

(To determine the presence of a subjective OWS clinically, the patient must present two or more
Heroin Addiction and Related Clinical Problems

of the symptoms listed in the main question, unless the interviewer identifies some other clinical condition of the patient that provides clearer confirmation of a subjective OWS.)

- On none of the last seven days..............................................5.
- On one or two of the last seven days.................................4.
- On three to six of the last seven days...............................3
- On each of the last seven days, once or twice a day............2
- On each of the last seven days, more than twice a day or very often....1.

>>> CUT-OFF POINT: If a patient has not presented any two of these symptoms at any time during the last week (score 5 in questions 4a and 4b), pass directly to question 5a.

4b. **Intensity of a subjective OWS**

*During the last seven days, how intense, on average, were the withdrawal symptoms you say you felt?*

- *On the occasions when you felt these symptoms, how intense were they, on average?*

Show the patient CARD 2.

Score: __/ (The score for this item is obtained by inverting the figure selected by the patient on the analogue-visual scale of Card 2: e.g. when a value of 5 is selected on the Card, this is equivalent to a score of 1 for this item, and so on, for each of the other items).

5a. **Frequency of craving for heroin**

*During the last seven days, how frequently have you felt an urgent need to use heroin?*

- *During the last seven days have there been times when you desperately wanted to take heroin?*
- *If there have, on how many of the last seven days did you feel these needs?*

- On none of the last seven days..............................................5.
- On one or two of the last seven days.................................4.
- On three to six of the last seven days...............................3
- Once or twice every day....................................................2
- Three or more times every day............................................1.

>>> CUT-OFF POINT: If a patient has not felt any craving for heroin at any time during the last week (score 5 in questions 5a and 5b), pass directly to question 6a.

5b. **Intensity of craving for heroin**

*During the last seven days, how intensely did you feel the need to use heroin, on average?*

- *On the occasions when you wanted to take heroin, how intensely did you feel this need, on average?*
Show the patient CARD 2.
Score: __/
(The score for this item is obtained by inverting the figure selected by the patient on the analogue-visual scale of Card 2: e.g. when a value of 4 is selected on the Card, this is equivalent to a score of 2 for this item, and so on, for each of the other items.)

6a. Frequency of overmedication
Some people who take doses of methadone experience symptoms such as feeling sleepy or sedated, difficulty in speaking, being unusually active or, alternatively, the sensation of “being drugged”. During the last seven days, how frequently have you had any of these symptoms?
(Ask the patient specifically if he or she had felt these symptoms about 3 hours or more after having taken the dose of methadone.)
- During the last seven days, were there any days when you had symptoms such as ... or ..., especially 3 hours or more after having taken your dose of methadone? (at this point repeat to the patient the symptoms listed in the main question).
- If there were, on how many of the last seven days did you have those symptoms?
  • On none of the last seven days......................................................…... 5.
  • On one or two of the last seven days.......................................…………….. 4.
  • On three to six of the last seven days........................................……………. 3.
  • On each of the last seven days, once or twice a day.........................2.
  • On each of the last seven days, more than twice a day or very often.............1.
>>> CUT-OFF POINT: If a patient did not have any of these symptoms at any time during the last week (score 5 for questions 6a and 6b), pass directly to an assessment of the Additional Items.

6b. Intensity of the overmedication
During the last seven days, how intense, on average, were the symptoms you say you had, in answer to the last question?
- On the occasions when you had those symptoms, how intense were they, on average?
Show the patient CARD 2.
Score: __/
(The score for this item is obtained by inverting the figure selected by the patient on the analogue-visual scale of Card 2: e.g. when the value of 1 is selected on the Card, this is equivalent to a score of 5 for this item, and so on, for each of the other items.)
ADDITIONAL ITEMS

A. Patient’s subjective assessment of how adequate their current methadone dose feels.

To what extent do you feel that the methadone dose you have been taking during the last seven days is adequate for you? By “adequate dose” we mean a “holding” dose that leaves you feeling “covered” (without any withdrawal symptoms), a dose that leaves you without too much of an urge to use heroin, and that at the same time leaves you not feeling too drugged.

Show the patient CARD 3.

Score:__/10

B. Patient’s wish to modify their dose of methadone

What dose of methadone would you like to take during the next seven days? (indicate one of the following)

- The patient wants to continue with the same dose.
- The patient wants to increase the dose to ___ mgrs/day.
- The patient wants to reduce the dose to ___ mgrs/day.

C. Secondary effects of the methadone taken during the last seven days

During the last seven days, have you had any of the following symptoms, at any time? (read them out to the patient). Indicate with an X those that the patient confirms.

<table>
<thead>
<tr>
<th></th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constipation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased sweating</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insomnia, or difficulty in sleeping</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alteration of sexual function</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In women, menstrual alterations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tiredness/muscular aches or pains</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

D. Concomitant medication taken during the last seven days

<table>
<thead>
<tr>
<th>Active drug</th>
<th>Total daily dose</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
E. Degree of general functioning of the patients (DSM-IV GAF)

ODAS - ANNEXES

**CARD 1:**
On this scale from 1 to 5, indicate how you perceived or felt the effect of that dose of heroin (or those doses of heroin).

<table>
<thead>
<tr>
<th>It had no effect at all on me</th>
<th>The effect was extremely intense</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

**CARD 2:**
On this scale from 1 to 5, indicate the degree of intensity you felt.

<table>
<thead>
<tr>
<th>Nothing at all</th>
<th>Extremely intense</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

**CARD 3:**
On this scale from 1 to 5, indicate to what extent you feel that the dose you are taking is adequate for you. How OK is the dose?

<table>
<thead>
<tr>
<th>Totally inadequate, useless</th>
<th>Perfectly adequate, OK.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>
Heroin Addiction and Related Clinical Problems

TONIGHT HE GRINS AGAIN

Nighttimes again
 Seems I’m my only friend
 Wander the streets alone
 The lost in search of his own
 Once again I’ve played the clown
 Used my friends and let them down
 Walk the streets just staring out
 Late at night the strange come out
 Time, time, time again
 I’m just looking for a friend
 But no one seems to be around
 Just this monkey that I’ve found
 Still he is my only friend
 And tonight he grins again
 Tonight he grins again
 Oh yeah
 Tonight he grins again
 It’s cold this pain
 It’s burning inside my veins
 I walk away
 A shadow of Dorian Gray
 Once again I’ve played the clown
 Used my friends and let them down
 Walk the streets staring out
 Late at night the strange come out
 Time, time, time again
 I’m just looking for a friend
 No one seems to be around
 Just this monkey that I’ve found
 Still he is my only friend
 And tonight he grins again
 Tonight he grins again
 Oh yeah
 Tonight he grins again

Savatage, 1991

Solitude is a major psychological dimension of addictive disorders. An addict stands alone against his or her disorder, since there is no outer object to provide support against the powerful call of the substance. Moreover, dedication to the substance is equivalent to letting it erode all other important ties. An addict fools and exploits people they can count on in order to feed their habit, but once this objective is achieved, objective remorse is felt. Symbolically, night-time is interpreted as the interval between two spikes of craving, when reflections can take place; this reveals that an addict retains normal values, but cannot by-pass the contradiction. As for the dynamics, it is not solitude which summons the substance as a pain-soothing medicine, but the substance which invades the addict’s life and sweeps everything from its path. “Still [the monkey] is my only friend”, which means the substance is not felt as an enemy, but a companion, at least when craving becomes intense again. The monkey is not benign, but is fatally close at hand. The substance is a sinister grin taken for a smile. Although further negative consequences loom, the addict is condemned to embrace the idea of another dose as a touch of heaven.

(Comment by Matteo Pacini, Pisa, Italy, EU)
INFORMATION FOR CONTRIBUTORS

The Editor of Heroin Addiction & Related Clinical Problems welcomes contributions of original manuscripts that are not under consideration for publication elsewhere. The Journal publishes research reports, proposals, letters to editor.

Peer Review: All manuscripts, including those written at the invitation of the editor, are subject to peer review by at least two experts to determine the originality, validity, and significance of the submitted material. Authors will usually be advised within eight weeks on the decision on their manuscript. All reviewers will remain anonymous.

Manuscript Specifications: Manuscript must be typed double-spaced with one-inch margins on A4 paper (Max 29.952 characters). The cover page must contain the article title, authors’ names and affiliations, and address for correspondence and telephone number of corresponding author. Please, submit your paper only by E-mail in Rich Text Format Saved File. Please provide figures in .pdf or .tiff, .jpeg format or as Microsoft Power Point Presentation. Each article must include an abstract (100-word maximum) and a reference list.

Bibliography must be ordered by authors’ names alphabetically. Start each reference with bibliography number; use these numbers, in parentheses, for in-text citations. Personal communications, unpublished manuscripts, manuscripts submitted but not yet accepted, and similar unpublished items should not appear in the reference list. Such citations may be noted in the text.

Please use the following guidelines for arranging references:

Journal article:

Book:

Book Chapter:

Journal names should be abbreviated as they appear in Index Medicus, journals not currently indexed there should not be abbreviated.

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Submissions should be accompanied by a cover letter indicating that the paper is intended for publication and specifying for which section of the journal it is being submitted (Research Reports, Proposals, Letters to Editor);

Ethics of Experimentations: Authors must declare in the cover letter that their studies submitted to Heroin Addiction & Related Clinical Problems have been conducted in accordance with Declaration of Helsinki.