



## Neonatal Abstinence Syndrome-2013

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### Abstract

Burgeoning numbers of infants exposed to a variety of substances which cause untoward effects, especially neonatal abstinence syndrome (NAS), are currently seen in major hospitals across the United States and throughout many other nations. The economic and emotional burden of NAS upon hospitals and medical staff and the morbidity experienced by the infants is evident. Symptoms are related to heroin, treatment medications including methadone and buprenorphine, and recently, a vast increase in the abuse of prescription opioids with epidemiological studies showing that every hour a baby with NAS is born in the United States. Despite differences in the properties of the causative agents, NAS presents as a constellation of behavioral and physiological signs and symptoms that are remarkably similar. In understanding NAS, one needs to be aware of the various signs and symptoms, the factors affecting onset, the variations that occur with different pharmacological agents that can precipitate it, and how to assess the severity and the need for treatment. Among the important issues affecting severity and duration of treatment for NAS are the methods of assessment and the timing of the treatment medication. The goal of NAS treatment is to provide symptom relief for the infant and to permit normal functions such as sleeping and eating to permit growth. Separation of the infant from the mother and the possibility of sensory deprivation may be independent predictors of more severe NAS. Decreased maternal attachment with the risk of neonatal abandonment may occur as a result of separation. Recent evidence-based practices have revealed the critical role of involvement of the postpartum mother in reducing NAS symptoms. Use of supportive measures can enhance medication treatment and support maternal nurturing. Traditional supportive measures such as non-nutritive sucking as well as the potential use of music reinforcement therapy are important in relieving the symptoms of abstinence in newborn infants exposed to opioids in utero.

## Is it Time to Build a Psychopathology of Addiction?

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### Abstract

The current 'official' nosology (e.g. DSM-IV) of addiction is largely limited to manifestations that can be objectively observed and suited to the maintenance of an 'atheoretical' perspective. However, addicted subjects display other psychic symptoms (in particular, those related to mood, anxiety, or impulse-control dimensions) that affect their well-being and social functioning. In practice, these symptoms are typically considered as being 'comorbid', thereby contributing to multiplying comorbid diagnoses in addiction. However, a close relationship can be detected between these symptoms and addiction, as underlined by the high frequency of their association, and by strong neurobiological and neuropsychological links. There are several reasons for taking these symptoms into account in clinical presentations of substance-use disorders. First, the pre-existence of psychic precursors (affective, anxiety and antisocial-related vulnerabilities and temperamental assets) may precede drug abuse and work as a specific risk factor in addiction. Second, psychiatric symptoms that accompany the use of specific substances, including irritability, sleep difficulties, anxiety, and attention/concentration problems, are not necessarily so intense as to warrant a 'disorder' level; however, they may substantially contribute to compromising the individual well-being and social functioning of people with addictive disorders. Third, more stable psychopathological manifestations depend on the prolonged interaction of substances with a predisposed neurobiological substrate and its active reaction. The resulting changes may not only justify the strictly behavioural presentation of addiction as a specific disorder— and psychological/psychiatric correlates such as craving and dyscontrol— but also the onset/worsening of other psychiatric symptoms. Hypofunction of limbic dopamine circuits, hypoactivity of prefrontal brain regions, changes in the reward and stress systems, and gene expression dysregulation, are all potential candidates underlying depression, dysphoria, anxiety and impulsiveness preceding addiction, featured moreover as an outcome of addictive processes. Fourth, clinical manifestations produced as a consequence of addictive processes do not seem to merely add to those previous encounters with substances. Interactions between the above factors should be considered, particularly in view of the fact that while predisposing psychic conditions may facilitate substance use and activate addictive processes, these, in turn, by acting on the same neuronal background, induce a worsening of psychic conditions in the same domains. DSM nosology does not seem to grasp the complexity of the interaction between the psychic structures involved, and neurobiological and physio-pathological processes activated by encounters with substances of abuse. On these bases, an integrative unified perspective explaining the pathophysiology and phenomenology of addiction has been proposed. The validation of an articulated clinical condition, encompassing part of the grey area of symptomatology that exists between addiction itself and other 'independent' psychopathologies, would certainly deserve special attention and specific research programmes.



## Agonist Opioid Treatment and Treatment of Psychopathology in Heroin Addicts

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### Abstract

Heroin addict treatment in a psychopathological perspective is something more than a toxicological stabilization. The aim of a good treatment with opioids agonists is a global mental stabilization, not only a morphinuria negativization. Decreasing opioid agonists dosage is dangerous, especially when mental disorder is co-occurring. The risk to transform a heroin addict into a mentally ill, without opioid treatment, is high. Heroin addict is often a masked psychotic. On the other hand, heroin addiction undermines the patient's sense of reality and the patient's coherence of his/her self. At present dopamine pathways are considered the common ground of heroin addiction and psychotic disorders. This presentation examines several therapeutic approaches under a new perspective of Addiction Psychiatry.

## Treatment of Depression in Heroin Addicts: When and How?

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### Abstract

Opioid dependence is a chronic disease with a high rate of impairment at personal, familiar and social levels. It is well recognized that major depression is one of the most prevalent comorbid psychiatric disorders in opioid-dependent subjects (44-54% prevalence). The prognosis of these subjects is poor and previous studies have emphasized the need of treatment to improve both depression and opioid dependence disorder. In this presentation we will summarize the current state of the art concerning the clinical characteristics of these depressions (primary vs. induced); and where (i.e. mental health network, drug abuse network, others); and how (in parallel, sequentially, integrated systems) these patients with both depression and opioid dependence have to be treated. Also we will be focused in the pharmacological and psychosocial treatments to be prescribed according the available evidence. (Torrens et al, 2011a,b; 2012) Finally, we will do some recommendations for future goals for research and clinical practice in this field.

## Positive Side of Opioid Neuropharmacology in Various Psychiatric Conditions

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### Abstract

The major psychiatric syndromes remain poorly defined and for the most part without definitively known underlying pathophysiologic mechanisms. Although great advances have been made in the development of supporting basic science related to these disorders, such as in biochemistry, molecular genetics and imaging techniques, the categorization of these disorders relies almost exclusively on the cross-sectional and longitudinal information gathered through clinical interview. Psychiatrists rely primarily on the DSM-IV whose categories do not imply the lack of a potentially significant overlap among these disorders. For example, that a given condition is identified such as Bipolar Disorder does not imply a crisp boundary from other disorders such as Schizophrenia, Obsessive-Compulsive Disorder or Borderline Personality Disorder. Many forms of pharmacotherapy have been developed: Antipsychotics, Antidepressants, Mood Stabilizers, Anti-Anxiety agents and others. Although we may know of how these agents may effect some endogenous neurochemical systems such as Dopamine, Serotonin, Nor-Adrenaline, and GABA their exact mechanisms of action remain elusive. We do recognize an endogenous Opiate system whose stimulation and modulation from exogenous substances (Opioid agonists and antagonists) may have profound effects upon behavior, cognition and mood. In the case of Opioid Drugs we generally have focused on the negative effects on such parameters by individuals who abuse these drugs for recreational purposes.

As many opioid formulations do have profound psychoactive effects, these effects may possibly be positive if regulated by physicians in a controlled manner for given psychiatric conditions. The purpose of this talk is to examine the evidence for the "Positive" use of such substances in major Psychiatric conditions. Some original data will be closely examined showing psychiatric co-morbidity (Anxiety, Psychotic and Mood) in Heroin abusers as a positive predictor for failure to relapse while receiving Methadone Maintenance. Simply put, if you are a Heroin abuser who also has a major psychiatric illness you may do better with MMT than if you lack formal psychopathology. This to many appears to be a paradoxical and certainly an enigmatic finding. The clinical use of medicines affecting the opiate neurochemical systems in individuals with various psychiatric disorders (e.g. Obsessive-compulsive Disorder, Post Traumatic Stress Disorder, Depression) will also be reviewed.



## Agonist Opioid Treatment and Heart Arrhythmias

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### Abstract

Opioid agonists for addiction treatment primarily include methadone and buprenorphine. Methadone is associated with QTc prolongation and torsade de pointes (TdP). Only recently, a transdermal formulation of buprenorphine resulted in QTc-prolongation. The relevance of these findings to addiction treatment has been a subject of ongoing debate. This has led to marked variability among international safety standards as well as clinical guidelines for performing electrocardiography (ECG). To date, there is little evidence that ECG programs can reduce the risk of arrhythmia. Moreover, there is concern that ECG programs may limit access to methadone maintenance treatment (MMT). Currently, it is unclear if the actual risk of arrhythmia differs between buprenorphine and methadone. Given this background we evaluated: 1. Pilot data from an ECG intervention program from a single United States opioid treatment program. 2. The U.S. Food and Drug Administration Adverse Event Reporting System (AERS) from 1969-2011 for methadone and buprenorphine adverse events. In the ECG pilot study we assessed the change from peak to post-intervention QTc interval in 21 patients who presented with marked QTc prolongation. Marked QTc prolongation was defined as a Bazett's corrected QTc > 500 ms, which is indicative of high-risk for TdP. In the AERS evaluation, we calculated the proportional reporting ratio (PRR) to assess for disproportionate adverse event reporting. Specifically, we tabulated ventricular arrhythmia/cardiac arrest, and QTc-prolongation/torsade de pointes (TdP). Disproportionate reporting was defined as a PRR > 2, a chi-squared error > 4, and > 3 cases. The results were as follows: 1. In the pilot ECG study, we observed that among individuals with marked QTc prolongation, the QTc interval decreased by 55 ms ( $p < 0.001$ ) and over half dropped below the 500 ms threshold. No patient was denied access to MMT. 2. In the AERS database, a total of 7283 adverse events were associated with buprenorphine including 857 deaths (11.8%), while 14915 methadone-associated events and 5770 deaths (38.7%) were reported. There were 132 (1.8%) ventricular arrhythmias/cardiac arrest cases associated with buprenorphine including 10 (0.1%) QTc-prolongation/TdP cases versus 1693 (11.4%) ventricular arrhythmias/cardiac arrest cases and 252 (1.7%) reports of QTc-prolongation/TdP for methadone. PRRs for buprenorphine were not significant for ventricular arrhythmia/cardiac arrest (PRR 1.1, chi-square 1.8) or QTc-prolongation/TdP (PRR 1.6, chi-square 1.6). By contrast, these values were significant for methadone (PRR 7.0, chi-square 851; PRR 21.4, chi-square 4305 respectively). We conclude that although there is concern regarding the utility of ECG screening in MMT, it appears to reduce the QTc interval in patients at high-risk without creating a barrier to care. Although there is a potential for QTc-prolongation with buprenorphine, it is not associated with disproportionate arrhythmia reporting. By contrast methadone is strongly associated with cardiac arrhythmia. Overall mortality rates were higher among methadone adverse event cases compared with buprenorphine.

## Behavioral Interventions to Reduce HIV Risky Behavior in Drug Addicts and Alcoholics

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### Abstract

The aim was to study the effect of treatment of opiate dependence with different drug formulations of naltrexone (oral, implantable and injectable) on HIV risk behavior. The method of the first study was four cell double-blind, double-dummy placebo controlled randomized clinical trial (280 patients, 70 patients per group) of combination of naltrexone with fluoxetine vs. naltrexone, fluoxetine, and double placebo. The 2nd study comprised three cell double-blind, double-dummy placebo controlled randomized clinical trial of naltrexone implant vs. oral naltrexone and double placebo (oral and implantable). In that study 306 recently detoxified opioid addicts were randomized to a six-month course of biweekly drug counseling and one of three medication groups (102 patients in each one): Naltrexone implant (1000 mg, 3 times-every other month) + Oral placebo daily (NI+OP), Placebo implant + Oral naltrexone (PI+ON) (50 mg/day), and double placebo (implant and oral) (PI+OP). The 3rd study was double blind placebo controlled randomized clinical trial of injectable naltrexone vs. placebo. 250 opioid addicts were randomized to 24 weeks of double-blind treatment with monthly intramuscular extended release naltrexone (XR-NTXN) 380 mg or placebo (PBO). In all three studies HIV risky behavior was measured with the Risk Assessment Battery (RAB). The results of the 1st study were that at the end of six months treatment, 2-3 times as many naltrexone as naltrexone placebo patients remained in treatment and had not relapsed, OR=3.5 (1.96-6.12),  $p < 0.0001$ . Overall, adding fluoxetine did not improve outcomes, OR=1.35 (0.68-2.66),  $p = 0.49$ , however, women receiving naltrexone and fluoxetine showed a statistically non-significant trend toward better retention in treatment when compared to women receiving naltrexone and fluoxetine placebo (OR=2.4 (0.88-6.59),  $p = 0.08$ ) [1]. In the 2nd study the cumulative proportion of heroin negative urines in NI+OP group was 63.6% compared to 42.7% in PI+ON group and 34.1% in PI+OP group ( $p < 0.0001$ ). Survival analysis also revealed a significantly greater retention in NI+OP group compared to two other groups: 53% of the patients in NI+OP group completed treatment compared to 16% in PI+ON and 11% in PI+OP groups ( $p < 0.001$ ) [2]. In the 3rd study a significantly higher proportion of XR-NTXN patients vs. PBO had opioid-free urines (median: 90% vs. 35%;  $p < 0.0002$ ). XR-NTXN was associated with 50% lower craving scores for weeks 8-24 vs. PBO (-9.4 vs. +0.8;  $p = .0029$ ), 94% reduction in naloxone-tested relapse to physiological dependence ( $p < .0001$ ), and longer median retention (>168 days vs. 96 days for placebo;  $p = .0042$ ) [3]. According to RAB, HIV drug risk behavior in naltrexone groups was significantly lower compared to other groups. We concluded that extended release formulations of naltrexone are the most effective non-agonist pharmacotherapy for opiate dependence. All drug formulations of naltrexone reduce HIV risk behavior.



## Access to Healthcare Services for Women Who Inject Drugs in Russian Federation

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### Abstract

Provision of medical services to people who use drugs, particularly injecting drug users, has been a highly essential and challenging issue for the health care sector in Russia. The currently existing regulations, which determine health care organisations internal rules and code of conduct, often disregard or ignore potential problems of patients with drug addiction. The goals of this study were to determine and to analyse the main reasons (obstacles and barriers) hindering the development of therapeutic alliances between female IDUs and medical service providers (therapists) that stigmatise their patients and aggravate their health condition. Therefore, this applied research is aimed at improving addiction treatment practices and providing drug users with high-quality medical services. This study was conducted applying the following social science methods: questionnaire survey and unstructured in-depth interviews, focus group, as well as qualitative and quantitative data processing methods. The sample group included 198 respondents, of them 21 participated in depth interviews, and 11 in the focus group. As a total, 237 individuals were involved in the questionnaire survey; however some of them (39 individuals) were disqualified in the survey process having failed to respond to the questions due to a mental disorder or intoxication. As a result, only data collected from 198 respondents have been processed in the study. Based on respondents' evaluation of problems related to the access to medical care as well as their specifics, most female IDUs (77.9%) encountered problems while seeking help from health care organisations. A half of respondents reported having addiction-related problems when sought medical help "sometimes," while 11.1% of respondents reported they encountered these problems "often" and 16.8% faced them "seldom." Medical services that were reported to be mostly problematic for drug addicted patients seeking help involved the narcological/addiction treatment (45.5%), surgical (37.9%), obstetrical and gynaecological (5.5%) services. The survey data are possibly influenced by the frequency of respondents' contacts with the services (the addiction treatment service was encountered by all respondents). Describing problems they encountered, female IDUs have referred to the breach of confidentiality (34.8%), maltreatment of patients (22.7%), addiction-related abuse/humiliation (22.7%), having to pay for services (16.7%), waiting times and waiting lists (11.6%), refusal of hospital admission to drug addicted patients (11.1%), required official registration as drug user (11.1%), refusal of treatment services to drug addicted patients (5.1%). Qualitative analysis of female IDUs' attitudes to problems/barriers they encounter while seeking medical help from health care institutions reveals that women try to avoid seeking medical help as long as possible, practising self-treatment and going to a doctor only in case of emergency.

## Characteristics and Treatment of Opioid Addicted Patients with TB and HIV in Ukraine

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### Abstract

Ukraine experiences growing HIV epidemic concentrated primarily among people who inject drugs (PWID), as well as threatening rise of MDR-TB epidemic fueled by HIV. A 90-day observational cohort study was conducted in 2012 in six tuberculosis treatment clinics of Ukraine. A total of 110 individuals with opioid dependence were enrolled in the study and observed during 90 days of inpatient treatment. Data collection tools included patient questionnaire completed at baseline and follow-up and patient profile completed by doctor on daily basis. The qualitative phase of the study included three focus groups with PWID with active TB: 1) previously treated in TB clinics; 2) on TB treatment now with methadone maintenance (MMT) and 3) on TB treatment without MMT. Data from the qualitative phase of the study suggests that MMT increases compliance with antimicrobial medications among opioid dependent people. PWID hospitalized with TB are generally extremely vulnerable patients with long history of drug use (mean  $18.4 \pm 7.2$  years); alcohol use prevalence (70%); amphetamines use (18%), and history of incarceration (85%). 81% of patients have re-treatment TB case, 63% among them having M(X) DR-TB or high risk of MDR (non-lab confirmed due to poor level of TB lab diagnostics in Ukraine). In comparison, WHO estimated MDR-TB prevalence among re-treatment cases as 45% in the civilian sector. At baseline patients had been staying in hospitals for  $125 \pm 145$  days (max 706). 25% of patients with confirmed M(X)DR-TB and 84% with high-risk MDR received standard first-line treatment regimen. 68% of patients were HIV+, and 18% - with unknown HIV status. 45% were prescribed ART. During 90-day observation period 9(8%) of patients died, 6 of them were HIV+ and none received ART. We concluded that inappropriate treatment of TB and HIV among opioid dependent patients in Ukraine results in high death rate and spread of MDR-TB. Standard treatment protocols should be implemented, and opioid dependence management integrated into TB treatment. It's recommended to establish MMT programs on all TB clinics where PWID are treated.



## Economic Sustainability of Different Treatment of Care in Opioid Dependence

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### Abstract

Health professionals' aim is to provide patients with the best possible care. Unfortunately, in doing this, they face financial and economic difficulties: the demand for health care – because of past successes and because of the emergence of effective new technologies – has often exceeded the available financial and human resources.

As a result, health care interventions have been evaluated not only for their quality, safety and effectiveness, which remain fundamental, but also for their costs. Pharmaco-economic evaluations put into relation costs and consequences of pharmacological treatments and, while calculating indices of efficiency, investigate the value of drug therapies. Information on the social and economic effect of diseases and appropriate therapies, as well as patients' quality of life and preferences are the basis for a pharmaco-economic analysis. There are three main techniques used in full economic evaluations of health care programmes: cost effectiveness analysis (CEA), cost utility analysis (CUA) and cost benefit analysis (CBA). All techniques address the issue: "which is the cost to reach a unit of effect?" Despite initial skepticism, economic analyses of new pharmacological therapies has become a valuable tool for decision and policy makers to highlight, judge and reward innovation and to link investments in research to improvements in healthcare provision. Analyses on cost, outcomes, and cost effectiveness applied to the field of addiction will be presented and discussed.

## Italian Position of GP about Opioid Dependent Patients

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### Abstract

If the 45,000 Italian GPs professional intervention was limited to what expected from the National Collective Labour Agreement and from the policies of health institutions (Ministry of Health and Regions), little space could be found for an operating professional role in the field of opioid dependence. All this despite excellent, even if few, recent experiences in this field. Current scenarios on addiction involve new users and new models of use. Patients' characteristics have changed (a sort of "social normalization") and also the type of dependence (polyabuse, gambling addiction). The "new consumers" are more and more included in a normal working and social context and they don't like to suffer from a "stigma" represented by attending Specialized Addiction Services (SerTs). Moreover, as to opioids, their use through new ways of consumption (inhaling, smoking, etc.) lets consumers feel to be less "patients." The Italian Society of General Medicine (SIMG) is the most important scientific association of Italian family doctors. Its members are 8000 and it is present all over the national territory. Its research institute, Health Search, with 1,000 researchers and over a million and a half patients recorded in its database, brings out data published in the most important international scientific journals. The Italian Society of General Medicine (SIMG) has a 20-year experience in training, editorial and research initiatives in the field of dependencies. Nowadays, a challenge that General Medicine has to face is to achieve a definite role in the management of these problems, which more and more look as chronic diseases and public health priorities.

New SIMG proposals refer to the implementation of a GPs national network, on a voluntary basis, in which GPs involved in some way in addiction issues can collaborate, and can manage some of addicted patients together with specialized services. This proposal could be carried out introducing a "GP with special interest in the field of drug addiction" figure, according to the English model (GpwSI). This kind of doctor should be a point of reference for his/her colleagues who deal with an addiction problem; he/she should have expertise and get good results, to be determined inside a core curriculum, shared with other institutional subjects and scientific societies. GPs who are part of the network should deal with the following aspects: 1. Prevention and early diagnosis; 2. Treatment; 3. Relationships with families. With reference to an early diagnosis, a pattern of risk factors (vulnerability?) should be defined, in order to detect populations at risk, on which making a proactive intervention, supporting families or a single subject at risk. Treatment should refer only to a part of opiate dependent patients, i.e. those stabilized both from a clinical and psychological viewpoint. It's necessary to choose, among available medications, those with pharmacological and prescription features suited to be transferred to the General Medicine. In particular, buprenorphine/naloxone, thanks to its low potential of abuse and administration convenience, showed a possibility to develop collaborative projects between GPs and SerTs at territorial level. In conclusion, we suggest a model aimed at a differentiated and integrated setting of treatment, where both GPs and SerTs can play a role, according to the clinical and toxicological features of each patient. In this sense, a network of pathological dependencies can be considered as composed of health professionals belonging to different fields (GPs, SerTs, and Universities) that combine horizontally their professional activities following criteria and guidelines on a shared good clinical practice.





## Cost-Utility and Budget Impact Analysis of Buprenorphine/Naloxone for Heroin Detoxification

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### Abstract

The objectives were to perform a cost-utility analysis (CUA) aimed at comparing buprenorphine/naloxone vs. buprenorphine and methadone in heroin addiction detoxification during one-year follow-up in Italy. Clinical, economic and utility data was obtained from the Department of Addiction, Local Health Authority of Varese (Lombardy Region) and literature. Drugs, bottles for methadone take-home doses, health care and social services were identified, quantified and valued in Euros (€) 2009 following the health care facility viewpoint. One-way and probabilistic sensitivity analyses (SAs) were performed. Buprenorphine (214 patients) and methadone (512 patients) are the most and the least costly options (€ 3.257,24 and € 2.219,47 per patient, respectively). Buprenorphine/naloxone (211 patients) costs € 2.541,05 per patient. During one-year follow-up patients accrue 0,573 (methadone), 0,599 (buprenorphine) and 0,602 (buprenorphine/naloxone) Quality-Adjusted Life Years (QALYs), respectively. Buprenorphine is strongly dominated by buprenorphine/naloxone and hence ruled out from the base case CUA. The incremental cost-utility ratio for buprenorphine/naloxone vs methadone is € 11.195,12. SAs confirm the robustness of the base case findings. Buprenorphine/naloxone seems advisable even from an economic point of view, since its incremental cost-utility ratio falls well within the usual acceptability standards for incremental QALY saved (€ 25.000-40.000; \$ 50.000).

## Case History: Soverato

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### Abstract

During opioid agonist maintenance treatment (OMT) in Italy, patients may experience problems accessing addiction assistance from the local drug addiction centers (SerTs [Servizi territoriali per le Tossicodipendenze]), resulting in reduced long-term adherence to treatment. To overcome this, the SerT in Soverato, Italy has developed a pilot project called Distribuzione per Conto (DPC), which distributes OMT through local pharmacies and involves general practitioners in the management of patients instead of the traditional treatment of these patients which was run solely through SerTs. Results of this study show that the DPC treatment strategy is a viable strategy as it increased patient satisfaction compared with the traditional strategy with no negative effects on the adherence to OMT and patient relapse rates. DPC also reduced the number of visits and counseling sessions at SerT, with a positive impact on time management and associated costs both for patients and clinical practitioners.

## On Total Quality Management and Assessment

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### Abstract

The Pompidou Group's core mission is to contribute to the development of multidisciplinary, innovative, effective and evidence-based drug policies in its member states. It seeks to link Policy, Practice and Science and focuses especially on the realities of local implementation of drug programmes. Europe is facing serious consequences of the austerity measures taken in the context of the financial crisis: more and more people are desperate, and drug and alcohol abuse increasingly occurs to deal with difficulties and unhappiness, some of the people who recovered from abuse and got "regular" lives are now in the first line to be excluded, to lose their (precarious) jobs, their houses, their families. As their lives drop, they relapse, whilst maintaining an adequate level of policy responses is getting more and more difficult.

On top of that, the social representation of drug addiction with the rise of "addictophobia" and questions about public money spending on the fight against drug addiction, which is particularly sensitive in the field of social reintegration of drug addicts. The presentation will look into the key challenges and opportunities of international cooperation and the type of support that can be expected from the Pompidou Group for governmental, but also for professional cooperation in the area of drug addiction and treatment.



## Estimating the Social and Economic Costs of Opioid Dependence

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### Abstract

Opioid dependency (dependency on heroin or prescription opioid painkillers) imposes significant costs on the state, communities, families, patients and users. While there is evidence of links between opioid dependency and a wide range of health, societal and criminal justice costs [1-3], evidence on the nature, size and scale of the impacts of opioid dependency is varied. Such evidence is vital to the design and implementation cost-effective policies and interventions. RAND has undertaken a systematic assessment of existing estimates of the costs of opioid dependency in order to: Better understand and map the various categories of costs; Collect existing estimates of the magnitude of different costs; Identify those costs for which estimates are available, and those costs which have not been estimated; Assess the robustness and generalisability of existing estimates through a detailed review of the costing methodologies and data sources used; Identify upper and lower bounds on the range of existing estimates, and the reason for variation between estimates. In this presentation findings from this assessment will be presented, along with the range of estimates of the cost of opioid dependency based on the current research. A framework will be proposed for generating more comprehensive and robust estimates of the costs of opioid dependency in order to better inform policy and decision making. Where possible, this framework will rely on validated methodologies and costing approaches, but will also seek to identify potential costs of dependence which have not yet been adequately explored and valued in the available evidence.

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## Diversion, Misuse and Trafficking of Methadone and Buprenorphine

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### Abstract

The diversion and misuse of prescription opioids has become an important cause of accidental death in the several countries. Drugs intended to treat opioid dependence like methadone and buprenorphine play an important, but ambiguous role in prescription drug abuse. Both drugs are critical elements in the successful treatment of substance abuse. Like all drugs, however, there are challenges in their appropriate use. The study of prescription drug abuse is difficult because the behavior is actively concealed from surveillance. To address this challenge, the Researched Abuse, Dependence and Addiction Related Surveillance (RADARS®) System ([www.RADARS.com](http://www.RADARS.com)) studies diversion, abuse and outcomes involved in the abuse of prescription opioids including methadone and buprenorphine. Several different systems (drug diversion investigators, poison centers, substance abuse treatment programs, college survey and street price survey) continually monitor abuse, diversion and outcomes from prescription opioids throughout the United States (US).

Our surveillance indicates that most commonly drug diverted in the United States is hydrocodone or oxycodone depending on the monitoring system. This is likely because these drugs are prescribed most frequently and are therefore the most widely available. In contrast, if the amount of a drug available is considered, the most frequently diverted drugs become methadone, hydromorphone, and buprenorphine. In the RADARS System Treatment Programs, methadone and buprenorphine are the most frequently endorsed drugs in terms of abuse. This means that substance abusers entering treatment endorse methadone and buprenorphine as drugs they abuse. In the US, methadone and buprenorphine are used by different physician specialties for two different indications: substitution treatment in opioid dependence as well as treatment of pain. For methadone, most endorsements by substance abusers involve a pill formulation, suggesting the medication was obtained for the indication of pain rather than for substance abuse. Poison centers in the United States follow each case for outcome. In poison center data, the drug most commonly involved in a death involving a prescription opioid is methadone and the most common formulation involved is a pill. Buprenorphine is different from methadone in that it has two different formulations available, buprenorphine alone and buprenorphine with naloxone. Our data indicate that both forms are abused, but buprenorphine alone formulation has a higher rate of abuse than the combination drug (buprenorphine + naloxone). It is also important to realize that patients under treatment for substance abuse or for pain live in a community and often have children in the home. Unfortunately, young children occasionally take their parents medication. The most common cause of death involving a prescription opioid in the US for a young child is methadone. In contrast, buprenorphine has one of the lowest rates of death in children. Methadone and buprenorphine are important treatments for substance abuse. Understanding their abuse can guide their use and hopefully avoid restriction of their availability.



## The Cost of Care of Opioid Dependence

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### Abstract

Classic measures of disease burden are well established, although the availability of data to generate these measures is still far from ideal at all levels, local, regional and national. Core measures include incidence, prevalence and mortality. These parameters are generally easy to interpret, uni-dimensional and empirical. COI estimates, include three main components: direct costs, morbidity costs, and mortality costs. Often, direct costs (also called cost of care) are measured from the expenditures for medical procedures and services provided for the treatment and care of a condition; morbidity costs are measured by the lost income due to reduced work capacity, absenteeism and presentism associated with the specific condition; mortality costs are measured as lost production associated with premature death. The measurement of the burden of disease is a topic of continuous development to public health researchers and policy makers. These measures are used to represent the general state of health of populations, to establish public health objectives, to assess the performance of health systems, and to inform decisions about the allocation of health care resources across disease categories or treatments. Furthermore, these measures are used to evaluate the need, potential costs and benefits of healthcare and public health interventions in specific fields. Estimates of the economic and social burden of addiction and its treatment in different contexts will be presented.

## The European Quality Audit of Opioid Treatment (Equator) Analysis: Are Current Treatment Systems Achieving the Desired Outcomes?

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### Abstract

The European Quality Audit of Opioid Treatment (EQUATOR) analysis was a Europe-wide survey that aimed to gain a 'real-world' understanding of the attitudes and experiences of physicians, patients and out-of-treatment opioid users to opioid-dependence treatment. The survey was conducted using telephone or face-to-face interviews of physicians (N=703) and questionnaires self-completed by patients receiving opioid maintenance treatment (OMT) (N=2298) and out-of-treatment opioid users (N=887), between 2009 and 2012. Countries included were Austria, Denmark, France, Germany, Greece, Italy, Norway, Portugal, Sweden and the UK. There were approximately 50 questions on topics relating to treatment access, quality, compliance and outcomes. Whilst most patients sought treatment in order to end their dependence (59%) and improve their health (62%), many patients were not achieving the desired outcomes of OMT. Many patients (41%) reported successfully achieving abstinence from illicit opioids, but a significant proportion (27%) reported ongoing use of heroin. Non-compliance emerged as one factor that may contribute to poor outcomes, with 21% and 24% of patients reporting they had ever misused (i.e., injected or snorted) or diverted (selling, swapping or giving away their medication) their medication. Patients had undergone 1.8 prior OMT episodes (i.e., a total of ~3 including their current episode), suggesting a pattern of repeated relapse and treatment re-entry. Rates of patient employment ranged from 7-59% across countries. Indicators of treatment outcome tended to show marked variation across countries, raising the possibility that differences in treatment delivery systems may contribute to the likelihood of treatment success. Findings from EQUATOR raise concerns about whether current interventions are being optimised to deliver on harm-reduction goals, and to achieve recovery.





## Optimising Outcomes from Opioid Dependence Treatment in Europe: Insights from EQUATOR on how Current Practices Need to Change

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### Abstract

The European Quality Audit of Opioid Treatment (EQUATOR) analysis suggests that current treatment systems are not achieving the desired outcomes of opioid maintenance treatment (OMT). Here we report additional analyses to explore whether inadequacies or inconsistencies in treatment delivery across Europe may be contributing to suboptimal outcomes. Although informed patient choice is considered critical to treatment access and outcomes, EQUATOR revealed marked variations in awareness of different treatment options (e.g., 41% were aware of buprenorphine-naloxone vs. 89% for methadone). Despite this, on entering treatment, 60% of patients requested a specific opioid medication and 84% of requests were granted. More than a third of patients (37%) were not currently receiving psychosocial counselling or support of any kind, despite evidence that such support enhances treatment outcomes. Moreover, high proportions of patients had self-reported a history of anxiety (57%) or depression (58%), reinforcing the likely value of psychosocial support. Many patients found the conditions of treatment provision to be a barrier to entering or staying in treatment. For example, 21% and 20% of patients respectively stated that supervised dosing and having to attend all appointments were conditions of staying in treatment that had the greatest impact on their lives. Differences in outcomes were also observed according to the OMT medication received. Methadone – the most commonly used medication overall – was notably associated with inferior outcomes relative to buprenorphine and buprenorphine-naloxone on measures including the proportion reporting ongoing use of heroin (42% vs. 20% vs. 20%;  $p < 0.001$ ) and the proportion in employment (methadone: 26%, buprenorphine: 36% and buprenorphine-naloxone: 36%;  $p < 0.01$ ). In terms of cross-country comparisons, France was notably associated with the lowest rate of overdose history (2%), the highest rate of patient employment (59%), the second lowest rate of prior treatment episodes (0.56), and the second lowest rate of ongoing heroin use (16%). The physicians providing treatment in France were almost entirely GPs (93%; overall sample: 59%). EQUATOR highlights several areas for potential improvement of current treatment practices, including ensuring that (1) patients are making informed choices, (2) the full range of pharmacological and psychosocial treatment options are being utilized, (3) treatment services are configured to enhance recovery (e.g., employment prospects), not just reduce harm, and (4) the potential for aspects of treatment delivery systems (e.g., supervised dosing) to impact negatively on outcomes is minimized.

## Reducing the Societal Burden of Opioid Dependence in Europe: Potential Benefits of Optimised Treatment Systems

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### Abstract

The European Quality Audit of Opioid Treatment (EQUATOR) analysis indicates that current treatment systems may benefit from optimisation in order to more efficiently achieve the desired outcomes of treatment. Here we explore evidence from EQUATOR concerning the benefits of treatment and, conversely, the societal burden and costs of untreated opioid dependence. Results from EQUATOR demonstrated the need to improve overall treatment outcomes and delivery. However, findings also showed that opioid maintenance treatment (OMT) has clear benefits. Fewer patients reported heroin use relative to pre-treatment levels (27% vs. 92%,  $p < 0.01$ ) and in comparison to out-of-treatment heroin users (29% vs. 67%,  $p < 0.01$ ). Most patients (83%) reported being very or fairly satisfied with their current OMT. Beyond the benefits of treatment, EQUATOR also confirms the significant individual societal burden associated with untreated opioid dependence. Patients who had previously stopped an OMT episode reported that this was associated with negative consequences, for example, relapse to illicit drug use (27%), crime (13%) and homelessness (7%), amongst others. Almost half (45%) of the patient and user sample had been in prison, an average of 3.40 times, predominantly for drug-related offences (average of 3.27 prison episodes). In many cases, treatment for drug dependence was not continued (37%) or stopped completely (27%) in prison. Only 29% and 17% of patients and users were in employment, respectively, representing a significant potential cost in terms of lost productivity and social welfare. Overall, a significant minority of patients and users reported a past history of blood-borne viruses including hepatitis C (50%), hepatitis B (14%), and to a lesser extent, HIV (5%), and a history of non-fatal drug overdose (21%). Out-of-treatment users included in the survey reported continuing to engage in drug use and associated high-risk behaviours such as the sharing of injecting equipment. Many patients and users reported a history of serious mental health problems including anxiety (57% and 53% respectively) and depression (58% and 56% respectively). The costs to society of crime, imprisonment, lost productivity, social welfare, and healthcare costs associated with the treatment of blood-borne viruses and mental health disorders are substantial. Conversely, the international evidence base confirms that investment in OMT (in community and prison settings) can reduce crime, improve physical and mental wellbeing, and reduce the spread of infectious disease. EQUATOR provides an important new dataset to inform future policy decision-making and highlights the importance of investing to optimise OMT delivery systems.



## Reducing the Societal Burden of Opioid Dependence in Europe: Potential Benefits of Optimised Treatment Systems

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### Abstract

The European Quality Audit of Opioid Treatment (EQUATOR) provides unique insights into opioid dependence treatment from a dataset of over 3000 participants (patients in treatment, out-of-treatment opioid users and physicians) across 10 European countries. Importantly, the EQUATOR sample is likely to be representative of the wider population of opioid-dependent individuals in Europe given that the demographics (age and sex distribution) of patients in EQUATOR are comparable with data from the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA). The expert panel will discuss the implications of the findings of EQUATOR for opioid dependence treatment and the priorities for change. Key questions that will be addressed in the discussion will include the following:

1. Are we getting the balance right between treatment control measures and treatment access?
2. What are the strengths and limitations of GP vs. specialist clinic-based services?
3. What impact may European austerity measures have on opioid dependence and approaches to treatment?

## Overview of the EU Drugs Strategy 2013-2020

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### Abstract

The New EU Drugs Strategy 2013-2020, prepared during the Cyprus EU Presidency, agreed upon by all 27 European Union Member States (MS) and validated by the Council of the European Union on December 7, 2012, provides the political framework and priorities to act on a) delivering a measurable reduction in the demand for drugs, drug dependence and drug related health risks and harms, b) contributing to a disruption of the illicit drugs market, c) encouraging greater coordination and – potentially – greater convergence of drug policy across Europe, d) strengthening cooperation between the EU, third countries and international organizations and e) better understanding all aspects of the drugs phenomenon and of the impact of interventions in order to provide evidence- based policies and actions.

With regards to the treatment of the affected individual, the Strategy departs from the past emphasis on the “substance” and focuses on the “person,” calling for the development and delivery of integrated, personalized responses with a view to recovery and rehabilitation in family, social and economic life. Around and for the person in need of treatment, the Strategy evolves in three cutting themes: a) universal, equitable access to care, prioritized through the call for expansion of accessibility and availability of services, so that all those who wish to access treatment can do so on the basis of need, b) patient choice, prioritized through the call for expansion of diversified drug treatment that caters for individualized needs and c) quality of care delivery, to be measured, audited and guaranteed across the treatment continuum, including quality care provision in prisons and to marginalized populations.

In that manner, the Strategy sets the scene for the immense policy effort to be undertaken by Anti-Drugs Organizations across Europe to challenge public preconceptions, establish a “health issue” status for drug dependence and cover the long distance towards recognizing that drug dependents are in need of integrated care that can help them rebuild their lives – all in the light of a looming financial crisis that challenges availability and accessibility of care. Making the right, cost effective choices, within the budget that is available, to further expand, diversify and integrate care to help drug dependents recover will be a tough call for MS and one that should be prioritized, if the Strategy is to be actualized through the coming Action Plans.



## OMT Treatment System Changes in Finland

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### Abstract

In Finland, opioid maintenance treatments (OMT) started on late 1990s with few first patients with methadone. Since that the treatment delivery, supply and regulations and have changed importantly. According latest estimation from 2005, in Finland approximately 15.000-20.000 (0.5 % prevalence) persons are PDUs of which 4.000-5.000 persons are opioid abusers, these numbers have remained relative steady the last 10 years. Currently approximately 2,500 of opiate abusers are in OMT of which approximately 58% in naloxone-buprenorphine combination, 38 % in methadone and 4% in mono-buprenorphine treatments. The first strict decrees of the Ministry for Social Affairs and Healthcare guided the treatment systems and the clinical management in early 2000 and the latest decree from 2008, have an emphasis on shifting evaluations and treatments to primary health care as well as allowing pharmacy distribution for the buprenorphine-naloxone combination. Although the new regulations and the number of patients have risen steadily in Finland, OMT patients are still relatively low at the level of primary health care (21%). The transition transference of maintenance treatments to primary health care and especially the use of pharmacy distribution (7%) have not developed as expected.

A particular concern in Finland has been the abuse of maintenance medications or theirs diversion into the street market, where buprenorphine is the most intravenously abused (approximately 70%) opioid. Finland was the first country in Europe to use for OMT the buprenorphine-naloxone combination medication as part of OMT, which was expected to have lower potential for less diversion into the drug market. We performed a five-year follow-up study among PDUs that revealed that the street price of the combination product is significantly less than the mono-buprenorphine product and that the price difference remained the same during the follow-up period. Thus we concluded that the abuse potential of the combination product is less than that one of the plain buprenorphine. Regardless the Current Care Guidelines, the implementation of OMT varies from one municipality to another in and even from to clinic to clinic. Thus the National Institute of Health and Welfare has launched a development project to widen the knowledge on different treatment modalities and support networking of the personnel working in the field of OMT to exchange experiences of good practices.

## What Can Be Learnt From International Treatment System Experience? Introduction to INSIGHT

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### Abstract

There is considerable variability in the level of access to opioid-dependence treatment and standards of care around the world. The International Survey Informing Greater Insights in Opioid Dependence Treatment (INSIGHT) project was initiated to explore the attitudes, experience and practice with regards to treatment among healthcare professionals, patients and out-of-treatment opioid users in Eastern Europe, Africa and Asia. Standardised questionnaires based on those used in the European Quality Audit of Opioid Treatment (EQUATOR) project were used to collect data on patients and physicians from the following countries: Croatia, the Czech Republic, Indonesia, Israel, Malaysia, Poland, Romania, Slovenia and South Africa. In Croatia and the Czech Republic, out-of-treatment opioid users were also surveyed and in Poland, Romania and Slovenia, nurses caring for patients with opioid dependence were also surveyed. Healthcare professionals were surveyed via telephone, face-to-face or online interviews; patients and users were surveyed via self-completion questionnaires. Topics addressed encompassed treatment practices (e.g., ease of access, therapeutic goals, medications, doses, counselling, regulations and guidelines) and experiences (e.g., satisfaction, barriers to entry and retention), clinical and public-health outcomes (e.g., illicit drug use, treatment retention, misuse and diversion), and demographic characteristics. Surveys have been completed in six of the nine countries to date yielding data from approximately 300 patients, 300 physicians, 50 users and 50 nurses. In this session we will provide information on the profile of opioid-dependent individuals and treatment providers. We will also review the diverse approaches to opioid-dependence treatment in the INSIGHT countries including different policies of reimbursement, treatment availability and treatment settings.



## INSIGHT: Key Findings and Highlights

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### Abstract

The INSIGHT project explored opioid-dependence treatment practices and the attitudes and experience of healthcare professionals, patients and out-of-treatment opioid users in Eastern Europe, Africa and Asia. We examine key indicators of access, quality of care and outcomes across the three regions. Almost half of patients (49% overall, ranging from 28% in Malaysia to 68% in Indonesia) said that better availability of treatment would have encouraged them to start treatment earlier. Across the whole survey, physicians reported that they treated 69% of their patients with opioid maintenance treatment (OMT) and 31% with detoxification; more than 40% of patients in South Africa (48%) and Indonesia (43%) were reported to be treated with detoxification versus 20% or less in Poland (19%) and Malaysia (18%). One third of patients (32%) reported that they continued to take drugs in addition to or instead of their OMT ranging from 14% in Malaysia to 44% in Croatia. Overall, 22% of patients reported that they had ever misused (injected and/or snorted) their OMT medication, ranging from 2% in Malaysia to 58% in Croatia, while diversion (selling or giving away) of OMT medications was reported by 25% of patients, ranging from 8% in Malaysia to 58% in Croatia. The majority of patients in Malaysia (88%), South Africa (66%) and Indonesia (52%) were in either full- or part-time employment versus 26% of patients in Poland. Ensuring access to high-quality treatment is critical to addressing the worldwide problem of opioid dependence. INSIGHT reveals significant variation in treatment access and outcomes across the different country samples and may inform strategies designed to address current unmet needs in this area.

## How Does Opioid-Dependence Treatment in the INSIGHT Project Measure Up Against Evidence-Based Care?

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### Abstract

Attitudes, experiences and practice with regards to opioid-dependence treatment were explored in the INSIGHT project by surveying healthcare professionals who treat patients with opioid dependence, patients in opioid maintenance treatment (OMT) and out-of-treatment opioid users in Eastern Europe, Africa and Asia. Here we examine key findings from INSIGHT with reference to evidence-based practice. Average maintenance doses of methadone (50.1 mg; range 28.8 [South Africa] to 67.5 mg [Croatia]) and buprenorphine (8.5 mg; range 5.2 [Malaysia] to 20.7 mg [Poland]) were below the recommended levels (methadone: 60-120 mg/day; buprenorphine: 12-24 mg/day 1-3). Average time to reach maintenance doses of buprenorphine was 10.3 days (range for country averages: 7.0-12.1 days), suggesting physicians may have applied a 'start low, go slow' approach that is appropriate for methadone but not buprenorphine, for which induction can safely proceed more rapidly<sup>2</sup>. Although psychosocial counselling improves outcomes from medication-assisted treatment approaches, only 37% of patients were receiving such support, ranging from 16% in Croatia to 72% in Indonesia. Maintenance treatment is generally preferred over detoxification because it reduces opioid use, HIV risk behaviours and transmission, mortality and criminal activity and retains patients to a greater extent than detoxification<sup>4</sup>. Yet, physicians reported that they treated 31% of their patients with detoxification varying from 18% in Malaysia to 48% in South Africa. Overall, results from INSIGHT indicate substantial deviation from established best-practice approaches and highlight multiple challenges that need to be addressed in order to improve treatment quality and outcomes for opioid-dependent patients. These include the need to use the most appropriate treatment (maintenance vs. detoxification), optimise induction and maintenance doses, and combine pharmacological with psychosocial interventions.



## Establishing Optimal Treatment Systems to Meet National Needs: International Experience from the INSIGHT Project

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### Abstract

The considerable societal burden of opioid dependence is a challenge most countries share. At the same time, there is substantial variation in how different countries have sought to confront this challenge, reflecting unique aspects of the local environment, including socio-economic and political factors, drug-use epidemiology, and historical policy. Maintenance treatment has been introduced at different times and with different treatment delivery systems across the globe. This provides a valuable opportunity to compare the success of different approaches and understand how treatment systems should be developed to meet the needs of the local environment. In this session we explore the implications of key findings from the INSIGHT study, a survey of healthcare professionals, patients and users in Eastern Europe, Africa and Asia. Key issues that need to be addressed include ensuring individuals who need treatment can access it, ensuring that the available treatment offers are evidence-based and high quality, balancing the need for high-quality care with local resource constraints, and safeguarding the integrity of the treatment system including the need to minimise medication misuse and diversion. This panel session will address key aspects of opioid-dependence treatment in the context of international experience and the unique local factors that shape the evolution of treatment approaches, resources and the local environment.

## Defining Universal Outcome Measures in Opioid Dependence Management: Initial View

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### Abstract

Medical assisted therapy is an important strategy to address the health and social consequences associated with opioid dependence, which is a chronic, relapsing medical condition that requires lifelong management. Failure to provide adequate treatment is generally costly to health services and to the community. Although many countries have an overall strategy on how to approach opioid maintenance treatment (OMT), the true methods used and outcomes of treatment may not be captured. Due to intra-country variations in treatment goals, it is not possible to obtain robust data on OMT outcomes. Generally, the main objectives of treating and rehabilitating persons with opioid dependence are to: Reducing/eliminating use of illicit opioids and addictive behavior; Reducing/eliminating injecting/needle sharing; Reducing the morbidity and mortality caused by the use of illicit opioids, or associated with their use, such as infectious diseases; Improving physical and mental health; Reducing/eliminating criminal behavior; Achieving a mental and physical state compatible with employment; Improving social functioning. The ultimate achievement of a drug-free state is an ideal and long-term objective, but this is unfortunately not feasible for some people with opioid dependence. Focusing only on achieving a drug-free state as quickly for ALL patients may jeopardise the achievement of other important objectives, such as HIV prevention and reducing crime. Reducing the harms associated with opioid dependence is an appropriate short-term goal for most subjects, with broader recovery following when the patient is stabilised and ready. Measuring the effectiveness of OMT varies according to the outcomes against which it is being evaluated. A multi outcome responder scoring system is proposed to achieve robust data on outcomes of OMT that can be used across regions. The highly variable patient population requires flexibility in determining the success of treatment. A single measure cannot define sufficient detail of opioid dependence management outcomes. Therefore, a set of metrics are proposed to capture outcomes across four domains: 1) mortality in treatment, 2) individual, 3) societal and 4) harm-related outcomes.

Thus, qualifying as a responder to treatment in the immediate term 'ie, short-term success' will be determined by achievement of defined goals for a series of outcome measures. Flexibility in achieving success will be possible through a scoring approach used to "qualify" subjects. We propose the following outcomes for discussion in the workshop: Domain; Metric Goal; Mortality; Mortality rate on treatment; Reduction in deaths; Individual; Concordance: retention in treatment at correct dose  $\geq 75\%$  retention over 1 year; Abstinence: avoiding compulsive, regular use of on-top opioid or other agents (e.g., alcohol, cocaine, benzodiazepines); Not using on-top opioids (heroin or other prescription) more than 1-2 times per month; Not using cocaine more than 1-2 times per month; Benzodiazepine use as per local practice guidance

Capacity to control use; Quality of life: improvement in QoL compared to others living with opioid dependence; Step change in Quality of life; Family: having a significant sustained relationship with another person; Demonstration of sustained relationship with another person (i.e., significant other, child parent); Crime: Reduction of criminal activity; Not involved in criminal activities; Health: reduction in viral infection (impacts society also); No risk behaviour(s) for viral infections; Society; Work: having potential to work in a role appropriate to individual's previous level; Engaged in work and/or actively searching for or desire to work to appropriate skill level.





## A Systematic Approach for Measuring Treatment Outcomes in Opioid Addiction

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### Abstract

The main objectives of treating and rehabilitating persons with opioid dependence include: reducing abuse on illicit drugs; reducing the morbidity and mortality caused by the abuse of opioids; reducing infectious diseases; improving physical and psychological health, reducing criminal behaviour; facilitating reintegration into the workforce and improving social functioning (WHO Position Paper, 2004). However, although many countries have an overall strategy or policy on how to manage opioid substitution treatment (OST), the actual methods used and outcomes of treatment may not be adequately captured. In addition, due to country and intra-country variations in treatment goals, it is difficult to obtain robust and comparative data on OST outcomes. Achieving a drug-free state for all patients would be ultimate treatment goal but it could jeopardise the achievement of other important objectives, such as HIV prevention (WHO Position Paper, 2004). Reducing the harms associated with opioid dependence is likely to be a much more realistic goal for most subjects. Measuring the effectiveness of OST varies according to the outcomes against which it is being evaluated. A multi outcome responder scoring system is proposed to achieve robust data on outcomes of OST that can be used across regions.

OST allows subjects to return to more stable, productive lives, reducing drug use and preventing some of the harmful effects associated with drug use. Therefore, qualifying as a responder to treatment 'i.e., a treatment success' will be determined by the achievement of defined goals for a series of four outcome measures. These measures relate to mortality in treatment; individual outcomes such as retention in treatment, abstinence from on-top drug use, quality of life, and family relationships; engagement with society demonstrated by being in work or actively seeking employment and reduction in harm-related outcomes. Flexibility in achieving success will be possible through a scoring approach used to 'qualify' subjects and a systematic approach on treatment outcomes would be beneficial both for patients, treatment management systems and policy makers.

## Experience in Measurement of Outcomes in Opioid Management: How Does It Influence Decision Making?

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### Abstract

In Lithuania, the pathway to a modern service for opioid dependence care began in the 1990s with a journey from abstinence treatment to a modern integrated system. Under the Soviet Union prior to 1990, the 'Narcological' system included forced treatment for non-compliant patients. Post 1990, treatment for opioid dependence in Lithuania has moved forwards and now aims to provide services that are effective and attractive for patients. There have been difficulties in this journey. Politicians have found some treatment options, such as residential drug-free programmes, easier to accept, and hence these types of programmes can be easier to fund. However, other treatment options, such as opioid substitution treatment, have been more politically sensitive, and hence more difficult to fund. Therefore, there was a particular need for those trying to implement opioid dependence treatment programmes to collect local outcomes data to prove their effectiveness in a Lithuanian setting. The WHO collaborative study on substitution therapy for opioid dependence and HIV, which was conducted in seven countries including Lithuania, demonstrated positive outcomes in terms of decreased heroin use, risk behavior and criminality; and improved health and quality of life (Lawrinson et al. 2008). The need for more localized information on the treatment of drug addiction has resulted in the setting up of a National Drug Treatment database in Lithuania. While the National database will provide its first outputs in 2013, the institutional database for outcome evaluation (Addiction Severity Index) instruments is in current use. This database includes assessment of addiction severity and clinical, social and psychiatric status and is completed at treatment initiation and every 12 months. As this database evolves it may gain an important role in documenting treatment outcomes. In an era of where health resources are being stretched, outcomes information at a patient and programme level helps identify and target funding to the most effective treatments.



## Making Provision and Payer Based Choices Based on Outcomes

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### Abstract

Treatment for opioid dependence (OD) is associated with a number of important outcomes including reduction in acquisitive crime, reduction in blood-borne infection risk and the potential for patients to progress to long-term recovery. Harm reduction has been the main focus of treatment for OD in the UK over the past 30 years. This focus has resulted in a number of positive outcomes in terms of crime reduction, control of HIV spread in injecting drug users and an aging heroin-user population with fewer young people using the drug. It is possible, however, that the focus on harm reduction has resulted in an approach that has prioritized long-term maintenance on opioid substitution therapy over achieving long-term recovery. Providing individuals with the best possible opportunity to achieve long-term recovery may require a range of support services to support their medical, psychological and social needs. Since 2010 in the UK there has been an increasing focus on recovery as a treatment goal for OD individuals. In England, drug treatment services are commissioned by 152 local administrative areas funded by public health grants along with local investment. These commissioning bodies then pay for services from providers such as the UK National Health Service (NHS) and Crime Reduction Initiatives (CRI). By modifying the 'success criteria' on which they commission services and by looking at the range of services that they commission, payers can have a major impact on health outcomes. In order to support recovery a range of services such as recovery coaches, asset based community development, health trainers and expert patient programmes may be offered to patients. In addition, other approaches such as switching to more recovery-friendly medication, intensive day programmes, detoxification, residential rehabilitation and sober living accommodation may be appropriate. In conclusion, payers have an important role in improving health outcomes in OD individuals by commissioning both the range of services that provide individuals with appropriate support for recovery, and by basing commissioning on outcomes (including medical, psychological and social) that provide individuals with their 'best chance' of recovery.

## Impact of Alcohol on Society

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### Abstract

While alcohol consumption is one of the major risk factors for mortality, alcohol dependence has been mainly considered as a condition which is disabling but not fatal. However, a meta-analysis on alcohol dependence and mortality reveals that in recent studies this disease condition has been associated with higher mortality risk than previously thought. Its relative impact on mortality is especially marked in younger age groups and in people with comorbidity. We will present the standardized mortality ratio (SMR) for all-cause mortality associated with alcohol dependence by sex and age, as well as cause-specific SMRs. Ways to reduce mortality associated with alcohol dependence are discussed, including but not limited to treatment interventions.

## Treatment System Changes in Australia: Goals, Best Practice and Recovery

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### Abstract

Methadone and buprenorphine are both classified by the World Health Organisation as essential medicines. Methadone is provided in 62 countries while buprenorphine is available in 35. Methadone for treating heroin addiction was introduced into Australia in 1969. Buprenorphine was introduced in 2002 followed by Suboxone tablets in 2006 and the film formulation in September 2011. Suboxone treatment has been modelled on the original methadone treatment model. Oral naltrexone was first used in the treatment of opioid dependence in the USA in the 1970s and registered in Australia in 1999. In addition a small number of medical practitioners began using the Special Access Scheme (which under certain circumstances allows the prescribing of unregistered drugs) to use naltrexone implants. Up until 2003 there was a 10% recurrent growth in treatment after which the number of people in programs plateaued and then grew at a reduced rate. This slow-down is believed to reflect a limitation in treatment supply. While there are significant jurisdictional differences in setting, style and content of services, the Australian model is dominated by General Practice prescribers (63%) and community pharmacy dosing (80%). Prison programs continue to be small compared to the scale of the problem. In 2009 there were 2157 dosing sites, yet there remain significant problems with access to prescribers and dispensing services. Less than 3% of GP's are involved in prescribing while only around one third of community pharmacies participate. In the current program another significant barrier to growth is that patients incur significant costs, the most significant of which is the patient co-payment for medication that affects 80% of patients. Many clients report financial difficulties resulting from this payment and it is a significant reason for premature discharge from the program.



## Addiction to Prescription Opioids Medication in Denmark

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### Abstract

In Denmark the opioid consumption per capita has been very high, in 2010 only exceeded by US and Canada (Pain & Policy Studies Group 2013) [1]. A recent population-based study has shown that 26% of the adult Danish population is suffering from chronic pain (>6 months) and 4.5% of the population is using opioids [2]. The highest consumption of opioids is generated by patients with chronic pain (about 70%) and the mean dose is 53 mg morphine equivalents per day [3]. Oxycodone, transdermal fentanyl and buprenorphine constitute 70% of the total costs in the primary health care sector [3]. At referral to a tertiary pain centre a great proportion of patients are already treated with opioids, often with short-acting opioids [4]. At our pain centre, a cross-sectional study has shown that 14% of the opioid treated chronic pain patients were addicted to opioids according to the ICD-10 criteria [5]. These patients are in a complex situation as they both have pain problems and addiction problems. In Denmark, most pain services will refuse chronic pain patients with addiction problems, and unfortunately most addiction centres also will refuse these patients due to their pain problems and due to the fact that the patients are misusing prescription opioids. The first step in our treatment algorithm at the pain centre is always to stabilise the opioid treatment. This regime seems to reduce pain intensity as well as the intensity and duration of break-through pain [6]. After stabilising the opioids efforts to wean off patients from opioids are always made. We have translated and validated a screening instrument for addiction in chronic pain patients, the Pain Medication Questionnaire [7], and now all patients referred to the pain centre are screened for possible addiction problems. If the screening is positive, then the patient will be subjected to special care in order to manage the addiction problem as well as the pain problem. This includes a very close surveillance of the opioid use and education of the patient about addiction and chronic pain. As our staff members are educated in chronic pain treatment and not in addiction medicine we have introduced supervision by a specialist in addiction medicine as a new initiative to help these patients.

**Keywords:** Opioid; Chronic pain

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## An EU View of Recovery

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### Abstract

The term "recovery" has been used increasingly in recent years indicating a changed perception and concept of drug policy. In Europe this debate started in the United Kingdom (e.g. The Scottish Government 2008) and Ireland, but has not been taken up so much in continental Europe. However, if one looks behind the term, many concepts can be found which are highly relevant throughout Europe and beyond.

The policy behind: "Recovery" stands for a discussion which has started from a critical evaluation of the results of 30 years of drug policy. Especially heroin addiction, which had been at the very core of European drug problems and drug policy for decades, has been in the focus of interest. Policies, interventions and approaches developed for this target group have been quite successful in helping people to survive, to limit secondary harm and diseases, and to stop further the spread of infectious diseases. However, many drug users remained in long term treatment and care without reaching "cure", "health" or "recovery". Ways to overcome this limitation are discussed more and more in a number of European countries. The evidence: Many of the concepts behind the global term "recovery" have been there for quite a long time. A recent EMCDDA Insight publication has discussed social reintegration and employment and reviewed the evidence for interventions targeted for example housing, employability. The overall objective here is to improve the social environments and in this way stabilise positive results reached through drug treatment or to improve living conditions even before such a state is reached. The presentation gives an overview on the evidence available. Opiate substitution treatment, abstinence oriented treatment, therapeutic community type interventions and many other approaches help drug users and addicts to improve their lives and to progress towards "recovery". Studies like the German "Premos" study will be used, to give an up to date overview on the evidence and discuss, what has been reached already and what remains to be done. Finally it is discussed, where this change of paradigm from pure "harm reduction" to "recovery" might be over-optimistic or even cause unwanted negative effects. While more ambitious targets in objectives can really help to make progress, facts and known limitations should not be ignored.



## Treatment System Changes in the UK – Focus on Recovery

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### Abstract

For 30 years the English drug treatment system was based on a philosophy of harm reduction. The arrival of brown powder heroin in the early 1980s saw a dramatic rise in the number of heroin addicts particularly in areas adversely affected by unemployment that followed de-industrialisation. This coincided with the arrival of the AIDS epidemic, adding dramatically to the risks associated with injecting drug use. By the late 1980s, scientific advisers concluded that HIV was a bigger threat to public health than drug misuse and approaches to drugs needed to change. In response, successive UK governments funded the expansion of a treatment system now characterised by widespread provision of needle and syringe programmes (NSPs) and opioid substitution treatment (OST). The aim was to protect the public's health and safety. Harm reduction was successful, reducing crime and drug-related deaths, as well as blood-borne viruses such as HIV and hepatitis. By 2006, some social commentators and opposition politicians challenged this version of success, and methadone treatment in particular. They lobbied government to increase their ambition for treatment, make an explicit commitment to abstinence and increase funding for residential rehabilitation. Government responded to this recovery ambition in the 2008 and 2010 Drug Strategies. The latter makes clear that that the aim of treatment should be to provide people with the support they need to reduce or stop their use, and to build a sustained recovery from dependency. Today's treatment population is increasingly dominated by older clients whose entrenched opiate use presents real challenges. The newly formed Public Health England (PHE) will explore how to accelerate, if possible, the recovery of this group. We will focus on a number of factors that support recovery: jobs, homes and positive social relationships. While the contribution of mutual aid groups such as Alcoholics Anonymous (AA) and Narcotics Anonymous (NA) was previously dismissed or seen as an optional extra, Twelve Step Facilitation (TSF) and assertive linkage to other forms of mutual aid and positive social networks is now seen as just as important to helping more people recover as bio-medical and psychotherapeutic treatments.

## Treatment System Changes in Greece

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### Abstract

In Greece in early 2010, opioid dependence pharmacotherapy treatment coverage ranged at the low 21% and over 5,500 opioid dependents were waiting to get on treatment for (on average) 7.6 years in Athens and 4.4 years in Thessaloniki. The NSP was also underperforming: at 7 syringes per Person Who Injects Drugs (PWID) per year, it ranged far behind the guidelines of 200 syringes. Meanwhile, the incidence of HIV/AIDS amongst PWID, mainly in Athens, was exploding (+1250% in 2011 versus 2010). OKANA, taking the challenge head on and despite the severe budget cut (2012 budget was 50% less than 2009), within just over 12 months, overcame persistent resistance to open up access to pharmacological treatment in 33 additional centers in general hospitals across the country, increasing coverage from 21% to 40%. This halved the waiting "list of shame" to get on treatment in Athens (to 3.6 years) and almost eradicated the list in Thessaloniki, whilst bringing per patient per annum cost down to the low €3,200 versus that of €10,600 in 2009. OKANA also implemented a substantial, 7-fold increase in NSP coverage to reach approximately 45 syringes per person per year, optimizing existing infrastructure and working closely with nongovernmental organizations. Such impressive outcomes at such a restricted budget were made possible through the development of decentralized networks of additional units within general hospitals across the country, thus a) optimizing available resources and b) de-stigmatizing access to OST and c) sensitizing and training medical and paramedical personnel in the field of addictions. This choice respected and safeguarded the right to treatment of patients suffering from opioid dependence and helped control for the spread of HIV amongst PWID, even at a much stricter budget. It appears that in resource strained public health in Greece, one swallow does a summer make.



## Impact of Opioid Dependence on Society

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### Abstract

The presentation is restricted to the use of Medication Assisted Treatment for opioid addiction spanning the past 50 years. Methadone maintenance treatment was the first specific medication approved to treat chronic opioid addiction following the groundbreaking work at Rockefeller University in New York City. Buprenorphine was subsequently approved for the treatment of opioid addiction and the use of Vivitrol/naltrexone is the most current medication to be approved for such use in the U.S. The disease of chronic opioid addiction has been one of the most rigorously studied of any illness in the world. It has certainly been well documented that the cost of untreated chronic opioid addiction is significant, from the earliest studies conducted by Dr. Vincent Dole, Dr. Don DesJoulais, and Dr. Herman Joseph. At the very least, the cost to society of untreated addiction was \$45,000.00 per individual as far back as 1991. The costs have risen since that time due to the relationship between untreated opioid addiction and HIV infection/ AIDS and other blood borne diseases such as Hepatitis. Studies have also repeatedly documented that co-morbidity decrease sharply as an individual gains access to Medication Assisted Treatment for opioid addiction. Such co-morbidities are further contained as the patient is retained in treatment. Another exhaustive area of research is the relationship between decreasing drug related crime and people getting access to treatment. Many studies have demonstrated that crime rates fall as the patient enters and remains in treatment.

We have also learned that the individual social functioning improves as the patient is retained in treatment in terms of returning to work and general health and social functioning. Alternatively stated, people who do not get access to Medication Assisted Treatment for opioid addiction will die prematurely and become increasingly co-morbid with blood borne diseases and psychiatric co-morbidity. From society's perspective, it is of great value financially and ethically to provide people access to care wherever it is needed. The general argument against such treatment access is driven by a perception that addiction to opioids is self-induced. According to this argument, society, through its governmental institutions, has no obligation to provide such care to individuals with a self-induced illness. Additionally, many people do not see addiction as an illness at all, but as some moral failing. The individual simply did not have the ability to resist using such drugs in the first place and after they initiated such drug use, did not have the wherewithal to discontinue. As such, society owes such individuals absolutely nothing. Given the aforementioned costs to society, with increased health care costs through emergency department visits or general hospital care, criminal complaints, and incarceration in correctional facilities, this argument is nullified. The presentation will focus on the benefits of treatment and how the entire society benefits from such care, including the individuals and their immediate families in addition to the communities as a whole.

## Addiction: From Brain Mechanisms to New Treatments

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### Abstract

Over the past decades the role of brain processes addiction has become much better understood, and this offers the hope of more specific targeted treatments with better efficacy and fewer adverse effects. Specific brain circuits that mediate aspects of addiction such as reward, craving and impulsivity have been studied and their neurochemical basis has been partially unraveled. The role of dopamine, opioid and GABA-A receptors in regulating these processes is leading to the development of new approaches to treatment such as dopamine and opioid receptor partial agonists and subtype selective antagonists. Other novel approaches include the development of immunotherapy including vaccination for drugs such as cocaine and nicotine. In shall review these developments and the underpinning neuroscience discoveries from which they have emerged and their implications for policy change.





## Treatment System Changes in Portugal

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### Abstract

Although the first hospital consultation for adolescents and addicts dates back to 1973, it was only in 1977 that the first organized addiction treatment system started to be built, within the services of the Ministry of Justice. After this three NGO's started their intervention, using a residential approach. In 1987, the increasing social impact of drug addiction prompted the government to start an inter-ministerial project with the engagement of the Ministry of Health to provide treatment for drug addicts.

Another important step was taken in 1993, with the first harm reduction program: exchange of needles and syringes. Health Ministry network goes on increasing opioid treatment between 1994 to-2000. The late 1990's brought important changes in the national strategy on drugs, with a strong increase of pragmatic interventions and social sanitary low threshold programs put in place. By the year 2000, the Health Ministry network of the National Institute of Drug IDT, included more than 40 centers, and hundreds of other places under protocols with NGO Therapeutic Communities. By then, the social environment was good enough to support the law of harm reduction and the law of decriminalization of drug consumption. In fact, the drug problem was being faced by a reduction in demand, and high and low threshold interventions, namely towards heroin addicts (the main reason for referral to drug help services). Nevertheless, alcohol misuse was and still is the most important addiction in the society. The increasing offer in treatment and harm reduction programs (with increasing methadone and therapeutic community places) was associated with a significant decline of HIV notifications and lethal heroin overdoses. In the last 10 years, a gradual shift in consumption was noted, with a tendency for decline in heroine consumption and increasing abuse of cocaine, alcohol, bzd, cannabis and synthetic drugs. In 2006 starts in Portugal the legal deal of smart shops. Also in 2006 the regional alcohol centers of Health Ministry were integrated on the network of the IDT. Last six years, the national addiction treatment system faces several challenges such as important asymmetries in the quality of treatments. It occur a decline in the number of trained physicians involved, and important gaps in physician training that result in mistakes such as under-dosage of opioid therapy. Waiting lists for methadone high threshold treatments are coming back and behaviors like open-scene abuse also seem to be slowly coming back. In 2012 important changes occur: the IDT was terminated as such. It's treatments centers are nowadays integrated into the several regional health administrations. Local addict's treatment centers are being reorganized to work more closely with neighborhood health centers and other social facilities.

## Primary Care Treatment Systems: Challenges and Opportunities – Case Studies from France and the United States

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### Abstract

The purpose of this lecture is to impart the historical view of opiate dependency, the treatment options available to treat it in different primary care clinical settings and the knowledge to implement those treatment options. As in the rest of the world, chemical dependency disorders (especially prescription "pain killers") in the United States are so pervasive as to have become a major public health crisis affecting families of all social-economic levels, communities, and governments, both state and local. The annual costs (to healthcare, business and the legal system) associated with dealing with chemical dependency in the United States is estimated to be \$3.3 trillion. The incidence of addictive disorders in the general population in the United States is approximately 1 out of 7.5-8.5 people. Knowledge on how to treat chemical dependency disorders is critical to addressing this healthcare crisis which, currently, is not sufficiently understood by many Physicians and other Healthcare providers. Education on SBIRT (Screening, Brief Intervention and Referral to Treatment) and pain management are the means to impart that knowledge.

## Treatment of ADHD and Comorbid Substance Misuse

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### Abstract

There is much anxiety amongst practitioners about the use of stimulant treatments in ADHD in relation to drug misuse. This comes from the controlled status of the stimulant drugs, their misuse by some elements of society and the use of "illicit" stimulants as a form of self-medication for people with ADHD. My talk will examine the underpinning pharmacology of these drugs both when used as treatments of ADHD and when misused. I will show that specific kinetic and dynamic factors can predict misuse and explore ways in which this can be minimized.



## Optimizing Methadone and Buprenorphine Dosing for Opioid Maintenance Treatment

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### Abstract

Methadone maintenance has been available for treatment of opioid addiction since the 1960s. Methadone prevents the opioid withdrawal syndrome and provides a helpful tool for reducing some components of opioid craving. It reduces the risk of relapse for patients receiving methadone maintenance treatment (MMT). Adequate methadone dose seems to be an essential factor for the efficacy of methadone maintenance in reducing the craving and illicit use of opioids. Proper dosing blocks the euphoric effect of the illicit opioids which is the key factor for the drug seeking behavior and relapse. Despite the common agreement that methadone is an effective treatment for opioid dependence, there has been a wide variation for dosing among clinicians. Some clinicians have been conservative and leaning toward the low-dose regimen. This practice may have a better safety profile for methadone side effects and overdose. Corrected QT (QTc) interval prolongation and Torsade de Pointes (TdP) have been reported in patients treated with methadone for opioid dependence or pain management. A dose dependent effect on QTc prolongation has been shown in some studies. However, patients who are treated with the lower dose range tend to do worse regarding illicit opioids use and retention in treatment. To date, methadone dosing is still an issue of debate and controversy among clinicians who are involved in MMT programs. A literature review will be presented to update the audience about this issue and provide recommendations for proper methadone dosing. At the current time, the consensus is to have a goal for methadone dosages to be in the range of 60 to 100 mg daily. For patients who continue to use illicit opioids while on this dose range, clinicians may consider doses greater than 100 mg daily. However, this is not the current consensus but rather is based on the limited promising data we have at the present time, doses greater than 100 mg daily could be considered if the benefits outweigh the risks for some patients. Baseline and annual QTc interval screening is recommended for patients on a methadone dose higher than 100 mg daily.

Buprenorphine is relatively a new option for opioid maintenance treatment. It became available in the market in 2003 in 2 sublingual forms, buprenorphine only and buprenorphine/naloxone combination. Several studies reported that buprenorphine is an effective medication for treatment of opioid dependence. It has a better safety profile compared to methadone. Unlike methadone buprenorphine does not seem to prolong the QTc interval and seems to be the better option for patients with heart problems. Currently there are no consensus guidelines for optimizing buprenorphine dosing for maintenance treatment. A literature review will be presented to update the audience about optimizing buprenorphine maintenance treatment (BMT). Strong evidence exists based on 21 randomized clinical trials that the higher buprenorphine dose (16-32 mg daily) may improve retention in BMT compared to lower doses.

## An Estimate of the Incremental Costs and Benefits Associated with Retaining Clients in Buprenorphine Treatment for Twelve Weeks

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### Abstract

Problem drug users who stay in treatment for at least 12 weeks have better outcomes up to 12 months post-intake and, in turn, are inferred to cost less to society. Services that retain clients for longer should therefore generate economic benefits that justify their expenditure to lengthen a client's treatment duration. This study estimated the potential benefit (£UK) per retained client and ranked four maintenance dose ranges of buprenorphine in terms of their incremental benefits and costs. Data on 12-week retention, daily dose, treatment length were extracted from 11 RCTs that were included in a recent meta-analysis of buprenorphine's clinical effectiveness at doses <16 mg/day and >16 mg/day (Fareed et al., 2012). All trials were 12 to 18 weeks in length. Treatment retention rates were calculated for four dose groups: 0 to 7.9 mg/day (N=449); 8 to 15.9 mg/day (N=505); 16 to 23.9 mg/day (N=273); and 24 to 32 mg/day (N=55). Benefit-cost ratios were estimated for each dose range from a societal perspective. Only buprenorphine ingredients costs (£UK) for treatment completers were included in the denominator. The monetary value associated with the total number of treatment completers was included as a positive or negative benefit in the denominator. The potential annual monetary value of retaining a client in structured drug treatment for 12 weeks, derived from the Drug Treatment Outcomes Research Study, was estimated at £5,840.80. Incremental benefit-cost ratios (IBCRs) were used to rank the four dose ranges using the Challenger-Defender method. The 16 to 23.9 mg/day group had a higher retention rate (65.20%) than the 0 to 7.9 mg/day group (44.10%), 8 to 15.9 mg/day group (52.48%), and 24 to 31.9 mg/day group (58.18%). To control for the effect of imbalanced sample sizes across dose groups in the calculation of incremental benefit-cost ratios (IBCRs), costs and benefits were updated to indicate those to be expected if 1000 people were treated within each dose range. Net present values in the updated sample ranged from £2.5 million (0 to 7.9mg/day group) to £3.4 million (16 to 23.9 mg/day group). With each retained client valued at £5840.90, 16 to 23.9 mg/day is the optimal dose range based on incremental benefits and costs. Compared to the next most cost-beneficial dose range, 8 to 15.9 mg/day, the 16 to 23.9 mg/day group had £188,124.20 higher costs but saved £743,312.92 more in societal costs by virtue of more clients staying in treatment. This equates to an incremental benefit-cost ratio (IBCR) of approximately 4:1, i.e. each £1 spent to provide a dose of 16 to 23.9 mg/day is expected to save £4 more to society than would be saved by spending £1 to provide a dose of 8 to 15.9 mg/day. This conclusion was unaffected by the results of sensitivity analyses that used 0.5 and 1.5 of £5840.80 as the benefit per retention. Under current assumptions, the societal benefits associated with the retention rate among buprenorphine patients dosed with 16 to 23.9 mg/day appear to justify treatment providers to pay the extra ingredient costs to dose patients within this range when clinically and budgetarily appropriate to do so.



## Pulling Together Findings of European Associations – Old Problems and New Drugs: An Overview of the Contemporary European Drug Scene

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### Abstract

Cannabis is the illicit drug most widely available in Europe, where it is both imported and produced domestically. Cannabis cultivation in Europe is widespread and appears to be increasing. All European countries reporting information to the EMCDDA mentioned domestic cannabis cultivation, though the scale and nature of the phenomenon seem to vary considerably. Data available from various sources point to a predominance of herbal cannabis throughout Europe, it appears to be the most used cannabis product in two-thirds of the reporting countries, while cannabis resin is the product of choice in the remaining third. In most European countries, cannabis use increased during the 1990s and early 2000s. Europe may now be moving into a new phase, as data from general population and school surveys point to an overall stable situation. Cocaine remains the second most commonly used illicit drug in Europe, although prevalence levels and trends differ considerably between countries. High levels of cocaine use are observed only in a small number of mostly western European countries. Here recent surveys suggest that the drug's popularity is now stable or even possibly declining. There is considerable diversity in use patterns – which include both socially integrated and more marginalised groups. Spain, the Netherlands, Portugal and Belgium appear to be the main points of entry to Europe.

**Heroin:** Across a number of indicators, the picture for heroin is largely stable since 2004. However, a number of qualitative changes can be identified, in particular an aging cohort of opioid users and increases in polydrug use. The proportion of injectors among those entering treatment for opioid use is also decreasing. Information about heroin shortages in a number of countries in late 2010 and early 2011, and a recent decline in heroin seizures, point to changes in heroin availability in Europe that might also be associated with shifts in drug use patterns. In a small number of European countries (Bulgaria, Czech Republic, Estonia, Slovakia) fentanyl, a synthetic opioid and its analogues are in use, and buprenorphine is used illicitly in Finland. EWS: One of the main tools to follow drug market innovation is the EU early-warning system, a rapid-response mechanism set up in 1997. An increasing number of new psychoactive substances are reported by EU Member States to the EMCDDA and Europol. Among these are several synthetic cathinones, including mephedrone. With this drug gaining popularity in some countries, notably the United Kingdom, and reports of seizures in several other countries, it was decided to undertake a formal risk assessment of the drug which led to a Europe-wide control. Since 2009, new synthetic cannabinoids continue to be regularly reported. Currently, EMCDDA is preparing a Joint Report with Europol on 4-methylamphetamine (<http://www.emcdda.europa.eu/activities/action-on-new-drugs>) after reports of a number of deaths linked to the use of this currently uncontrolled drug.

## Smart Shops Drugs in Portugal: Policies and Users Damages- an Overview with Clinical and Pedagogical Short Videos

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### Abstract

Human Beings have consumed alcoholic beverages for thousands of years. Amphetamine was first synthesized in 1887, and between the years 1932-1936, 39 different amphetamines were licensed to the pharmaceutical industry. Between 2005 and 2010, 150 new synthetic compositions were identified. In our consumerism society, people are over stimulated to use, abuse, and misuse all kinds of substances, alcohol and synthetic drugs alike. Are we prepared to face it? If for the use of legal substances there are laws, for illegal synthetic substances there are no regulations on how to use them and nobody can seriously support the quality of what is illegal or unknown. Neither the professionals nor the users are sure of what is consumed. In Portugal, as in others countries, synthetic drugs can easily be bought online. Since 2006, all over the country, step by step, several shops have opened the deal of the so-called smart substances, synthetic substances, diversion drugs, which for some users hasn't been smart at all. Some got very sick, and some lost their lives. Like other well known psychoactive substances, the consumption of the so-called smart substances, synthetic substances, diversion drugs, involves risks for the health of the user and also social risks.



## Alcohol and Cocaine Misuse in Spain

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### Abstract

In recreational settings, cocaine use is strongly linked with the consumption of alcohol and other illicit drugs. Data from general population surveys in nine countries have revealed prevalence levels of cocaine use among heavy episodic drinkers. Cocaine is often used in combination with other drugs, especially alcohol, cannabis, other stimulants and heroin. Coca Ethylene Epidemiology: The British Crime Survey (2010/11) reported that adults who drank alcohol regularly were more likely to find it acceptable to take cocaine than adults who drank less often or not at all; in addition, an association between increasing frequency of visits to a nightclub or pub and increasing levels of cocaine use was identified. In Spain in the last year, 15.3% of people haven't consumed anything, the percentage of non-consumption between women is almost twice as big as male consumption. Even, an important poly-consumption and alcohol intensive consumption (binge drinking) exists, for example in the last 30 days: Alcohol is present in 90% of poly-consumption habits. Alcohol consumption, overall if it is intensive (binge drinking or ethylic intoxication), it comes always with other drugs. However is important to know that more than 95% cocaine consumers drink a lot, but on the contrary the alcohol consumers only consume cocaine about 3%, And for this reason one the aims in the treatment is to stop alcohol consumption between cocaine consumer especially among binge drinkers and drunkenness. Fortunately in the last few years this is decreasing. We owe thanks to them that coca ethylene increase of: euphoric, anxiety, risk of sudden death because of increasing the cardiac rhythm between 3 and 5 times more than another kind of drug, which modifies consumer behavior and physic consequences. Researchers supported by NIDA have found that the combination of alcohol and cocaine make the liver create a new substance ethylene of cocaine, which intensifies euphoric effects of cocaine and increase the risk of sudden death. So we think about different treatments. The EMCDDA and the Cochrane Group on Drugs and Alcohol recently published an overview of reviews of the pharmacological treatment of cocaine dependence (Amato et al.). This analyses the acceptability, efficacy and safety of psycho-stimulants, anti-convulsants, anti-psychotics, dopamine agonists and disulfiram to treat cocaine dependence. In Spain to combine cocaine + alcohol is the most important drug poly-consumption between drug consumers. It is a very dangerous combination - including sudden deaths. It's frequent among young people who practise binge drinking. It's necessary a complete and multimode treatment, medical, social and psychological intervention. Although we need a good prevention programme between young people.

## Redesign of Community Prescribing Service within Addiction Services in NHS Lanarkshire (NHSL)

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### Abstract

Non-medical prescribing for nurses and pharmacists has been a service delivery option since 2004. This coincided in NHSL with the new GP contract implementation and cessation of GPs prescribing to patients on opiate substitution.

To maximise service delivery from Addiction Services in NHSL, pharmacist prescribers were offered positions to work with a clinical caseload. NHSL offers several Non-Medical Prescriber (NMP) clinics and employs a full time pharmacist within the redesigned "Community Prescribing Service (CPS)". These developments have allowed the CPS to evolve with a skill mix of prescribers and a different model to many other addiction services. As patient numbers continue to increase, demands on the service have increased, but the CPS development has allowed increased capacity and improved service for patients with no loss of efficiency, clinical effectiveness or increased staffing costs. The use of NMP increases the number of practitioners working within the CPS, producing a greater balance and mix of prescriber types. A "vision" of the prescribing service with the aim of providing clearer guidance on the development of the CPS and its impact on the delivery and care of patients has been produced. Allocation of patients to the most suitable prescriber and beneficial level of care. To ensure service delivery remains consistent and clear, whilst also providing a high standard of care and support for the prescribers, there has been a review and development of protocols and guidelines for use by the CPS. The recruitment of appropriate and experienced prescribing staff to CPS. The medical support level is at the maximum level attainable with the budget restrictions and is supplemented by pharmacist and nurse NMP. Patients can be transferred between addiction team members and prescribers depending on need and level of support required. A benefit of the CPS is that patients receive treatment and support appropriate to the individual. A checklist of key components is being developed to assess each patient against the criteria annually, the key components include sexual health and dental checks, BBV testing etc. and the checklist ensures documentation on the patient's health and well-being. The medics within the CPS have more of a consultancy role with increased time for medical patient review.

The CPS as a whole is delivering a higher level of service with increased levels of co-ordination and clinical governance with improved levels of adherence to guidelines, while the service is providing greater level of support and safety for the patients and prescribers involved. The redesign of the prescribing service (CPS) within addictions services is demonstrating many benefits. The redesign is maximising treatment and prescribing by matching the levels required and providing the most appropriate prescriber to deliver care to the patient. The use of NMP should be encouraged in other areas/services and brings increased diversity, knowledge and multidisciplinary patient care to services.



## The Impact of Comorbidities on Bipolar Disorders - Alcohol, Temperament and Bipolar Disorder

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### Abstract

Psychopathology and course of affective disorders are clearly characterized by comorbidity and temperamental imbalances. In the past, we have examined the impact of temperamental traits on different psychiatric conditions, such as somatoform disorders, suicidality, psychoactive substance use, including alcoholism and opiate addiction. With the brief TEMPS-M a quick and valid assessment of temperament is possible. The dimensions of alcohol dependence were assessed by means of a computerized structured interview, the Lesch Alcoholism Typology. High scores in cyclothymic temperament were associated with a negative course of the disease and highly overlapped with the Lesch IV subtype of alcoholism. In a parallel study 101 consecutive patients with opiate addiction treated at the Oum El Nour Rehabilitation Hospital in Lebanon were examined. The high overlap of the Lesch IV subtype and cyclothymic temperament was confirmed.

## Bipolar Disorders and Alcoholism

Simhandl C

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### Abstract

In clinical psychiatry it is well known that alcohol abuse and alcohol dependence is often associated with other psychiatric disorders especially with affective disorders. Because of current diagnostic criteria (ICD-10 and DSM-IV-TR) it is called comorbidity of bipolar disorder and alcoholism if both full criteria are present at the same time. Genetic studies try to find transmissions because of offsprings of adult alcoholics have higher rates of mood disorders. Lifetime risk of alcoholics to develop a psychiatric disorder is three times higher than in normal population. There are different results regarding the influence of the relevance of age, sex and begin of alcoholism and further course of bipolar disorder. Various other diagnostic criteria combine the affective component and the diagnosis of alcoholism like Akiskal's or Lesch's criteria. Early recognition seems to be important as our sample of 108 hospitalized bipolar patients with alcoholism show higher age at first admissions with a higher number of previous affective episodes. It must be discussed whether alcoholism can compensate for a longer period of time or features like gambling and depression is interpreted as a consequence of alcohol consumption and not as manic symptomatology or depression per se. 9% had a relapse into mania, 75% into depression and 16% into other psychiatric states.

## Medical Treatment Options for Alcohol Use Disorders

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### Abstract

When it comes to alcohol use disorders, we all know about the differences of treating withdrawal, of treating craving and also relapse prevention treatment. In the Vienna hospital we even use a pre-treatment, before the inpatient withdrawal starts.

So we have a lot of experience with pre-treatment, using mainly Naltrexone (1x50 mg) or baclofene (50-150 mg), which will be presented. We use these medications together with the Lesch typology and a drinking diary, filled in by the patient, for a reduction of the amount of drinking (called "cut-down drinking" programme). Many persons cut down to zero, skip the inpatient time and go straight to the relapse prevention programme. During the inpatient time we use caroverine, baclofene, gammahydroxybutyric acid, ondansetron (for early onset only), as well as benzodiazepines. If necessary –or if epileptic fits had occurred before-, we use antiepileptic medication as usual. The automatism of using benzodiazepines is no longer present in our clinic, wherefore we have very short inpatient times (about 14 days). For relapse prevention we use acamprosate, naltrexone, baclofene and -last but not least- antabuse. We took part in the study of nalmefene and presently of SMO.IR. We will report about our clinical observations with these medications.





## Medications in Alcohol Dependence Usefulness of the Lesch Alcoholism Typology

**Lesch O**

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### Abstract

Alcohol dependence as defined in DSM-IV as well as in ICD-10 is viewed as a brain disease with a long term relapsing course. It is often caused by different underlying psychiatric disturbances and/or different personality disorders. In most countries alcoholism treatment is still offering homogeneous programs, that include neither evidence based options nor individualized treatment, though the heterogeneity of this disease is by now undoubted. Many typologies have been developed cross-sectionally and usually divide between 2 or 5 groups. Today it is internationally well accepted that we need for therapeutic approaches 4 different subgroups. Today there is a computerized structured interview to define the most important areas to introduce an evidence based treatment program ([www.LAT-online.at](http://www.LAT-online.at)). The rates of the Lesch Typology are significantly different in different treatment settings (Internal medicine, psychiatry, homeless shelters, gender and so on). We investigated 80 alcohol dependent patients, according to ICD-10 and DSM-IV (44 patients admitted at the psychiatric ward and 36 at an internal ward, we will show that biological markers and the MELD-Score defined different severities and that Lesch Type II patients were overrepresented at the internal ward and Lesch Type III patients at the psychiatric ward. As craving according to types has to be seen significantly different we need also different withdrawal - and relapse prevention treatment programs. The effects of neuroleptics, antidepressants and anticraving substances will be presented and specialized psychotherapeutic approaches will be discussed.

## Addiction– Forensic Aspects

**Platz WE**

### Abstract

In the Federal Republic of Germany under Paragraph 64 of the German Criminal Code offenders in a forensic hospital for withdrawal treatment can be accommodated up to a maximum of two years, when alcohol was cause of the crimes and without therapy further offenses are to be expected. Precondition for accommodation in a forensic withdrawal clinic is also a success prognosis, to be provided before, i.e. that according to the guidelines of the Federal Constitutional Court of March, 16th, 1994 either a recovery can be anticipated or that after therapy completion the affected for a certain period of time remain in a state of abstinence.

In the past decade studies have shown that such a success prognosis can reasonably be established, if diagnostically Type II of the Lesch-Typology can be assumed, since after catamnestic investigations an alcohol abuse pattern of type II with coexisting motivation for a change is supposed to develop the greatest prospect of treatment success and thereby reducing a future risk of criminal offenses under the influence of alcohol.

## Stuck in the Centre City Drug Using Milieus: A Prism –Based Study of Co Morbidity among Homeless Drug Users

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### Abstract

The presentation focuses on the troubled population homeless in the centres of modern cities. These individuals have typically had a long term deviant development from child- and adolescence and their problems have been inadequately met by treatment and education. Often this population also has a high number of immigrants and asylum seekers. Consequently, transcultural issues are involved. It is generally assumed that this population has a high co-morbidity of psychiatric and substance use disorders. However little is known about the actual prevalence of such disorders in this population. Particularly, there is a lack of knowledge on what types of psychiatric disorders that coexist with what types of substance use disorders, and even more so knowledge on what type of disorder that is the primary in occurrence and significance. Such knowledge presupposes an understanding on the time sequence, development and experiences in the treatment organizations. What are the dynamics when people end up in the often destructive centre city milieus – and what can be done? In this study we intend to use the Psychiatric Research Interview for Substance and Mental disorders (PRISM) (Hasin, Trautman and Endicott 1998), a semi structured interview especially developed to investigate patients co-morbid with mental health and substance use problems in a time line perspective. The development of the respondent's mental health and substance use from an early age. The project is an interdisciplinary study that intends to increase knowledge in all the areas of the mental health program from the mental health of the young incorporating transcultural elements. The main focus is on diagnosis and treatment possibilities of adult populations co morbid with mental health and substance use disorders.



## **Stabilized but Still Using: A Study of OMT Patients in the Injection Room (Health Room). Characteristics and Possible Interventions. Should OMT Be Discontinued?**

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### **Abstract**

OMT usually intend to reduce or even stop the use of illegal drugs. Use of injections is in particular targeted as injections are associated with increased risk of overdose mortality and injection related morbidity. Some programs have discontinued OMT in cases of continued drug use and in particular if the use has a destructive pattern. The injections rooms are harm reduction oriented facilities that intend to reduce the health problems and increase injection competency in users not able to or willing to stop the use of injections. How should the OMT programs and the injection room leaders meet users included in OMT who use heroin in the injection room facilities. The presentation describes the patterns in the injection room in Oslo and analyses the types of OMT patients using the room, describes their characteristics and discuss the therapeutic choices.

## **On Demand Services? Results From the “Lasso Project” a Low Threshold on Demand Suboxone Program**

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### **Abstract**

Some addicts are difficult to engage in OMT programs. The might be ambivalent to any change of drug use, sceptical attitudes might hinder contact and different procedural demands might constitute problematic thresholds. Further; sometimes relatively new addicts have scarce contacts on the health and social care services. The might cause a risky time lag before OMT. There is therefore a need for special programs for different types of “hard-to-reach addicts”. Several models have been described either for increased availability such as “methadone- by-bus” or “interim” project that might initiate treatment without formal decisions and especially for patients on waiting lists. These types of program usually use methadone as agonist and this might cause a initial period of increased mortality and necessity of control measures. In Oslo the municipality and the specialist hospital services has created a low threshold program for buprenorphine/naloxone without formal application. The program collaborates with low threshold social services and outreach services. The presentation describes the program and the results after 2 year and find the model promising.

## **Dying In Spite Of Low Threshold Services. Who Died and What Interventions Had Been Tried? A Study of Overdose Mortality Patterns in Oslo**

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### **Abstract**

Norway is found with high overdose mortality in the EMCDDA reports on drug problems in Europe. This is a concern to the national authorities and in particular to the municipal authorities in Oslo that has a heavy load of iv heroin addicts. The city has developed an extensive low threshold social service and also strived to make health services easily available. A well-developed health crisis team is often called in OD cases and the cities have 7 low threshold health services for homeless and poorly integrated addicts. OMT is also available. Still the city has between 50 and 70 OD mortality cases each year. The presentation describes a project where all cases of OD mortality 2006-2009 is analysed with cause of death and contact with social and health services. What characterizes those dying in spite of low threshold services and what could be done to improve the treatment system.



## APSAD - Changes in the Understanding of Opioid Induced Hyperalgesia- Clinical Implications

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### Abstract

The presentation of acute and chronic pain may be complicated by a number of factors including mental health disorders, social issues and substance use disorders. The chronic administration of opioid drugs also has implications for the perception of acute and chronic pain and therapeutic options for individuals. This workshop will address the conceptualisation of pain and the clinical relevance of the above issues as well as aspects of bio/psycho/social assessment of pain. Using guided discussion and interactive case studies, we will explore issues around pain, dependence and optimising treatment for clients. The role of holistic assessment for treatment and management planning is discussed. Developments in our understanding of hyperalgesia are reviewed and examined in terms of treatment planning. Issues around the prevention of chronic pain syndromes, the provision of informed consent for non-pain related opioid treatments and ethical considerations in pain management in those with opioid dependence are explored. The role of non-pharmacological treatments in pain management is considered and their evidence base examined. The specific vulnerability of the pain population for substance use disorders is explored and methods for monitoring and managing these clients are presented. There is discussion of vulnerability of those with substance use disorders to develop chronic pain and strategies for its prevention. Risk factors for medication diversion and strategies to reduce these risks are presented.

## An Ecosystemic Integrated Addiction and Mental Health Treatment Model

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### Abstract

This workshop presents an Ecosystemic Integrated Addiction and Mental Health Treatment Model which uses an ecological approach to study how community, organization, staff, and consumer addiction, mental illness and HIV/AIDS beliefs, attitudes and behaviors influence treatment theory, process and effectiveness. Methods and strategies will be proposed on how to engage organizations and staff in a process of self-examination, learning, and change. Consideration is given to the following important contextual factors: consumer/patient, family, organization, and staff/caregiver illness and disease beliefs, including causation, management, treatment and/or recovery; and philosophies about the role and responsibility of patient, family, program and staff in the treatment/recovery process. This ecological model allows us to observe and analyze systems and subsystems and comprehend the importance of individual, group, and system interrelationships and communications, and bridges core medical, psychiatric, psychological, nursing, social work and recovery principles, practices, beliefs and strategies. This Ecological approach has the potential to remedy present day linear cause and affect thinking that leads to treatment program structures and policies focused entirely on changing client consumer behavior, beliefs and personality, while neglecting the complex social environment of the client. Among the important parts of the ecological systems are the referring agency, families with their values, beliefs, hopes and fears and behaviors, along with racial and ethnic culture and class structures. Last to receive focus and consideration for evaluation and change are the treatment organization and its staff. The application of the Ecosystemic Model sensitizes staff at every level of the continuum of care to use an ecological way of thinking about assessment, planning, treatment, intervention and evaluation. The model also lends itself to conceptualizing the structural, organizational, policy and emotional barriers to delivery of competent and effective treatment practices and services. Workshop is designed to elicit participant's opinions, beliefs, knowledge, and experiences related to addiction, mental illness and HIV/AIDS treatment and recovery approaches, and organization and staff performance. The goal of this discussion is to then develop performance improvement and change strategies that will enable the participants and their organizations to implement "Evidence Based and Best Practices Models of Treatment". The goal is addiction, mental health and HIV/AIDS treatment models which serves the needs of the consumers and their families, results in positive consumer behavioral outcomes and meets regulatory and funding guidelines. Learning Objectives: 1. Understand how a widened ecological perspective, which takes into account contextual factors including systems, subsystems, culture, class, economics, politics, along with patient consumer/ family, organization/staff values and beliefs about mental health and substance use, is helpful in successfully addressing and meeting the complex medical, addiction, mental health and psychosocial needs of this patient population; 2. Learn how to develop and use an ecosystemic format for developing the policies and procedures required for an integrated addiction and mental health treatment program including guidelines for planning, decision-making and evaluation in admission, treatment and aftercare for multi-diagnosed consumers and their families; 3. Learn how to prepare eco-maps, genograms, family assessments and belief questionnaires for use in developing strategies and interventions aimed at producing positive organization, caregiver and patient/family CHANGE.



## Anthropological View of Substance Abuse

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### Abstract

Every culture is familiar with drug use. Different substances that affect consciousness, stimulate or relax, have always been a part of various social practices. In archaic societies, they were an inevitable part of different rituals – initiation, healing, hunting, etc. In modern times, drug use is usually associated with the distinction between legality and illegality, pathology and health. Anthropology, as an interdisciplinary scientific discipline, together with ethnography, as the basic method of research, focuses on the social aspect of drug abuse in a more comprehensive manner. It looks for answers to questions like why certain substances are forbidden whereas others are not, and what significance is ascribed to the consumption of certain substances, on the basis of which ratios of power, etc. Most of all, it changes focus from the substance and the biological consequences of its use to the user and his context. The presentation aims to outline the socio-anthropological view of substance use, which categorizes the use of drugs as predominantly social phenomenon. Also, it emphasizes the meaning of ethnographic research methods, which can complement and provide an important corrective to more quantitatively oriented approaches, such as epidemiological surveys. Key words: anthropology, ethnography, social practices, drugs.

## Stigma and Patients with Dual Disorders/Complex Needs

**Segrec N**

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### Abstract

Patients with mental illness have to face with their disease accompanying psychological and social consequences, a number of health risks, and stigma. Stigma is often accompanying substance use disorder. The prevalence of substance use disorders is higher among patients with other mental disorders than in general population. Few studies were published on the association between stigma and discrimination among people with mental illness and substance use disorders and the data are scarce. It is however known that multiple stigma and discrimination are associated with more negative consequences. We have interviewed 15 patients included in the programme characterised by integrated treatment of psychosis and substance abuse. The international standardized scale to assess stigma and discrimination was used. The results of stigma and discrimination interviews in people with comorbidity have been compared with results of stigma and discrimination interviews in people with schizophrenia only (without co morbidity of substance use disorder). Better understanding of stigma could help to improve treatment programmes for patients with dual disorders and adapt programmes to patients' needs. Evidence based interventions to reduce multiplied stigma could be proposed to reduce barriers to treatment and rehabilitation of this vulnerable population.

## The Stigma of Drug Addicted Persons in Slovenian Internet Media

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### Abstract

Stigma is the extreme disapproval of a person on the grounds of characteristics that distinguish them from other members of a society. Those who are drug addicted are among the most stigmatized. Our study aimed to compare the contents and stigma direction of messages on drug addiction in Slovenian internet media during a period from 2005 to 2010. All internet messages about drug addiction during five years period were collected using search engines Google, Najdi. si, Pubmed and COBISS. The study sample comprised all internet media contents pertaining to the topic of drug addiction (N=270, 100 of them used). More than half of internet messages contained positive statements toward persons who are drug addicted. Anti-stigma messages were mostly found on web pages of newspapers and magazines (22%) and on internet forums (23%). Anti-stigma messages were also found in scientific articles (4%), graduation exams (9,4%) and in manuals for parents and relatives (2,5%), on websites of societies for prevention and treatment of drug addiction (19,1%) and on websites of schools and communities (12%). On some internet forums we found contents with the aim to normalize drug use (6,7%). Regarding previous reports on media coverage of drug addiction the situation in Slovenia improved. Based on our findings, recommendations for journalists and professionals are suggested.



## Gender Differences in Relation to Mental Health in Patients into Methadone Maintenance Treatment

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### Abstract

A high prevalence of co-occurring mental health problems has been found in persons with substance use problems, with depression, anxiety and antisocial personality disorder being the most common co-morbid disorder reported. Various studies examining overall rates of psychiatric co-morbidity found that women substance abusers has more psychological problems than man did [1], whereas others found women no more likely to experience psychological problems than man [2].

Studies that examining anxiety as co-morbid disorder in addiction found that anxiety included posttraumatic stress disorder is more present in women than in man [3], or in contrast, that it is more present in man [4] or it is equivalent [2]. Studies of depression were also inconsistent. Some studies reported women experienced higher rates of depression than man [3]. Only one study found men had higher rates of both depression and anxiety [4] and it is noteworthy that the sample of this study was a specific population, that is, African American cocaine users.

In the studies that examining antisocial personality disorder as co-morbid disorder in addiction was found that men had higher rates than women [5], or not differences were found.

The aim of this research is to determine the gender differences in relation to mental health in opiate addicted patients admitted into mixed gender methadone maintenance program in the Centre for prevention and treatment of drug abuse and addiction in Skopje, Macedonia. Two groups of patients with different gender on methadone treatment, 60 male and 31 female, all with the Syndrome of opiate addiction were included in the study with an intended choice. The trans-gender population was not included in the research.

The examined groups were mutually compared by the markings of the observations included in the Addiction Severity Index, part for mental health.

For statistic analyze of the results we used descriptive statistics methods (percents, arithmetic average and standard deviation, standard error, cross-tabulation) and analytic statistics methods (Mann-Whitney U test, Pearson Chi-square test, Fisher exact test). The levels of probability for achieving the zero hypotheses in accordance with the international standards of the biomedical sciences are 0.05 and 0.01.

In relation to mental health in this study female drug users were more anxious at the time of the interview ( $p=0.03^*$ ), depressed in last 30 days ( $p=0.043^*$ ), and in the life time period they have more than males suicide ideas ( $p=0.03^*$ ) as well as trouble controlling violent behavior ( $p=0.043^*$ ). This results suggest that treatment have to pay enough attention to the bigger prevalence of co-morbid disorders in female patients.

**Keywords:** Gender differences; Methadone maintenance program; Mental health

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## Experience of Motherhood and Needs For Help in Women with Drug Addiction

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### Abstract

Women with substance use disorder often have different needs and problems in different areas (housing, employment, health, mental health, motherhood, family). The most vulnerable group is mother with child. They both need special care and help. In this presentation I would like to present experience of mothers with substance abuse problem. And their experience with pregnancy, childbirth and the role of the mother. What kind of problem, troubles and distress they have in this period and what kind of help they get from different institutions and what kind of help they actually need.

## Association between Adverse Childhood Experiences and the Risk of Substance Abuse in Adolescence

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### Abstract

Adverse childhood experiences (ACE) such as child abuse and neglect, household dysfunction including family violence constitute a great proportion of the risks for poor health in later life. The aim of our study was to collect data and determine the magnitude, scope and extent of the problem of adverse childhood experiences, including different types of child maltreatment and household dysfunction, among secondary school and university students in the Republic of Macedonia and its impact on health-risk behaviors, more precisely on substance abuse. The most common type of household dysfunction was living with a family member who abuses substances. Overall, 13.4% of students lived with someone who misused alcohol or used illicit drugs, and 10.7% lived with someone who was alcoholic, 3.6% of students lived with a family member who used illicit drugs. Alcohol use and smoking were the most common health-risk behavior consequences, 27.6% claimed to be current drinkers, more than a fourth being smokers and 5.3% of students had used illicit drugs. The results demonstrated a relationship between adverse childhood experiences and later manifestation of health-risk behaviors among young people. Emotional abuse increased the likelihood of drug abuse twice, physical abuse increased the likelihood of smoking 1.5 times, sexual abuse increased the likelihood of drink-driving 1.5 times, physical neglect increased the likelihood of driving while drunk, household dysfunction such as substance abuse in the family doubled the likelihood of starting smoking early, and increased the chances of attempting suicide 2.3 times, domestic violence, increased the chances of smoking by two, the chances of an early start to smoking by more than three, and almost quadrupled the likelihood of drug abuse, parental separation or divorce increased the likelihood for drug abuse almost twice. The results confirmed the conclusions of previous studies that childhood experience of abuse is associated with risks for poor health in later life. In general, the more adverse experiences encountered in childhood, the higher the probability that an individual engages in risky lifestyle habits and consequently might suffer from poor health.

## Relationship between Methadone Dose and Plasma Cortisol Levels in Methadone Maintenance Patients

**Spasovska Trajanovska A\*, Ignjatova I, Vujovic V, Chaparovska D and Janicevic D**

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### Abstract

Various endocrine abnormalities have been reported in methadone maintenance patients, which included increase basal plasma levels of ACTH and cortisol. Pathophysiological mechanism postulated does explain these findings included a direct action of heroin or methadone at the hypothalamic or pituitary level.

The AIM of this study was to explore the relationship between methadone dose and plasma cortisol levels and depressive symptoms in the patients of methadone maintenance treatment. We evaluated 60 methadone maintenance patients separate in two groups. Group A consisted of methadone maintenance patients on oral high dose of methadone 80-120 mgr/day and group B consisted of heroin addicts with lower dose of methadone therapy 10-60 mgr/day. The plasma cortisol levels were assessed using the chemiluminescent immunometric assay (CLIA)-high sensitive methods. Depressive symptoms were assessed by using Beck-Depression-Inventory (BDI). The differences between two examination groups were determined by t-test for independent samples and Pearson co-efficient on linear correlation. The results show that patients treated with higher dose of methadone therapy have higher level of cortisol but the results were not statistical significant  $p=0.06$ . But, in our study we got the positive correlation between methadone dose and score of BDI (depressive symptoms)  $r=0.5$ ,  $p=0.000$ . Treatment with antidepressant therapy (sertraline) may be diminished higher plasma cortisol levels and depressive symptoms in patients with higher dose of methadone.



## Psychological Indicators of Treatment Program for Drug-Addicted Adults

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### Abstract

Psychological aspects as self-esteem, self-concept and emotion competencies play an important role in maintaining physical and mental health and low levels of these aspects are in strong relation with high levels of depression, anxiety, personality and eating disorders and/or different forms of addictions. Because psychological well-being is one of the essential protective factors in maintaining abstinence, we try to evaluate a hospital treatment program for drug addicted adults with selected psychological measures. Results are prospective and indicate statistically important increase in different aspects of self-concept and in global level of self-esteem throughout the treatment process. Study of the impact of emotional competencies on the two highly correlated but not the same constructs (self-esteem and self-concept) revealed, that the highest percentage of variance explains the dimension Management and regulation of emotions. We can conclude, that psychotherapeutic treatment of drug addiction improves psychological well-being and coaching an emotional skills could have positive effect on some other psychological aspects.

## Physical and Mental Health and Social Functioning in Older Alcohol-Dependent Inpatients: The Role of Age of Onset

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### Abstract

Alcohol dependence is a severe and often chronic condition with a strong impact on physical and mental health and (social) functioning, in particular for older patients. Due to the heterogeneous and complex nature of alcohol dependence, subtyping alcoholics has been a subject of scientific and clinical studies for decades. In most of the typologies, the age of onset of alcohol dependence is an important criterion to distinguish subgroups of alcohol-dependent patients. Previous literature suggests that early onset alcoholics show more comorbidity, a greater severity of alcohol dependence, and a worse prognosis than late and very late onset alcoholics. The aim of this study was to determine whether older alcohol-dependent inpatients with early, late and very late onset of alcohol dependence differ in physical and mental health and social functioning. In a specialized inpatient detoxification ward for older patients in The Hague, The Netherlands, the Addiction Severity Index was administered to 157 alcohol-dependent patients age 50 and over (38% women, mean age  $62.7 \pm 6.5$ ). Patients were categorized into early (age < 25), late (25-44) or very late (> 45) age of onset of alcohol dependence. Univariate and multivariate analyses were conducted to examine the association between age of onset and chronic somatic symptoms, current use of illegal drugs, depressive and anxiety symptoms, concentration problems, difficulty controlling aggression, suicidal thoughts and suicide attempts, spending free time alone, having friends, debts, and convictions for criminal acts. Results Older alcohol-dependent inpatients had substantial physical, mental and social problems, which were largely independent of the age of onset of alcohol dependence. However, patients with early onset alcohol dependence had more chronic somatic complaints and more suicidal thoughts than patients with late onset alcohol dependence. The very late onset group did not significantly differ from the other two groups in any of the variables under study. Conclusions The body of evidence that suggests that late onset alcoholics generally have better outcomes and less comorbidity than early onset alcoholics could lead clinicians and researchers to underestimate the impact of late and very late onset alcoholism. Our study shows that late and very late onset groups of older alcohol-dependent patients are in many respects similar to the early onset group. Their severe physical and mental health problems and poor social functioning should not be neglected. Further research could focus on treatment response for older early, late, and very late onset alcohol-dependent patients. Outcome measures of interest are not only alcohol-related measures, but also measures of physical and mental health and social functioning.



## Effects of State Alcohol Excise Tax on Incidence of Sexually Transmitted Infections (OS)

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### Abstract

Given that alcohol consumption is a known risk factor for sexually transmitted infections, and given extensive previous research has established the clear effects of alcohol taxes and prices on drinking, we examined the effects of the 1 September 2009 increase in Illinois alcohol excise tax on the rates of two common STIs (chlamydia and gonorrhea), and evaluated possible differential effects by age and ethnicity. An interrupted time series design was used to estimate the effect of the Illinois excise alcohol tax increase. Monthly chlamydia and gonorrhea rates were obtained from state mandatory notifiable disease reporting systems for 80 months prior to and 28 months following the tax increase (January 2003-December 2011). Trends and changes over time in chlamydia and gonorrhea rates due to other factors were controlled using data from 12 comparison states without alcohol tax changes during the period studied. Mixed models assuming Toeplitz(13) co-variance structures estimated effects for three race/ethnicity groups (White, Black, Hispanic) and four age groups (15-19, 20-24, 25-29, >30). The largest effects were found among Blacks, where chlamydia decreased 17% and gonorrhea decreased 23%, and 25-29 year olds, where chlamydia decreased 20% and gonorrhea decreased 31%. These estimates represent net effects of the tax increase, after taking into account variability in STI rates due to other factors in common across states. Among Black 25-29 year olds, we found the largest effect of the tax increase; chlamydia rates decreased 14% and gonorrhea rates decreased 27%. We concluded that Chlamydia and gonorrhea rates decreased after a state alcohol excise tax increase. Effects were most pronounced among Blacks and young adults (25-29 years old), groups where these STIs are especially prevalent.

## Network Qualified Ambulatory Alcoholism Treatment (QAAT) Founded

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### Abstract

Alcohol dependency is one of the most common and severe chronic diseases. Many patients need qualified medical treatment for a long time, like for diabetes, asthma or depression. The evaluation of our own data shows the reduction of required medically assisted detoxifications up to less than 10%. But there are hardly any physicians ready to do this job. The few, who are already trying it, should know each other and share their knowledge and experience. Therefore, we have founded the network QAAT within the German Society for Addiction Medicine (DGS). We hope to be able to have not only a national but also an international exchange of information about each other's experience.

## Does Online Interaction With Peers Restrain Their Addictive Behaviors or Encourage Them? Focusing on the Effects of Internet Groups on Deliberate Self-Harm

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### Abstract

In recent years, the brilliant spread of the internet as a communication tool has changed our lives. Communication through the internet allows for anonymity of its users and defies the boundaries of time and places, making it possible for people to communicate at anytime and anywhere. It has enabled people to interact with others whom they might not otherwise interact with. There are millions of diverse and specialized groups on the internet. It provides a great opportunity for people to belong a group consisting of similar others, especially those who have culturally stigmatized problems. There has been a rapid increase in the number of internet groups on the theme of stigmatized problems such as addictive behaviors. What are the effects of these groups? Does online interaction with peers restrain their addictive behaviors, or encourage them? To clarify such issues, the author focused on internet groups about deliberate self-harm and explored their effects on self-harmers. In previous studies, self-harm has been defined as inflicting direct harm upon one's own body without suicidal intent triggered by emotional pain. The most common reason for their self-harm is a desire to seek relief from a terrible state of mind and the second most common reason is to get understanding and sympathy from significant others. Currently, it has generally been considered as an addictive behavior. In the internet era, a sizeable number of self-harmers communicate with other self-harmers through the internet. In fact, a lot of groups on self-harm exist online. The author analyzed narratives regarding the use of internet self-harm groups which were collected by semi-structured interviews. The number of participants is nine in total and all of them are females. One of them was aged 19 years old and others were in their twenties during the time the interviews were conducted. Based on narrative analysis, the author found that there was no narrative which indicated that internet self-harm groups restrained their self-harm, while most narratives indicated that internet self-harm groups encourage self-harm. The cause of such acts were modeling, competition with other self-harmers, identity as a self-harmer which seem to be promoted by those internet self-harm groups, as well as a sense of belonging in such internet groups. Such phenomenon should be considered as a warning signal that online interaction with peers sometimes has perilously aggravated their addiction behaviors. However, the narratives also showed that internet groups provided irreplaceable and invaluable effects for self-harmers such as self-disclosure and/or emotional support that is difficult for people with addictive behaviors to get in their daily life. The potential effects of online communication with peers can be considered for self-harm as well as for other addictive behaviors such as substance abuse and eating disorders. Future research should explore the possible similarities and differences in internet groups' effects on people with other addictive behaviors.



## Reducing Alcohol-Related Harms among Indigenous People Using a Targeted Intervention Approach

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### Abstract

In countries where alcohol use is culturally acceptable, a greater proportion of Indigenous people abstain from alcohol use compared with the general population; however, among those who do drink, Indigenous people consume alcohol at riskier levels [1-3]. In countries in which alcohol is consumed by only a minority of the population, Indigenous people are more likely to consume alcohol than those in the general population [4]. As a result, Indigenous people worldwide experience a disproportionately high burden of alcohol-related harm compared with the general population. Intervention that is modified specifically for each Indigenous group is necessary to address these harms. Proposed programs must be acceptable to, and feasible for, Indigenous people, and rigorously evaluated to determine cost-effectiveness. This paper demonstrates the process of tailoring and evaluating an alcohol intervention for Indigenous people. In Australia, modified versions of the Community Reinforcement Approach (CRA) and Community Reinforcement and Family Training (CRAFT) were found to be acceptable to Aboriginal clients of an Aboriginal Community Controlled Health Service and a Community-based Drug and Alcohol Treatment Agency [5]. Specific Aboriginal Australian resources were developed, including program manuals and intervention resources, and health service staff were trained and certified in the programs' delivery. The evaluation of CRA and CRAFT was strengthened by using Aboriginal-specific outcome measures. This process, used in Australia to tailor and evaluate appropriate alcohol intervention for Aboriginal Australians, is applicable worldwide and could, when applied, help to reduce the disproportionate burden of alcohol-related harm experienced by problem drinking Indigenous people, their families and communities.

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## 5HTTLPR Polymorphism May Influence SERT Availability in Patient with Alcohol Dependence

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### Abstract

Evidence has suggested that the serotonin transporter (SERT) plays a role in the pathogenesis of alcohol dependence, anxiety and depression and that polymorphisms of the serotonin-transporter-linked promoter region (5-HTTLPR) may influence the SERT. This study evaluated the differences in SERT availability between healthy controls and alcoholic patients and the impact of 5-HTTLPR polymorphisms on SERT availability. Eleven healthy controls and 28 alcoholic patients were recruited. SERT availability was measured in vivo with single photon emission computed tomography and <sup>123</sup>I-labeled 2-((2-((dimethyl-amino)methyl)phenyl)thio)-5-iodophenylamine in the midbrain, thalamus and striatum. Each subject was genotyped for the 5-HTTLPR polymorphism. Compared to healthy controls, there was a significantly lower availability of SERT in the mid-brain among patients with pure alcohol dependence (pure ALC). Of patients with anxiety, depression and alcohol dependence (ANX/DEPALC), the carriers of one LA allele showed a significantly higher availability of SERT in the striatum compared to non-LA carriers. After Bonferroni correction, these significances vanished. There were no significant differences in SERT availability between controls and ANX/DEP ALC. The results suggest that pure alcoholics may have lower SERT availability in the midbrain; the 5HTTLPR polymorphism may influence SERT availability in ANX/DEP ALC. These findings may serve as springboard for future large-scale studies.



## Differential Profiles of Drug-Addicted Patients with and Without Violence Problems

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### Abstract

Concern about the relationship between drug abuse and the development of violent behavior and criminal acts has increased in recent years. Some authors posit that violence is a major cause of morbidity and mortality among drug-addicted patients, especially in patients who are addicted to illegal substances. Several studies have shown evidence regarding high rates of physical violence among addicted patients. These studies have analyzed the violence both from a general perspective and from the specific perspective of gender violence. However, the link between drug abuse, alcohol abuse and violence remains unknown today. The connection between substance use and violent behavior is complex and is suggestive rather than conclusive. The present study examined the prevalence rate of violent behaviors in a sample of drug-addicted patients. The main purposes of this study were to assess the specific characteristics of drug-addicted patients with associated violence problems, to identify the differential profiles of patients who do and do not demonstrate violence problems, and to determine the relationship between violence problems and treatment retention and dropout. A sample of 252 addicted patients (203 male and 49 female) who sought outpatient treatment was assessed. The mean age of the sample was 37.6 years (SD=9.5). The socio-economic level was middle to lower-middle class. The main substances that motivated treatment were cocaine (49.6% of the sample) and alcohol (43.3% of the sample), followed by other substances (e.g., heroin, cannabis, amphetamine, etc.) in smaller numbers (7.1% of the sample). Information on violent behaviors, socio-demographic factors, consumption factors (assessed by the EuropAsi), psychopathological factors (assessed by SCL-90-R) and personality variables (assessed by MCMI-II) was collected. Drug-addicted patients who were associated with violent behaviors were compared on all variables to patients who were not associated with violent behaviors. The rate of drug-addicted patients with violent behaviors in this sample was 39.68% (n=100). There were significant differences between the numbers of patients who did and did not demonstrate violence on some variables. Patients with violence problems were younger than those without violence problems and were more likely to report having been a victim of abuse. Moreover, they were significantly more likely to have experienced an overdose and showed a significantly higher score on several EuropAsi, SCL-90-R and MCMI-II variables. The results of this study indicated that violent behaviors were quite frequent in addicted patients. These problems were closely associated with drug consumption and were mainly directed at family, friends and drug abuse partners or executed to obtain money for buying drugs. These results are consistent with data obtained in the few studies that were carried out to date in this field. Moreover, patients with violence control problems presented with both a more severe addiction and several comorbid problems. According to these results, individuals with violence problems showed a more severe profile of addiction. Because of this, some authors have recommended that violent patients with a substance use disorder must be provided with additional, targeted intervention to promote violence-free outcomes.

## Intimate Partner Violence in Addicted Patients: Prevalence and Differential Profile

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### Abstract

The main goals of this study were, first, to determine the prevalence rate of intimate partner aggressors among users of a drug addiction treatment programme in Navarre (Spain). Second, this study sought to know the specific characteristics of these patients and to establish the differential profile between addicted patients with and without associated intimate partner violence. The sample was composed of 125 addicted patients (95 male and 30 female), who sought treatment at the Proyecto Hombre Addiction Treatment Programme in Pamplona, Spain during the period from May 2010 to August 2011. All participants were assessed at entry to the therapeutic programme in order to collect information about the presence of intimate partner violence, as well as about socio-demographic variables, addiction related variables, psychopathological symptoms and personality disorders. All participants were evaluated using the Spanish versions of the following tools: a) EuropASI, the European version of the Addiction Severity Index (ASI); b) Conflict Tactics Scale (CTS-2); c) Inventory of Distorted Thoughts about Women and Violence; d) Symptom Checklist-90-Revised (SCL-90-R); e) State-Trait Anger Expression Inventory (STAXI-2); f) Impulsivity Scale (BIS-10); g) Interpersonal Response Index (IRI); and h) Inadaptation Scale. The prevalence rate of gender violence in the addicted patients of the sample was 33.6%. Addicted patients with associated violence problems showed severe violence behaviours against their partners: psychological violence (insults, threats, broken objects, etc.) was observed in 94.9% of addicts with gender violence; physical violence (use of weapons, hitting, kicking, etc.) was observed in 84.6% of addicts with gender violence; and sexual aggression in 43.6% of them. Moreover, 71.8% of the addicts with gender violence have caused injuries to the partner as a consequence of their violence, being severe injuries in 42.1% of cases. A comparison of addicted patients with and without associated intimate partner violence problems showed statistically significant differences in several variables. Violent addicted patients showed higher severity than nonviolent patients in psychopathological (depression, anxiety, hostility) and personality (state-anger, motor impulsivity) variables. The results of this study showed a high prevalence rate of intimate partner violence among users of a drug addiction treatment programme. These findings indicate the need to assess the presence of intimate partner violence problems in addicted patients. Likewise, these findings suggest the need for additional studies about the effectiveness of treatment programmes for drug addicted patients who present this kind of violent behaviours.





## Working towards Recovery: A Snapshot of Opioid-Dependent Patient Motivation and Outcomes in the UK Compared with Europe at a Time of Policy Evolution

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### Abstract

Drug policy in the UK has previously focused heavily on harm reduction, but in recent years there has been a shift towards a goal of recovery, as set out in the UK government's Drug Strategy (2010). Four phases of recovery have recently been proposed by a UK report: engagement and stabilisation, preparation for change, active change and completion. A European survey, the European Quality Audit of Opioid Treatment (EQUATOR), was conducted in 2010 with the aim of providing a snapshot of experiences of physicians, patients and out-of-treatment users. This presentation will look at data from the UK – a country in the process of evolving its treatment policy and with ongoing changes in commissioning programmes – placed in the context of the EQUATOR results, in order to assess the success of current approaches. Physicians (N=703), patients (N=2298) and out-of-treatment opioid users (N=887) from 10 European countries participated in the survey. Within the UK, 100 physicians, 248 patients and 196 out-of-treatment users took part. Here we analyse topics of relevance to the UK Drug Strategy for the UK compared with other European countries. UK (vs. the European EQUATOR average) patients were motivated to end their dependence (60% vs. 59%), improve their health (68% vs. 62%) and gain employment (40% vs. 28%). However, more UK patients reported poor health, with a history of anxiety (73% vs. 57%) or depression (76% vs. 58%). While similar proportions received psychosocial support (60% vs. 56%), UK patients were less likely to comply with their medication (reported diversion: 30% vs. 24%). UK and European patients were satisfied with the success of treatment (80% vs. 83% reported being 'very' or 'fairly' satisfied); however, more UK patients were using heroin (45% vs. 29%) and crack (38% vs. 7%), and fewer were employed (6% vs. 29%). UK patients reported more failed/stopped previous opioid maintenance treatment (OMT) episodes (4.0 vs. 1.8) and more often cited relapse (70% vs. 27%), crime (42% vs. 13%), homelessness (28% vs. 8%) and social isolation (39% vs. 12%) as consequences of stopping OMT. The results provide new insight into the variability of the UK treatment system vs. Europe with regard to clinical and public health outcomes, providing a new body of evidence to guide effective decision-making. Patient motivation is high and OMT has many associated benefits, but there are several areas where the UK can identify policy priorities relative to the rest of Europe in order to help patients meet the four phases of recovery. Optimizing treatment strategies and re-targeting them towards the goal of recovery may help more patients to progress further in their recovery journey.

## Adolescent Illegal Drug Use in a Rural Settlement in Ikorodu, Nigeria: Impact of Social Factors and Implication for Future

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### Abstract

Adolescent substance abuse continues to be a significant societal problem. Regular use of substances during the teenage years increases the likelihood of developing a substance use disorder (SUD) [1]. Earlier studies among adolescents were on prevalence and mainly in urban secondary schools [2-4], however, there was paucity of information on effect of social factors drug use among these adolescents, most especially in rural settlement. This study aimed to determine the prevalence and social predictors of drug use among adolescents in Agbede community, a rural settlement in Lagos Nigeria. A stratified multi-stage random sampling of Senior Secondary School students in Agbede Community of Ikorodu Local Government area. One-on-one interview with 300 pupils were concluded using World Health Organization Student Drug Use Questionnaire to assess lifetime history, past year and 30 days use of Alcohol, tobacco, cannabis, stimulant and tranquilizer, personal factors as well as parental factors determining drug use was also assessed. Alcohol was the most commonly used drug with 18.3% ever users, 12.7% past year users, and 10% 30 days users. Next most common were tobacco 18%, cannabis 3-7%, stimulant 11.3% and tranquilizer 89.0%. Males were more likely than females to be users of every drug group investigated, Christians were more likely to use alcohol than other faith. Predictors of drug use among this group of adolescent include male gender, Yoruba ethnic group, low level of education in mother, public school student, polygamous family type, first born adolescent, unemployed mother and father use of alcohol. In conclusion, alcohol is the most commonly used drug in this group of adolescent and predictor of use include male gender, type of school attended and parental use of drug among others and many require attention by school authorities as well as public health authority.

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## Addictions and Crime: Results in a Spanish Sample

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### Abstract

This study explored the prevalence of criminal behaviours in patients who are addicted to drugs. A sample of 252 addicted patients (203 male and 49 female) who sought outpatient treatment was assessed. Information on criminal behaviours, socio-demographic factors, consumption factors (assessed by the EuropAsi), psychopathological factors (assessed by SCL-90-R) and personality variables (assessed by MCMI-II) was collected. Drug-addicted patients who were associated with criminal behaviours were compared on all variables to patients who were not associated with violent behaviours. The rate of drug-addicted patients with criminal behaviours in this sample was 60.3% (n=150), and it was mainly related to traffic of vehicles, followed by drug dealing crimes. There were significant differences between the numbers of patients who did and did not demonstrate criminal behaviours on some variables. Patients with criminal problems were mainly men and single. Moreover, they were more likely to report poly-consumption and they showed statistically significant differences in some scores on several EuropAsi, SCL-90-R and MCMI-II variables. According to these results, patients with criminal problems present with a more severe addiction problem. The implications of these results for further research and clinical practice are discussed.

## Addiction Interpreter? Preliminary Findings from a New Zealand Study Using Ibogaine

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### Abstract

Ibogaine is a naturally occurring psychedelic plant derivative, originally used as a medicine and in indigenous ceremonies in West Africa. For over 50 years it has also been used on an unofficial basis as an aid to withdrawal from opioids and stimulants. Since 2010, in New Zealand, ibogaine (and its metabolite noribogaine) have been gazetted as non-approved prescription medicines. This talk introduces the basis and background of ibogaine in the treatment of opioid dependence and outlines preliminary findings from an observational study of the use of this treatment in New Zealand. The primary objective of the study was to determine the effectiveness of ibogaine-assisted therapy in elimination or reduction of drug usage, craving and withdrawal, and in improving other aspects of life as measured by the Addiction Severity Index Lite (ASI-Lite) composite scores over a period of 12 months following the therapy. Secondary objectives were to assess the severity of withdrawal symptoms following ibogaine treatment as measured by the Subjective Opioid Withdrawal Scale (SOWS), whether ibogaine treatment reduces the presence of such symptoms, to determine the effectiveness of ibogaine-assisted therapy in producing relief from self-reported depression using the Beck Depression Inventory-II (BDI-II), to investigate the relationship between ASI composite scores after ibogaine treatment and the subjective effects of the treatment and alteration of consciousness as measured by the States of Consciousness Questionnaire (SCQ), to assess the participant's status and well-being using the investigator ratings, to determine whether the effects of the therapy have met the participants' expectations set before the treatment and to verify drug use or abstinence using data obtained from urine drug screening. Ibogaine has complex pharmacodynamic actions on various neurotransmitters including the endogenous opioid, glutamate, serotonergic and cholinergic systems. Despite thousands of treatments globally as an addiction interrupter there have been no systemic evaluations of its efficacy or safety. In spite of reported efficacy of ibogaine its use has remained outside of conventional treatments and in some countries has been classified as a dangerous and abusable substance with no therapeutic value. Animal studies have indicated neurotoxicity in high dose and possible cardiac toxicity including a risk of prolonged QT interval. Despite these concerns this study suggests that ibogaine has a place in addiction medicine in the treatment of opioid dependence but further evaluation is required.



## Inner and Outer Voice Therapy

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### Abstract

Inner and outer voice coaching and addictive behaviours Self-responsibility is often focused on when clients come to therapy about various problems with addiction. This may help the client 'own the problem' without desiring to own the solution. Rather than positioning the client as the problem, it may profit the therapeutic diad to focus on the relationship that the client has with the object of their desire, be it alcohol or other drugs, a gambling machine or even fast foods. Positioning this relationship as the problem may help the client to gain power over the problem. Cognitive behavioural therapy puts the therapist in the role of an inner voice coach, who helps the client modify the addictive self-talk that is related to the targeted problematic behavior. Narrative therapy on the other hand can help the client gain an outer voice that speaks out against the problem of addiction. Within the NT approach the person is never the problem but the problem is the problem (the relationship with the addictive substance or behavior). This speaking out increases personal agency and complements the need for self-responsibility with acknowledging that the individual's responsibility occurs within variables beyond their control. This may include the way that addictive substances/behaviours are marketed or linked towards specific cultures. As a young person growing up in the twenty first century they have no way of controlling what is presented on the internet and other media and therefore desperation gambling and the marketization and glamorization of alcohol can have a big influence on becoming dependent on a substance or behavior. 'Inner' as well as 'outer' voice coaching can improve the sense of personal power, and help the individual reclaim their life from the problem.

## Substance Misuse, Criminality and Psychiatric Disorders As Risk For Suicide and Alcohol and Substance Related Causes of Deaths: A Longitudinal Swedish Study

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### Abstract

Substance use and criminality seem to be strongly associated with elevated mortality. This especially evident for suicide and alcohol and drug related causes of deaths. The aim was to analyse the importance of early drug misuse, other behavioural risk factors including victims of violence and other offences and the hazard of suicide mortality and alcohol and drug related causes as well as other causes of deaths. This Swedish longitudinal national wide cohort study comprises all young men conscripted for military service in 1969/70. We followed 49 398 18-20 year old young men for 35 years according to causes of deaths. Possible confounders were collected at the time of conscription through interviews and two questionnaires. The cohort has been matched with official registers measuring mortality and criminality from 1970 and onwards. Estimates of mortality risk was calculated as hazard ratio (HR) with 95% confidence intervals (CI) using Cox proportional regression analyses with adjustment for potential confounding by family, psychological and behavioural factors including alcohol and substance use and psychiatric disorders. Repeat violent offenses were associated with an eleven fold higher hazard of dying from a substance-related cause and nearly fourfold higher hazard of dying from suicide. Participants with experience of violence and inpatient care for substance misuse or psychiatric disorder had about a two to threefold higher risk of dying compared to participants with no substance use or psychiatric disorder. Violent offending and being victimized are associated with excess mortality and a risk of dying from an alcohol or drug-related cause or suicide. Consequently, prevention of violent behavior might have an effect on overall mortality and suicide rates. Prevention of alcohol and drug use is also warranted.



## Malmö Treatment Referral and Intervention Study (MATRIS): Effective Referral from Syringe Exchange to Treatment for Heroin Dependence

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### Abstract

Syringe exchange has been suggested in a few US trials as a potential conduit to treatment for drug addiction, but this never has been documented in Europe. The results from the US trials have been varying. In one trial 70% of heroin addicted patients were transferred to maintenance treatment with levomethadyl acetate hydrochloride (LAAM). In other studies the percentage of patients who entered maintenance treatment with methadone after active referral were no higher than 40% even with motivational and financial incentive and as low as 16% for referral only. Despite considerable documentation of methadone and buprenorphine maintenance treatment in heroin addiction, this treatment has been limited in the Swedish setting, traditionally with low availability and high-threshold policies. The present study aims to assess effectiveness of a syringe exchange programme for referral of heroin addicts to evidence-based treatment, and to assess, in an RCT design, the contribution of a case management intervention. Consecutive heroin addicts attending the syringe exchange of Malmö, Sweden, who are willing to participate, are referred to maintenance treatment (methadone or buprenorphine, medication chosen based on clinical assessment and outside the study design), and randomized to either a strength-based case management intervention in order to facilitate referral, or to referral-only. If eligible for treatment, patients are initiated on the maintenance treatment after 11 days. Study outcome is successful transfer from syringe exchange to treatment initiation. The study will be finalized by the 1st of April. So far after applying exclusion criteria, 77 consecutive heroin users at the syringe exchange programme were addressed and offered to participate in the study. 72 out of 77 patients were willing to join the study. 68 patients turned up for baseline interview and randomization and of those 67 that is 99% of included subjects (33 who were randomized to the case management intervention compared to 34 of the controls) showed up for medical assessment. Out of the total of 67 that showed up for medical assessment 63 (93%) successfully started treatment. Our data indicate that syringe exchange in a Swedish setting can be efficient for transferring heroin-dependent patients to evidence-based treatment. Strength-based case management intervention did not predict referral to treatment initiation. To our knowledge this may be the highest rates of referral published so far of out of treatment heroin users from a harm reduction setting to evidence-based treatment.

## Interim Buprenorphine Treatment in Heroin Addiction – A Pilot Effectiveness Study

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### Abstract

Interim buprenorphine treatment in heroin addiction – a pilot effectiveness study Background Interim methadone treatment has been tested in some US trials as a method for facilitated referral and initiation of substitution treatment in heroin addiction (Schwartz et al., 2006; 2009). However, despite the favourable safety profile of buprenorphine compared to methadone, interim treatment with buprenorphine rarely has been tested and reported in scientific literature (Krook et al., 2002). The present pilot effectiveness study aims to assess the feasibility of an interim buprenorphine treatment for initiation of heroin addicts in full-scale substitution treatment, and to study baseline predictors of successful transfer to full-scale treatment. Methods Interim treatment was introduced in a previously high-threshold setting with waiting lists to substitution treatment, in Lund, Sweden. Consecutive heroin addicts were offered to enter interim treatment. Patients were excluded in the case of unstable mental condition, pregnancy, primary methadone addiction or if considered by the responsible physician to require methadone for substitution treatment. The interim program was a medication-only condition with supervised doses of buprenorphine-naloxone (maximal daily dose 24 mg) and tripled dosing on Fridays. Transfer to full-scale substitution treatment (full treatment including psychosocial interventions, flexible substance and dosing regime, and possibility of take-home doses) was offered consecutively when available and required drug-free urines in the interim condition. Forty-four heroin addicts (five females, 39 males) entered interim buprenorphine treatment. Among them, 57 percent (n = 25) were successfully transferred to full-scale treatment after an average of 44 days. Remaining clients could not be transferred, generally because they did not manage to become drug-free. Successful transfer to full-scale treatment was associated with a lower baseline AUDIT score (4.4 vs 12.6, p).



## Alcohol Use in Patient of Somatic Emergency Hospital

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### Abstract

Alcohol abuse is the cause of many somatic diseases, more severe illness manifestation, and the premature patient deaths. The aim of this study was to determine the prevalence and severity of alcohol abuse and dependence among patients with a c somatic diseases hospitalized in emergency multidisciplinary hospital.

## Testing Theoretical Models of Problem Drinking and Substance Abuse in Female Rape Victims: Findings from an Urban Community Study

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### Abstract

This presentation will provide an overview of findings from a large community study of sexual assault survivors (N=1863, 85% response rate) in a large metropolitan area (Chicago, IL, USA). Results of theoretical models predicting women's problem drinking and drug use will be presented using structural equation modeling (SEM). Additional results will examine mediators of negative social reactions to assault disclosure from social network members and how they lead to women's problem drinking. The role of trauma histories, drinking to cope with distress, and PTSD will be examined in understanding women's substance abuse outcomes. Results of SEM models showed that PTSD symptoms fully mediated the association between contextual trauma and the use of substances to cope. However, the association between both interpersonal trauma and child sexual abuse severity on substance use to cope were only partially mediated by PTSD symptoms. In turn, use of substances to cope fully mediated the relationship between PTSD and problem drug use as well as partially mediated the effect of PTSD on problem drinking. These results suggest that different trauma types and substance use coping may be important risk factors distinguishing sexually assaulted women who develop PTSD and problematic substance use from those who do not. The results suggest that identifying women's histories of different traumas may help to identify those at greater risk for substance use problems. We also conducted discriminant function analyses to examine whether reactions specific to alcohol use during the assault predicted greater symptomology than reactions to the sexual assault in general, as measured by the Social Reactions Questionnaire (SRQ, Ullman, 2000). Women receiving negative alcohol-related social reactions upon disclosing assault reported greater self-blame and drinking problems. Finally in order to explore the role of social reactions in drinking, we disaggregated controlling reactions from infantilizing reactions showed that infantilizing reactions in particular related to less perceived control, which in turn was related to more PTSD and problem drinking, whereas controlling reactions were not related to perceived control, PTSD, or problem drinking. Tangible aid was related to increased perceived control over recovery, yet it was not protective against PTSD or problem drinking. Finally, PTSD and drinking to cope fully mediated the effect of perceived control on problem drinking. Implications will be drawn for treatment and intervention with rape victims to incorporate assessment of social reactions from support providers told about the assault and address such reactions in treatment, including their effects on victims' coping, PTSD, and substance abuse outcomes.

## Neurocognitive Differences between Male and Female Pathological Gamblers

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### Abstract

PG is classified in the Diagnostic and Statistical Manual of Mental Disorders - DSM-IV-TR and in the ICD-10 as a disorder of impulse control. However, this association between impulsivity and pathological gambling remains a continuous issue within the literature: Some researchers find high levels of impulsivity in pathological gamblers while others report findings suggesting that there is no difference in impulsivity of PGs versus controls, and others even suggest that impulsivity in PGs is lower than in controls. Gambling behavior is different between male and female populations. Male population prefers sports bets, card play and internet gambling but female population prefers scratch tickets, machines and bingo parlors. In order to measure the impulsivity, obsessive compulsive behavior and addictive behavior we performed the Stroop, the Continuous Performance Test, the Multiple Matched Figure test, The Iowa Gambling tests to female (n=37) and male pathological gamblers (n=54) with age and sex matched normal controls (n=65). We found differences between male and female gamblers rather than normal controls. Male population demonstrated more impulsive and addictive gambling behavior and female population demonstrated less impulsivity in gambling behavior and obsessive compulsive traits.





## Prevalence of Cognitive Impairments and Emotional Recognition Bias in Substance Abuse or Dependence Currently in Remission

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### Abstract

Ample evidence indicates an association between substance abuse, cognitive deficits and biases in emotion recognition. The objective was to identify the factors associated with impairments in cognition or emotion recognition following substance abuse or dependence. The study included male patients with a past history of drug or alcohol abuse or dependence, currently abstinent and in a rehabilitation center. The subjects completed a one-hour computer-based test battery ("IntegNeuro", BrainResource™), assessing several cognitive domains, as well as the ability to properly identify facial expressions. The results were compared with healthy volunteers, matched for age, gender and education, supplied by BrainResource™.

107 subjects were included in the study (mean age 27 years, SD=8.02, range 18-52 years). Average duration of past use was  $11.2 \pm 8.1$  years, with  $4.8 \pm 3.9$  months of abstinence. The most prominent drugs used were heroin (46.7%), cannabinoids and alcohol (37.4%), amphetamines and cocaine (15.9%). The rate of psychiatric co-morbidity was 51.4%, the most common Attention Deficit/Hyperactivity Disorder (21.5%). A significant (*p*). Substance abuse is associated with major intricate short-term cognitive morbidity, including a differential bias in emotion recognition.

## Masturbation Addiction

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### Abstract

Is it possible to become addicted to masturbation? By analyzing relevant research on behavioral, non-substance addictions as well as substance addictions this article aims to answer that question by focusing on two main theoretical viewpoints: behavioral and biological. In both cases, the literature tends to view masturbation as a behavior with significantly negative consequences both biologically and psychologically. However, there is debate over whether or not any behavior can truly be classified as an addiction. This presentation aims to identify the relationship between potentially problematic behavior and whether or not these fall into the category of true addictions.

## Racism, Rurality and Reluctance: Implementing Community Reinforcement and Family Training in Rural Australia

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### Abstract

Australians experience a disproportionately high burden of alcohol-related harm, relative to the general Australian population. Aboriginal and Torres Strait islander people are over represented in Australia's institutions of surveillance and control – jails and child protection agencies chief among them. The damage perpetrated by policies resulting in the Stolen Generation - the forced removal of children from Aboriginal and Torres Strait Islander Families for over one hundred years between 1869 and the 1970's - and other overt and covert acts of racism is demonstrated in a swathe of statistics such as decreased life expectancy, low income levels and low educational attainment for Aboriginal people. Ways to implement and evaluate alcohol interventions has been identified as a priority for reducing alcohol related harms because Aboriginal people do not want to use non-Indigenous services. In rural areas where the majority of Aboriginal people live, populations are small and support services limited. There was no existing evidence for a community approach to problematic alcohol use that had worked for Aboriginal participants and no one in Australia was providing family inclusive interventions even though the importance of family and kinship responsibilities in Aboriginal culture was well known. A recent systematic review of family-based alcohol interventions identified Community Reinforcement and Family Training (CRAFT) as having great potential to be tailored for Aboriginal Australians (Calabria et al 2012). A decision was made to implement CRAFT via the internationally recognised training and accreditation process within a rural drug and alcohol outreach team. Funding was received to evaluate the process and outcomes of a clinical trial of CRAFT in the rural Australian context. This paper describes that context, the method used to recruit participants into the trial and the way CRAFT is currently being implemented in a challenging practice environment. Critical to the approach was supporting drug and alcohol counsellors to become accredited CRAFT therapists. Interviews were conducted with counsellors undergoing accreditation to describe their experiences of being accredited via training, on-line supervision and assessment of recorded counselling sessions. Challenges to implementing an American approach in Indigenous Australian communities were investigated. Key themes identified included language and terminology differences and expectations of client participation in counselling. The way a talking therapy involving role-plays and homework was delivered in a rural outreach context to Aboriginal people reluctant to participate in a westernised approach was a key concern to counsellors.



## Examining Pain in Opioid Dependence

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### Abstract

Over the past several decades, the medical use of opioid analgesics to treat pain has increased in the United States [1]. From 1997 to 2002, the prescription rate for the four most common opioid pain treatments rose dramatically: use of oxycodone during this period increased by 403% [2]. This rise has continued over the past decade; the International Narcotic Control Board's (INCB) 2010 data demonstrate this dramatic rise in opioid analgesic consumption over three decades time. The United States has, by far, the greatest rate of consumption of narcotics, nearly five times the average of European countries (INCB, 2010) [3]. Correspondingly, the rates of prescription pain reliever abuse increased fivefold over a decade's time (SAMHSA, 2010) [4]. These medications are readily obtainable in Florida; the NY Times affirms that it has "long been the nation's center of the illegal sale of prescription drugs" (NY Times, August 31, 2011). In many, use is initiated following an illness or injury. Physicians in the US routinely prescribe opioids for a variety of physical health problems ranging from musculoskeletal injuries to fractures to headaches [5]. As access to this category of medications has increased exponentially, more clients addicted to prescription pain medication have appeared in 'medication-assisted' treatment programs (MATs) for the treatment of their opioid dependence. This oral session will report on the findings from a multi-year, multimethod analysis of data focused on those in treatment for their opioid dependence in Florida. Quantitative and qualitative findings were analyzed on data obtained through statewide administrative data files, a retrospective chart review, and a self-reported satisfaction survey of individuals currently in care, including individual interviews conducted at treatment sites throughout Florida, run by separate agencies, and serving geographically distinct populations. Findings from this evaluation demonstrate the changing nature of the population being served in opioid treatment programs. Administrative data analysis reveals that persons coming to care in recent years are largely addicted to prescription opioids, are younger, raising children, and have limited employment experience. Different paths to care are also emerging. Individual interviews revealed that some develop their addiction following their injury with no evidence of a previous addiction history; others had a significant history of addiction prior to their being severely injured. Analysis of treatment and pharmacy records demonstrated that nearly 35% of those in care for opioid dependence ('07-'08) had arrived there several years after being treated with opioids following an injury or illness. Integrating care for opioid dependence and pain is difficult; chart reviews revealed that the primary reason given when leaving care against medical advice was to seek better pain control. Numerous educational and clinical strategies have been developed to in the past several years to address the intersection of pain and opioid dependence [6,7]. Challenges in the treatment of this growing population will be discussed.

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## Drug Users and Prescribers Views of the Buprenorphine Naloxine Soluble Film

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### Abstract

This presentation will outline the results of qualitative research into the views of drug users, prescribers, and pharmacist of the Suboxone Film product. In total 65 service users were interviewed just under half of whom were being prescribed Buprenorphine-Naloxone in tablet form. In addition 46 service providers were also interviewed. Both the drug users and the service providers were enthusiastic about the Suboxone Film product and on being shown the placebo version of the product could immediately identify multiple benefits of the Film form of the drug compared both to the existing tablet form of the medication and other substitute prescribed medication used to treat opiate dependency (principally methadone). Administration of the Film Product Amongst the drug users interviewed the administration of the Film product including its supervision was not seen as presenting any particular problem although quite a few of those interviewed commented that they would not want staff within either a community or custodial setting to be placing the product within their mouth-. Packaging Criticism was expressed by both drug users and service providers of the difficulty in accessing the medicated strip located within the sealed outer pouch. Almost of all those shown the product needed to resort to scissors to access the medicated strip. Amongst both the drug users and service providers interviewed there were positive comments on the discreetness of the Film product packaging. In addition, both drug users and service providers valued the fact that the packaging of the Film product was child safe- this was identified as being particularly important given the additional difficulties (in comparison to the tablet form of the drug) in removing the medication from a child's mouth. Speed of Melt The fact that the Film product could be rapidly absorbed, particularly compared to the tablet form of the drug, was valued by both service users and service providers. The rapid dissolution of the Film product meant that drug users anticipated having to spend much less time within the pharmacy thereby reducing the likelihood of their bumping into individuals who did not know of the fact of their drug dependency but who might suspect as much on witnessing their having to have their medication supervised. Confidentiality Privacy and Discretion Amongst the drug users interviewed the Film product was felt to offer much greater levels of privacy where individuals were required to consume their medication under some level of supervision- often occurring in circumstances where the drug users consumption of their existing medication could be witnessed by other people. Diversion The diversion of medication within custodial settings was reported as being widespread by many of the drug users interviewed - instances of individuals regurgitating methadone for distribution to other prisoners or diverting Suboxone tablets for later sale to other prisons were frequently described in our interviews. The consensus amongst the drug users interviewed in this study was that the Film product would substantially reduce the occurrence of such diversion. Conclusions Amongst the drug users, prescribers, and pharmacists interviewed there was a widespread belief that the product would significantly reduce the diversion of medication that occurs within custodial settings. It was also recognised that the Film product would maintain a significantly higher level of privacy and confidentiality where drug users were required to consume their medication under some level of supervision.

## The Process of Developing a State of the Art Therapeutic Programme at the National Rehabilitation Centre in the UAE

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### Abstract

This paper describes the process of implementing an evidence based, state of the art inpatient treatment programme by reviewing and revising an existing programme. The paper provides a brief background and history of the Centre and summarises the issues that emerged during this process. It describes how a "Three Phase Method" for evaluating the existing treatment programme was developed. During the implementation phase the Organizational Readiness to Change by the Texas Christian University [1] was used on a limited sample of staff to measure resistance encountered. The "lessons learnt" and recommendations for a similar enterprise in the region or in any other setting can be categorized to program design, human resources and interventions. The program design recommendations include that a) the design should reflect the philosophy, mandate and scope of services offered by the facility. It should however be designed in as part of a continuum of care and not independent treatments, b) Program should be well structured with clear phases and objectives that can be measured and monitored, c) therapeutic program should be as comprehensive to address variable needs of the patients, d) the treatment should be designed with a concept of 'program' development rather than set of interventions. This however, requires that the operational/functional organigram of the facility endorse this concept. Under human resources the recommendations, a) Involving the staff responsible to implement any program in its development is indispensable to the successful implementation of the program, b) staff training and professional development is indispensable to endorsing new programs. Adequate and appropriate training and time should be allocated with a step wise approach raising the staff confidence level. Training should not attempt to be threatening to the staff. Finally, recommendations for interventions include, a) selection of interventions should not be limited to evidence based interventions and extend to cover alternative treatment of cultural acceptance. Majority of the program should however be allocated to evidence based interventions, b) the evidence based interventions rest on the interface between results from literature and preferences of the treatment team or practice based evidence.

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## Using Psychodrama Group Therapy Techniques on Addiction Treatment

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### Abstract

Addiction treatment is different from other therapies. This usually contains individual and group therapies, self-help groups and cognitive-behavioral techniques in addition to biological treatments. Group therapies are applied in different stages during the treatment as complementary. Group psychotherapies have some therapeutic elements:

1) instillation of hope; 2) universality; 3) imparting information; 4) altruism; 5) group cohesiveness; 6) interpersonal learning; 7) self-understanding; 8) imitative behavior; 9) development of socializing techniques; 10) corrective recapitulation of the primary family experience [1]. Members from both structured or semi-structured group therapies help each other to express themselves. They might be in different stages of sobriety, and more experienced members accept the new comers, become role models, and instillation of hope element takes place easily [2].

Psychodrama is one of these group therapy techniques. Addicted people are facing lots of problems during their daily lives after stopping to use. Psychodrama helps people to re-handle their past experiences, to face past events and to embody inner thoughts on the stage. Those kinds of experiences could be either to re-experience the past event or a rehearsal of an imagination towards future. Psychodrama was developed after 1923 by J.L. Moreno after discovering therapeutic side of "play". Psychodrama aims at an individual's healing in a group setting. Psychodrama has a principle to act, "do not explain, do it!" principle, and this makes it different from other techniques. Psychodrama deals with spontaneity, creativity and action in order to gain insight for a person in a group setting. We can use psychodrama techniques in four dimensions: 1) group exercises focusing on a specific problem; 2) protagonist exercise; 3) focus on group process; 4) psychodrama towards group. Psychodrama also has different elements. The first is "stage", which helps to create "as if" experience. The second is "the therapist", who creates the psychodrama and the environment. The third element is "the protagonist", who is the main player in the group setting. The fourth element is "auxiliary ego", who are the most important individuals, feelings or concepts in the protagonist's life. The last element is the "group", which is the microcosm of the individual himself [3].

This specific group has been meeting approximately for 3 years once in a week for 2 hours. During this period some members participated regularly, some dropped out, and some new members participated. This group works mainly on "Problem Solving Techniques" and other life experiences. In this presentation, the basic Psychodrama techniques would be explained by giving group therapy examples. Those techniques are named as "To double", "Mirroring", and "Role reverse". In addition, I will give examples about psychodrama group therapy stages such as "warm-up", "the main play", "role sharing", "identification sharing", and "process analyzing".

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## The Effects of Opium Use in the Life and Art of Edgar Allan Poe and Samuel Taylor Coleridge

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### Abstract

Our study focused on the interaction between psychoactive substance use and the artistic creative process, i.e. literature. Conscious and unconscious work is necessary in the two stages of the creative process. In the first, 'inspirational' phase the artist is passively present in the process. It shows many similarities with regressive processes in terms of id impulses and drives that are dominantly unconscious. The second phase is the 'elaborational' one. In this phase, the 'passively' received artistic material is reconstructed and transformed to a comprehensible form. Therefore, artists have to face their unconscious processes and work with emotional material that is difficult to keep under control. Bringing these unconscious contents into consciousness needs special sensitivity while working with them needs special control functions. Considering these mechanisms, psychoactive substances serve a double function in the case of artists. On the one hand, substances may enhance artists' sensitivity. On the other hand, they can help moderate the hypersensitivity and repress extreme emotions and burdensome contents of consciousness. On the basis of these theoretical considerations, the authors review and illustrate how the use of opiates could have influenced the life and literary work of Edgar Allan Poe and Samuel Taylor Coleridge. In both artists' case, various emotional states that accompany the artistic creation are handled by the balancing role of opiates.



## Young Adults Who Were Prenatally Exposed to Heroin. What Happened to Them?

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### Abstract

This study aims to describe the social environment and development, the psychopathological effects and the drugs of abuse consumption in young people aged between 20 and 30 years old born to heroin addicted mothers. We tried to localize all the people born in our hospital between the 1982 and 1990 with the diagnosis of "child born to heroin-addicted mother" to fill an interview to assess socio-economic, psychopathological and drugs of abuse consumption items. We gathered a sample of 30 patients. We noted a high percentage of parental abandonment, related with a high parental mortality (30% of fathers and 40% of mothers) and a significant number of subjects who lived in extended care (44.4%), adopted or in shelter centers during their childhood (23.3%). The high rate of abuse was also remarkable, referring 26% of the subjects emotional or physical abuse. Most of them were classified into a medium or high socioeconomic level and practically all of them had basic education. However, social problems were frequent in this group, referring to have been arrested 30% of them. Up to 56.7% of patients had visited a psychiatrist at least once in their life and most of them presented problems such as ADHD, depression or personality disorders. Substance use was very high across the sample compared to the general population.

**Conclusion:** Abuse, neglect, delinquency, mental health care and drug use are issues that take place with great significance amongst this group of subjects, making them susceptible to be closely followed from their birth in order to minimize and face the risks.

## Psychiatric Co Morbidity among Substance Abusing Mothers

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### Abstract

Tampere University Hospital Addiction Psychiatric Clinic developed a model to assess pregnant mothers' drug problems as a project ending 2005. After that this work has been continued. Similar working models have been taken into use in other university hospitals in Finland, but only in Tampere in contest of liaison psychiatry. The aim of this work is to get drug addicted mothers into treatment as early in pregnancy as possible. This study aims among mothers whose drug-use had been severe enough to end up in an assessment at a specialized addiction clinic, to explore the amount of psychiatric diseases. Background variables are compared to those of other women given birth in the same hospital. 217 referrals arrived into the clinic during the study 1.6.2003 – 31.12.2005. The maternity clinics in Pirkanmaa health district were informed of the referring criteria. 119 patients were asked to take part in the study. After all, 49 patients went through the whole study process. The assessment was made using Structured Clinical Interview for DSM-IV (SCID) during the period 6-12 months after birth giving. The comparison group was asked whether they had had any in- or outpatient treatments in psychiatric care and about their drug and alcohol use. Mothers with drug problems have high amount of psychiatric illnesses. That has been shown earlier among pregnant mothers [1] and women in general [2]. However, there is also a group of women who did not fulfil criteria of any psychiatric illness in the end of the study. Personality disorders are common among substance abusing mothers as they are among other addicted patients. These women got intensive treatment for both their drug and psychiatric problems which had a favourable effect in their ability to take care of their own children. Treatment models for drug addicted mothers are helpful as have been shown in other studies [3]. Especially important is to treat both addiction and psychiatric diseases at the same time in the same treatment setting as has been the trend in the field during last years.

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## Emerging Synthetic and Natural Psychoactive Drugs in South Florida's Club Scene: Users' Demographic, Health Risk, and Prescription Drug Misuse Profiles

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### Abstract

Ecstasy use has stabilized in the past decade, but other classes of drugs are increasingly prevalent in recreational drug use settings. These include synthetic stimulants, psychedelics, and cannabinoids, as well as natural psychedelic drugs. There is little information about the demographic and health risk profiles of users of these emerging drugs in the United States. Eligible respondents (N=243) were aged 18 to 39 and reported recent use of club drugs and misuse of prescription opioids and/or sedatives. Interviewers administered standardized health and social risk assessments. Drugs of interest were categorized for analysis: 1) natural psychedelics (e.g., psilocybin mushrooms, salvia), 2) synthetic cannabinoids; and 3) synthetic psychedelics and stimulants (e.g., 2C-x, mephedrone, BZP). Logistic regression models examined demographic and health risk characteristics of users of each category. Users of natural psychedelics (N=57) were younger ( $p=.000$ ), more likely to be Latino ( $p=.003$ ) and less likely to be Black ( $p=.010$ ), and reported higher levels of substance dependence ( $p=.032$ ) and mental distress symptoms ( $p=.015$ ) than non-users. Synthetic stimulant/psychedelic users (N=34) reported more frequent misuse of prescription opioids ( $p=.002$ ) and sedatives ( $p=.004$ ) and use of LSD ( $p=.012$ ), more mental distress symptoms ( $p=.021$ ), more drug-related psychological ( $p=.008$ ) and physical health ( $p=.003$ ) problems, and were more likely to be recent drug injectors ( $p=.009$ ) than non-users. Synthetic cannabinoid users (N=33) were younger than other study participants ( $p=.017$ ), but did not report elevated levels of other drug use or drug problems. No gender differences were observed for any emerging drug class. Recent users of synthetic stimulants and psychedelics appear to be at high risk for prescription opioid and sedative misuse, drug injection, and drug-related health problems. None of these health risks were associated with synthetic cannabinoid use.

## Therapeutic Drug Monitoring in Patients Undergoing Methadone Maintenance Treatment: A Novel Test Using Dried Blood Spots

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### Abstract

Opioid replacement therapy with long-acting opioids is the most effective approach to counteract heroin dependence, a worldwide health and social problem affecting the lives of millions of people. Since its introduction in the 1960s, methadone (MTD) a synthetic full  $\mu$ -opioid receptor agonist has been the treatment of choice for opioid addiction. Methadone is however characterized by a large variability that partly accounts for heterogeneous response patterns during methadone maintenance treatment (MMT). In fact, genetic polymorphism in genes encoding for MTD-metabolising enzymes (different isoforms of cytochrome P450) and transporter proteins (P-glycoprotein, ABCB1 isoform) as well as for  $\mu$ -opioid receptors may partly explain the observed inter-individual variation in the pharmacokinetics/dynamics of MTD and influence dose requirements. In addition, during MMT, many patients take concomitant medication(s), and this can affect the pharmacokinetics of MTD, so influencing the clinical effect and the safety profile of the drug. Thus, an accurate therapeutic drug monitoring during MMT should be performed in order to provide the optimal dosage for maintaining adequate MTD blood levels, reducing at the same time the possible risk of severe adverse effect, and also in order to monitor possible abuse of the drug. A rapid isocratic reversed-phase high-performance liquid chromatographic method (RP-HPLC) with coulometric detection has been developed for the determination of MTD in dried blood spot (DBS) and human plasma samples. The application of the test brings concrete advantages to both patients under MMT and clinicians: these include short collection time, low invasiveness, ease and low cost of sample collection, transport and storage. Moreover, blood concentrations of methadone are more reliable as an indicator of its concentration in the action sites than the dose taken. On the other hand, clinicians may be better aware of the problem of variability in responses to methadone, and in the various factors involved. This method was successfully applied to dried blood spot samples collected from heroin-addicted patients under methadone maintenance therapy at doses between 40 and 240 mg day<sup>-1</sup>. The statistical analysis (Bland-Altman plot) showed that the results were in good agreement with those found from the analysis of plasma samples obtained from the same patients. Thus, the method has proved to be suitable for the monitoring of methadone by means of dried blood spots.



## Prevention Trial in the Cherokee Nation: Research and Intervention Design

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### Abstract

The Prevention Trial in the Cherokee Nation is recently funded complex intervention trial funded by the U.S. National Institutes of Health. It is a partnership between prevention scientists at the University of Florida and the Cherokee Nation Behavioral Health Services to create, implement and evaluate a new, integrated community-level intervention designed to prevent underage drinking, other drug use, and associated negative consequences among indigenous and other youth living in rural high-risk underserved communities. The trial is being conducted in Oklahoma in the south-central United States, an area suffering from high rates of poverty and substantial health disparities. The Cherokee Nation includes people descended from members who were forcibly relocated by the government from the southeastern U.S. following the Indian Removal Act of 1830. With the capitol in Tahlequah, Oklahoma, the Cherokee Nation has a tribal jurisdictional area spanning 14 northeastern Oklahoma counties. The Cherokees have a democratically elected government that oversees all government functions, including business, education, health, housing, law enforcement, etc. The University of Florida and Cherokee Nation teams worked collaboratively to design the research and intervention design for the trial. The preventive intervention builds directly on the results of multiple previous experiments with two distinct approaches - community environmental change and screening, brief intervention and referral to treatment (SBIRT). This project evaluates each approach separately and in combination using a factorial design. Communities Mobilizing for Change on Alcohol (CMCA), an evidence-based community change strategy, is being adapted and implemented within three communities. Connect, a new school-based enhanced SBIRT intervention, is being developed and implemented within three schools using school-based service providers hired in partnership with the Oklahoma Department of Human Services. Four key research design elements optimize causal inference and experimental evaluation of the intervention effects: 1) a controlled interrupted time-series design, 2) random assignment to study condition, 3) a factorial design, and 4) multiple comparison groups. A primary design feature of this trial is many repeated measures (a time-series), which substantially increases internal validity as well as statistical power over conventional pre/post community trial designs. Repeated assessments will measure implementation fidelity for each intervention component, and measure key proximal as well as the primary outcomes of youth alcohol and drug use through survey, observation and archival sources. The primary study sample will include all high-school students within six towns. Quarterly measurements will produce a time-series design with observations of youth nested within town over the four-year period. In addition to repeated cross-sectional samples, we will track the embedded cohorts over four years, maximizing statistical power. Our goal is to partner and develop capacity for rigorous science and sustainability of effective prevention practices, not only among local scientists and professionals, but also among local citizens.

## Gap Analysis in Drug Demand Reduction – Pilot Study in Treatment

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### Abstract

The Best Practice Portal (1) developed by EMCDDA, synthesizes the current evidence on the interventions for drug demand reduction basing on the results of world leading organizations in evidence base research (2). An overview of the available evidence allows assessing the state of the art and the identification of gaps on research. Building on the state of the art of research capacity in Europe we narrowed the scope to identify uncertainties in treatment interventions. Using the experience of the James Lind Alliance as inspiration, the present project piloted a gap analysis exercise composed by an analysis of the available evidence complemented by interviews. To identify stakeholders' opinion on current research gaps is the main scope although systematic identification of ongoing research projects and setting priorities for further research can also benefit from its results. The objectives were to identify the questions from the decision makers, the practitioners and the patients for which the available systematic reviews of effectiveness do not yet provide answers; to propose further areas for research on treatment. The methods - to identify the state of the art we've performed a bibliographic review. To identify the relevant research gaps we've implemented an on-line survey (non-probability sample techniques). To summarize the interviewees view we performed a qualitative analysis (N-Vivo 9). We created a short-list (3) of 191 names. 175 E-mails were successfully forwarded and 58 completed questionnaires received. The final response sample was composed of people from 22 countries. The distribution of participants is as follow: 39 male and 19 female, 31 experts or researchers, 2 decision makers and 4 patients). In terms of population in need for further studies the respondents indicated drug users (opioid, "legal highs", cannabis and stimulant drug users), professionals of drug treatment, and others (drug users' families, non-users, decision makers, youngsters at risk, former drug users). The indicated gaps enclosed how to keep patients in treatment, how to help people with psychiatric co-morbidity, occasional or poly-drug users, young and ageing drug users. In terms of intervention it was proposed that different settings and procedures of treatment need further analytical exploration. Besides, both macro-level factors and management features (including operational and administrative issues) were suggested. Although the focus of the analysis was the treatment, it was also mentioned that interventions of other nature should also be focused (for example prevention and harm reduction). In terms of questions to be answered the need to match patients with the best treatment among those for which there is evidence, was clearly indicated along with the need to study the impact of career personal beliefs and professional orientation on the outcomes of interventions. A long list of questions will be edited and made available.



## Risks and Consequences from the Use of Benzodiazepines for People at Methadone Maintenance Treatment

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### Abstract

The goal of this research is to establish the risk and consequences from the use of benzodiazepines for people who are part of a methadone maintenance treatment. In this research were included 148 people, who were part of a MMT. For this purpose we used unstandardized questionnaire. From 148 people, who took part on this research 132 were using benzodiazepines every day. 49 of them have used them intravenous, and 83 per os. At all of these patients it was noticed a problem with their memory. 12 of them had accident when they were driving when taking benzodiazepines. Most of the patients when taking the benzodiazepines they were also taking, heroin, alcohol and methadone, which was a reason for overdosing, which fortunately didn't end with death. We have noticed a physical dependence of benzodiazepines at 67 patients who were part of a methadone maintenance treatment, especially at those who have taken the benzodiazepines intravenous, longer time and in bigger amount.

## Sexual Dysfunctions among Patients Entering Addiction Treatment

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### Abstract

The aim of this study is to detect the prevalence of sexual dysfunctions among the patients entering addiction treatment, with respect to different substances. The Arizona Sexual Experience scale (ASEX) was administered to 725 patients with average age 34.7 years (min. 17 years, max. 69 years, SD  $\pm$  11.3), 71.9% of males, at the time of admission into addiction treatment. The patients, all with diagnosis of dependence, were divided into the groups according to the type of their addiction: opiate (heroin) users (n = 290), methamphetamine users (n = 98), cannabis users (n = 80), alcohol users (n = 175) and gamblers (n = 82). The highest prevalence of sexual dysfunctions was in the group of the patients with heroin dependence – 33.4 %. Alcohol was the next with 18.3 %, followed by methamphetamine users 17.5 %, gambling 8.8 % and cannabis 2.5 %. Significant differences were also found in the age composition and gender among the groups. Females had higher proportion of sexual dysfunctions than the males. Heroin users with dependence have the highest rate of sexual dysfunction, followed by alcohol and methamphetamine users. Patients with cannabis dependence and gambling had the lowest rates, which might be partially attributable to the under-representation of the females in these groups of patients. Gender is playing an important role in this respect.

## The Application of Public Health Information Technology in the Monitoring of Clients in Treatment for a Substance Related Disorder in Belgium: First Results on Double Counting and Preferential Pathways of Clients

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### Abstract

In 2011, a national, secured and computerized registration of all treatment episodes for a substance related disorder was implemented in Belgium. This epidemiological registration is part of a project of the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA), called Treatment Demand Indicator (TDI). One of the important features of the Belgian registration is the use of the client's national identification number to accurately and securely identify their health records in this national database. The technical architecture of this registration, as well as advantages of the use of the unique identifier will be explained in terms of double counting, follow-up of clients over time and further developments of integrated systems. A web-based platform, integrating the secured access, encryption and coding services of a Trusted Third Party was developed to facilitate all Belgian treatment facilities in the registration of 20 variables for each treatment episodes followed by clients in treatment for a substance related disorder. The coded national identification number was used to identify clients. If this national identification number is not available, other alternatives can be used. Records submitted to the Belgian TDI platform in 2011 and 2012 were analysed in terms of a) the utilisation rate of this unique number, b) the double counting avoidance and c) the follow-up of clients in time. In 2011 and 2012, 56 treatment units participated in the Belgian TDI registration and registered respectively 8130 and 6876 treatment episodes. The national identification number was used in 88.1% of these records in 2011 and in 86.9% of the records in 2012. Discrepancies were found between types of treatment centres: 71.2% of use in low-threshold centres vs. 93.7% in residential crisis centres.

Among the records using the national identification number, 8.5% in 2011 and 14.8% in 2012 were records of a client seen previously in another treatment unit. The identification of these records allows to avoid double counting of clients for the data reporting. Proportionally, clients in residential crisis centres are more often seen in other treatments facilities afterwards (24.4%) compared with patients from other residential centres (8.4%) or ambulatory centres (4.2%). A more in depth analysis of these multiple records can also identify preferential pathways of clients in treatment. The application of public health information technology in the monitoring of clients in treatment for a substance related disorder increases substantially the accuracy of the epidemiological estimates but also enables the longitudinal and geographical follow up of the clients. Future linkage databases including information on substitution treatment, infectious diseases, mortality or reimbursement can be accomplished with approval of privacy commission. This will put the TDI database in a central position for a better integrated, secured and available health information on clients with drug or alcohol problems.



## A Survey of Alcohol and Substance Misuse Prevalence and Its Correlates in a High Secure Hospital

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### Abstract

It has long been established that Substance misuse, including alcohol (SMU) are widely prevalent in mentally disordered offenders and their use has been linked with violence and offending. Despite this, there is a scarcity of literature that focuses on patients within the high secure forensic setting. This survey aimed to identify the extent and severity of Substance misuse problems experienced by patients in Broadmoor High Secure Hospital and the need for specialised psychological treatments. A questionnaire was designed to assess past SMU prevalence and its use in the context of offending and mental health. The questionnaire also recorded the assessment and treatment needs of patients. This was completed for all patients at Broadmoor Hospital over a 10-month period by their responsible clinicians following a review of health care records. Of a total of 241 questionnaires submitted, responses were received for 230 patients (response rate: 95%). Of these 206 (88.6%) had a history of past SMU. The most commonly reported substances were alcohol and cannabis, with a high degree of concurrent use (62.1%). There was a history of use of at least one substance in 179 patients. A high prevalence of clinical and forensic risk factors was associated with SMU; in approximately two thirds of the sample substances were linked with the onset of mental illness and exacerbation of symptoms. In a similar number there was a link between SMU and offending behaviour, including violence. Assessment of SMU treatment need was under represented in patients with a history of alcohol or "any drug" misuse - approximately 60% of those with past SMU history had not received a formal assessment to determine treatment need. Patients with evidence of past alcohol and "any drug" use were the least likely to have received treatment (75.7%; 73.2%, respectively), whilst they were considered to have the greatest treatment need (59.4%; 67.3%, respectively). Treatment need was notably high (>70%) among patients for whom SMU was associated with clinical and forensic risk factors. This study highlights a discrepancy between treatment need and provision for patients with a history of alcohol and/or substance misuse in our sample. Appropriate treatment would hopefully lead to risk reduction and successful rehabilitation. The findings highlight the importance of appropriate service provisions of psychological treatments for alcohol & substance misuse in high secure hospitals.

## Achieving Alcohol Abstinence in Some Strange Medical Conditions

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### Abstract

Alcohol abuse is a chronic behavioural problem that can further develop as a progressive disease. In our country Albania, for many years Disulfiram was the only drug used for clinical management of alcohol dependency. Especially when used without medical prescription, and concomitant use of alcohol, can lead to disulfiram-ethanol reaction (DER). In front of a severe alcoholic abuser who develops hypovolemic shock, hypotension, tachycardia, nausea, flushing, chest pain, it becomes difficult to make a differential diagnosis between DER and other pathologies. The aim of this case presentation is to present the difficulty in making a differential diagnosis in alcohol abusers. And sometimes alcohol detoxification and abstinence can be encouraged even in some strange medical conditions. A 42-year-old, chronic alcohol abuser was referred to the coronary unit of our hospital for an urgent coronarography. On admission he manifested tachycardia, flushing, nausea, dyspnoea, tremor, confusion, arterial hypotension. His heart ultrasound revealed septal hypertrophy. His laboratory tests showed elevated liver enzymes, GGT 207 U/L (normal range 10-61 U/L), ALT 97 U/L (normal range). The coronarography resulted normal. The treatment continued with continuous electrocardiographic monitoring, adequate oxygenation and electrolyte replacement, especially calcium which had low level.

The reassessment of the medical history taken from the patient, and the correlation with the clinical signs and laboratory findings, revealed the accurate diagnosis: Nifedipine overdose as a suicidal attempt, and a long history of severe alcohol abuse (14-18 Unite/day). After four days of hospitalisation, the patient left the hospital and continued the supportive treatment at home. After seven days of alcohol abstinence we begun Naltrexone (50 mg/day), to reduce the risk of relapse, and we performed weekly medical control. Naltrexone was discontinued after 6 months of treatment, and till 12 months from the first day of abstinence, any relapse was referred. Various strategies are employed to treat alcoholism, including psychosocial interventions, pharmacologic interventions, or both. But sometimes, extreme physical and psychological circumstances, as survival from a suicidal attempt, can help patient realise the importance of their health. And an appropriate medical approach can lead them to a successful treatment for alcoholism.



## Relationship between Alcohol Consumption and Serum Liver-Derived Enzymes in Correlation with Some Metabolic Markers in Healthy Males

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### Abstract

Alcohol use and abuse in Albanian population, especially in males, is very common. Unfortunately it is part of our daily habits and in some regions it is an important element of tradition. Already is well known how alcohol abuse alter the activities of hepatic enzymes, leading to a high number of hospitalisations, but the subclinical liver damages, sometimes are underestimated. The purpose of present study was to evaluate the relationship between self-reported alcohol consumption, and abnormal liver enzymes including aspartate-aminotransferase (AST-reference

We enrolled 76 apparently healthy men, who undergone an annual health Check-up in our hospital. The subjects were divided in 2 subgroups according to the amount of alcohol consumption: occasional drinkers (OD)( $\leq 16$  Unite/week) and moderate drinkers (MD)(16-42 Unite/week). We excluded females from our study, because any of them did report alcohol consumption. The mean age of participants was  $38.8 \pm 8.4$  years. In MD group the average value of ALT was  $59.7 \pm 28.3$ , AST  $33.7 \pm 17.2$  and GGT  $71 \pm 40$ ; While in OD group, ALT was  $31.7 \pm 14.9$ , AST  $22.1 \pm 14.7$ , and GGT  $30.1 \pm 6.9$ . In MD group the ALT level was higher than the normal range in 83% of cases, AST in 45% of cases and GGT in 38% of cases. In OD group ALT level was higher than normal range in 20% of the cases, AST in 5.8% of cases while was not found any case of elevated GGT. In MD group, TG was  $178.9 \pm 116$ , comparing to  $138.2 \pm 41.3$  in OD group. Regarding BMI we didn't see important differences between the 2 groups. ALT was shown more sensitive than AST in alcoholic liver disease. In this study we found an important correlation between moderate alcohol consumption and elevation of liver enzymes. Even if the effects of obesity on GGT should also be considered, in our study we didn't found significant differences of BMI between the 2 groups. The prevalence of elevation of TG was higher in MD group than in OD group. These results may help to develop new approaches to detect in preclinical stage the liver damages, and also may help changing our daily habits.

## How to Deal with Non-Co-Operative Patients: A Difficult Case of Severe Concomitant Abuse of Alcohol and Lorazepam

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### Abstract

Multi- drug abuse is a big problem nowadays, even in our country, Albania. Alcoholism remains a serious cause of morbidity and mortality, despite all the treatment strategies. When alcohol is combined with anxiety, mood disorders and benzodiazepine dependency, it becomes life threatening for the patient, but also a familiar and social drama. In this complicated panorama, withdrawal is the gold standard, but most of time, very difficult to be achieved. In this long and multidisciplinary process, it is crucial the decision and the willingness of the patient, because we know already that the percentage of relapse is high. A 54- year-old man with alcohol and benzodiazepine dependence was referred to our hospital for a detoxification therapy. Daily use of alcohol had started 20 years prior to admission and the daily dose during the last year was nearly 25-30 Unite / day. In addition he had a history of concomitant Lorazepam abuse with daily doses 22-30 mg / day. During 20 years of abuse this was the second attempt for abstinence. The first time he left the addiction unit within 24 hours. The communication with the patient was very difficult; he manifested suicidal thoughts, emotional lability. What was the main problem at the begging, and what helped us during the process, was the confidence. For the first time he begun to trust a medical team. We used Librium to manage the alcohol withdrawal, and in the same time we begun to taper lorazepam doses, switching them to Librium, respecting the equivalent dose. The benzodiazepine treatment according to the scheme, finished 3 months from the first day of hospitalization. About 5 months from the first day of hospitalization, the patient had one episode of consuming alcohol, but not benzodiazepine. He continued the treatment and, till 7 months from the first day of hospitalization, any other relapse was referred. It is very difficult to treat concomitant abuse of alcohol and benzodiazepine, especially in patients with behavioral disorders. In our case, the main difficulty, except the high doses of alcohol and lorazepam, was the collaboration of the patient. Finding the best equilibrium between respecting the protocols, and treating well the patient, remain still a challenge in our clinical practice.





## Sex Differences in Psychosocial Concomitants to Alcohol Problems in a Representative Sample from Western Finland

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### Abstract

The objective was to investigate the sex differences in psychosocial concomitants to alcohol problems in different age groups. The psychosocial variables were depression, general mental health, schizotypal personality, and the extent to which subjects had been exposed to physical punishment during their childhood. A representative sample from Western Finland was drawn. Respondents (N = 3,944; 1,724 males, 2,220 females; age span 15-80 years) filled in a paper-and-pencil questionnaire. Alcohol problems were measured with the CAGE instrument [1]; exposure to childhood physical punishment with the Brief Physical Punishment Scale, BPPS [2]; poor general mental health with the 12-item General Health Questionnaire, GHQ-12 [3]; depression with items from the Short Form Composite International Diagnostic Interview, CIDI-SF [4]; and schizotypal personality with items from the Schizotypal Personality Questionnaire, SPQ [5]. According to a 2x2 (sex x alcohol problems) MANOVA, participants scoring high (above the mean) on alcohol problems scored significantly higher than those scoring low on alcohol problems on all dependent variables: depression, poor general mental health, schizotypal personality, and childhood exposure to physical punishment. There was a significant interaction effect, indicating that females with alcohol problems scored much higher than males with alcohol problems on both depression and schizotypal personality. The results suggest that alcohol problems is related to more severe mental health problems among affected females than among affected males, a fact which may be important to take into account when treatment and psychotherapeutic intervention programs are planned.

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## Transcultural Addiction Psychiatry: Gender and Psychotherapeutic Aspects

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### Abstract

The objective was to study interrelationships of gender specific of formation of heroin addiction (HA), prognosis of disease in adolescents for gender-differentiated therapy. We have examined in the hospital (with catamnesis over 1 year - 70%) 140 ethnically homogenous group of Russian patients with HA of male (n=70) and female sex (n=70) from 15 till 20 years; among those and others we have distinguished 4 groups of patients with various gender types. Control - healthy adolescents. Methods used were as follows: clinical and sexological scales, scale of Q-sorting by W. Stephenson. Cluster analysis of gender parameters [biological sex, valuable orientations (male/female), sexual experience (hetero/homo), social status (middle/marginal)]. In drug addicted girls (G) family history of depression is higher than in boys (B) - 2,7 times according to father and 1,5 times according to mother. In G withdrawal is more stretched in time, apathoabulic ones dominate then behavioral and depressive ones (22,2 % each) disturbances; in B - more often behavioral and alalgal variants of withdrawal. During formation of gender behavior in boys of significance is modulating role of criminal-marginal environment on the process of gender socialization of the personality, in which process coming-into-being both of addictive behavior as a whole and heroin addiction, in particular, occurs. Based on cluster analysis of gender parameters we have distinguished 4 masculine and 4 feminine types of formation of HA. Masculine types of HA: 1. Gender-dominant type (GDT) is represented by B with male gender type (MGT), hetero-sexual experience (hetero-SE), marginal social status (SS), male system of values (SV). 2. Gender-independent type (GIT) - traditional gender type of B [MGT, hetero-SE, middle SS and male SV] 3. Gender-partner type (GPT): MGT and hetero-SE, middle SS and female SV. 4. Gender-integrating type (GIT): MGT, homo-SE, middle SS, male SV.

Feminine types of HA: 1. Gender-repressive type (GRT) - co-dependent gender behavior [FGT, hetero-SE, marginal SS and female SV]. 2. Gender-independent type (GIT) - traditional gender type of G [FGT, hetero-SE, Middle SS, female SV]. 3. Gender-partner type (GPT): FGT, hetero-SE, marginal SS, male SV]. 4. Gender-utilitarian type (GUT): FGT, hetero-SE, middle SS, male SV. The most multiple in boys - GDT, in girls - the alternative to it GRT, GIT and GPT for B and G are symmetrical. Therapy and prognosis: In GRT type accent on the therapy of co-dependence. In GUT and GDT priority is pharmacotherapy of affective and behavioral disorders. Efficacy of antidepressants is maximal in post-withdrawal period in masculine GPT and GIT. Drug addicted B as a whole have more favorable prognosis than G. Prognostically favorable for B are GIT and GIT, in co-dependent girls - GRT. Adverse type in B is GDT and in G -GUT of HA formation. HA in adolescents have separate gender-associated types of disease formation with various prognoses. Gender-differentiated therapy is possible from post-withdrawal period: in GRT accent on the therapy of co-dependence, in GUT and GDT priority on pharmacotherapy of affective and behavioral disorders. Distinguishing of gender differences supposes the possibility of their differentiated use for prognosis of disease.



## Geriatrics and Geri-Addicts: Measuring the Relative Rate of Ageing in a Methadone Maintenance Population in Ireland

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### Abstract

The objective was to develop a method of assessing rates of premature ageing in a methadone maintenance population. Identification of patients based on age Identification of cohort of "Old" Methadone Maintenance patients (age 35 - 40) and "Elderly" (age 40+) Chart review Documentation of Co-Morbidities Measurement of Determinants of Ageing : Blood Pressure, Hand Grip Strength, and Timed Up And Go Test of Mobility Comparison of results with Expected data for the General Population from the The Irish Longitudinal Study on Ageing (TILDA) is a study of a representative cohort of over 8500 people resident in Ireland aged 50+. Methadone Maintenance Patients in the 35+ and 40+ age groups have multiple co-morbidities comparable with control populations aged 50+ and 65+ Hand Grip Strength and Mobility are comparable in Methadone Maintenance Patients aged 35+ and 40+ with Elderly General Population. Patients with a history of drug use, who are in Methadone Maintenance, are ageing more rapidly than the General Population.

## Cyclobenzaprine does not Commonly Attract Non-Prescription Usage

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### Abstract

Cyclobenzaprine is a tricyclic agent mainly prescribed for muscle relaxation and pain. We aimed to determine if this drug was sought for extraordinary and illicit use among patients who were prescribed the same for medical indications and for equal to or more than a two-week period. For the period 2005-2013, 25 patients (12 M, 13 F) were followed for cyclobenzaprine use which amounted to 40.5 yrs. of cumulative patient exposure (use range 2 wks.-94 mo.; ave. 19.4 mo.). Patient age ranged from 21-61 yrs. (mean 44.2 yrs.). Patient compliance, frequency of use, and overuse were tracked by clinical charting, patient interview, and pharmacy prescription databasing. Indications for cyclobenzaprine prescription among these patients included chronic pain syndrome, acute and chronic back pain, acute muscle spasm, fibromyalgia, and other drug withdrawal. Dosing ranged from 10 mg. od to 20 mg. qid. 7/25 patients consumed the drug on a daily basis for chronic pain. There was a substance abuse history in 10/25 patients, and 6/25 were actively using illicit drugs. There was no overuse beyond the prescribed amount nor drug-seeking behaviours for cyclobenzaprine among any of these patients. Two patients with a history of substance abuse complained of excess sedation from cyclobenzaprine and were inclined to stop the drug treatment. Cyclobenzaprine does not commonly attract overuse or drug-seeking behaviours in this patient group, including patients with past or existing substance abuse.

## Adjustment of Different Ways of Measuring Alcohol Binge Drinking in Spanish Youngsters

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### Abstract

The present work establishes the best way to measure the incidence of binge drinking (BD), taking into account the three parameters used at an international level: number of consumptions (Wechsler et al., 1995), grams of alcohol intake (measured according to SDUs) and grams of alcohol that youngsters really take (see method). To consider BD, there has to be an intake of 60g or more of alcohol in men, and 40g or more in women, carried out during a period of 2-3 hours (MSC, 2008). Data collection was carried out in two stages. The first one (classroom), 188 alcohol consumers students from the Faculty of Psychology of Valencia (161 women -85.6%- and 27 men -14.4%- with a mean age of 22.52) registered their pattern of consumption (days of week, starting/ending time, number and type of consumptions).

In the second part (laboratory) they had to choose, among a set of glasses, the ones they used habitually to take each drink. They were provided with the original bottles (with colored water) and they were asked to serve the drinks they were to take, using ice-cubes if they wished. After measuring the ml. of alcohol served, the grams were calculated for each person [real measure] and the ones that would be assigned to them if SDUs were used were taken off (fermented= SDU=10g and distilled= 2 SDU=20g) [standard measure]. The mean in grams consumed by male BD (n=19) is 120.79 (td=37.68) and by women BD (n=150) is 94.50 (dt=31.36). Among those who exceed the BD, there are 69.44% male and 89.5% women. On the days of the greatest consumption (Thursday, Friday and Saturday) BD people consume greater real quantities than those estimated with UBEs. More concretely, on Thursday and Saturday this difference is greater (27.6 g. and Saturday= 34.3 g. more than those of the standard measure). If the Wechsler criteria had been followed, 39.8% BD women would not have been classified as such (4 or more consumptions). Besides, the quantity of grams consumed by these women (78.42g) almost doubles the set limit: 40g. In the case of men, more than half of them (52.7%; n=10) are wrongly classified (less than 5 consumptions) and, similarly to what happens with the females, their consumption in grams (111g) almost doubles the limit: 60g. Results indicate that a high percentage of women and men would be wrongly classified following the criteria of Wechsler, possibly due to the fact that this does not take into account the type of alcohol they drink. It would not be recommendable the use of this criteria to register BD. To estimate the consumption in grams -standard grams, real grams and the difference between both-, the real grams exceed substantially the standard grams. This questions the usefulness of the SDUs -standard grams- to register the pattern of consumption by youngsters.



## Alcohol Use in Bar and Night Club Personnel: Turkey Oludeniz (Blue Lagoon) Case

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### Abstract

Alcohol is legally sold and used and it is most commonly used for entertainment, socialization and coping with stress/emotional problems. The variables that affect alcohol-substance use and frequency have been widely investigated in several studies so far. It has been so far reported that 35% of the population in Turkey drink alcoholic drinks, significantly more in western parts of the country. Besides, the studies in recent literature also indicated that learning theories have a far reaching influence on alcohol use and addictive behavior. This descriptive study, on the other hand, was designed to analyze the alcohol use in bar and night club personnel. This study was conducted in October 2012 in Oludeniz, Turkey, a popular touristic destination and entertainment center. The study sample was composed of 100 bartenders, waiters, musicians and managers who were currently working in bars and night clubs in the region and who consented to participate in the study. The data were collected with a socio-demographic questionnaire and AUDIT (Alcohol Use Disorders Identification Test) and they were evaluated with specially designed software.

**Results:** 92% of the participants were male and 72% were single. 53% were between 21-30 years old. 46% graduated from high schools. 32% of the participants were bartenders, 29% of them were waiters. 78% were working in the same place for more than 3 years and they mostly worked at the night shift, frequently longer than 8-10 hours a day. 50% of the participants had a monthly income of 400-800 Euros. Most of the participants found their work quite enjoyable and 71% particularly reported that they were satisfied with what they were doing. Furthermore, 37% of the participants stated that they didn't use alcohol at work. Average AUDIT score of the sample was  $X=9.19 \pm 6.17$  and 54% of the participants obtained 8 points or more in the scale. 64% of the participants were regular smokers and those who smoke were noted to tend to have higher AUDIT scores, which was found to be statistically meaningful ( $t=2.35, p=0.02$ ). It was further acknowledged in face to face interviews that some bars strictly banned using alcohol at work while some others were promoting it by having a discount for the personnel. A number of the participants also stated that they used alcohol for a better communication with the customers as well as feeling more comfortable when dancing. As a result, it was found that bar and night club personnel commonly used alcohol at work, which was considered to be explained with learning theories. It was also suggested that similar prospective studies be designed with different and larger sample groups in future.

## Frequency of Anabolic-Androgenic Steroids Consumption, Awareness and Attitude towards Side Effects among Male Students of Medical Sciences: The Role of History of Athletic Performance

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### Abstract

It seems that the growing AAS abuse without physician prescription and awareness of their serious side effects has been prevalent even among educated people in the society. However, very few studies have been performed on this group. Since the awareness and attitude of this group could affect the attitude of the people who refer to them, consideration of the prevalence of AAS abuse and awareness and attitude towards these drugs is very important. Therefore, this study was designed and conducted to determine the Frequency of Anabolic-androgenic Steroids consumption, awareness and attitude towards side effects among male students of the Medical Sciences in Mashhad. Moreover, according to the role of professional sports on feeling the need to use these drugs, the students of medical sciences with a history of athletic performance were compared to other groups. The present descriptive-co relational study was conducted on 271 male students living in the dormitories of Mashhad University of Medical Sciences in 2008-2009 academic year and with the approval of the research committee of the University of Medical Sciences under the title of medical dissertation. The tool for data collection in this study was a self-report questionnaire including 31 questions chosen from the questionnaires of Randall et al. [1] and Nilsson et al. [2], and its reliability and validity had been approved in the study conducted in Isfahan by Kargarfard [3]. The data of the questionnaires were analyzed by SPSS software V. 14 and analyzed using appropriate statistical methods. Descriptive statistics was used to determine the frequency, percentage, average, and standard deviation. Comparing the averages and the relationship between variables were done through testing the assumptions of inferential statistics.

There was a significant correlation between age, field of study, academic level of the students and history of using AAS ( $p=0/69$ ,  $p=0/94$ , and  $p=0/48$ , respectively). The frequency of AAS consumers who had a history of athletic performance in different championship levels (city, province, or country) with a bodybuilding activity precedent was significantly higher than those who didn't have such background ( $p=0/003$ ,  $p=0/0006$ , respectively). The awareness score of the questionnaire showed the amount of familiarity with these drugs and their side effects, and attitude score demonstrated students point of view about AAS consumption and it had a direct relationship with optimistic attitudes and considerations against scientific facts. There are significant correlations between awareness and attitude as well as between awareness and prevalence ( $r_s=0.501$ ,  $p=0.004$ ) ( $r_s=0.3$ ,  $p=0.009$ ), respectively. However, there is no significant correlation between prevalence and attitude ( $p=0.15$ ). Although using AAS and having contact with consumers will lead to more familiarity with these drugs, they will increase peoples information in a limited and incomplete way without increasing awareness towards the dangerous side effects of these drugs and lead to the formation of optimistic and non-scientific attitudes. Furthermore, low level of awareness in medical and pharmacy students as people who will be one of the sources of information of others in future, is an alarm for more prevalence of incomplete information and non-scientific attitudes towards AAS in the society.

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## Experience with Different Treatments in Opioid Use Disorders in North India

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### Abstract

The objective was to assess different mode of treatment for opioid use disorder in India. The method was self-study. Experience with different treatments in opioid use disorders in North India. In India there are big problems with opioids especially in north India. Methadone being not available there are mainly two modes of treatments naltrexone (antagonist) and buprenorphine (substitution). Naltrexone is very good in decreasing craving and prevention of relapse but has big issue in compliance and most of patients relapse within three months. Though there is no formal approval, long acting preparations of naltrexone in the form of injections and pellets are being widely used in India. Buprenorphine was approved in India in 2005. Most of the patients are stable with 2 to 8 mg daily dose which is far less than dose being used in western countries. Even after seven years of approval it is not being widely used in India. Most of the patients and even the doctors have no understanding of chemical nature and safety of this drug and they believe this is just replacing. We conclude that Buprenorphine is under-utilized in India.

## Degree of Satisfaction in Patients with Alcohol Dependence Treated in Outpatient Psychiatric Service

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### Abstract

The objective was to evaluate degree of satisfaction with program of attention to alcohol related problems between alcohol-dependent patients contacting a psychiatric outpatient center. The method used was a cross-sectional study of 399 patients diagnosed with alcohol dependence, admitted to the Mental Health Unit of Torrelavega, during the period 2010-2012. After three months of treatment, they answered the questionnaire of satisfaction. The data were analyzed using SPSS for Windows. There were 310 men and 89 women with a mean age of  $48.06 \pm 12.16$  years. Among them, 111 questionnaires were collected, made up of 87 men and 24 women with an average age of 48.98 years (minimum age: 23 years, maximum age: 76 years). A 2.2% of patients had never received attention in the program and 49.4% had gone only to evaluation. Among those who had received assistance 80.5% did between outpatient. Most of the 90% patients believed that staff identified correctly and was reached with clear indications and useful documentation. Information about the disease (70.35%), treatments or diagnostic tests used (74.5%) and recommendations (75%) turned out better or much better than expected. Accessibility (71.9%), staff available to provide assistance when needed (77.6%) and the relief of discomfort (67%) were valued as better or much better than expected. The patients scored their level of global satisfaction with the clinic assistance received during the initial phase of the therapeutic process as  $8.62 \pm 1.80$ , and recommend alcohol program with  $8.65 \pm 1.94$ . Analyzing the history of treatments is found that patients with higher number of consultations ( $>10$ ) significantly valued as much better than expected the prescribed treatment ( $p=0.047$ ), the disposal of the staff when they requested help ( $p=0.000$ ), and the relief of discomfort ( $p=0.01$ ). For patients of mature age the information received about therapeutic process was larger than expected ( $p=0.076$ ) and the documentation received was useful ( $p=0.037$ ). The conclusion was: 1. The patients present a high level of overall satisfaction with their attendance in the alcohol program; 2. The elements rated more positively were: staff attitude to provide assistance, the recommendations, treatments or tests diagnostic used, helpfulness of the staff, accessibility, the information received about the disease, relief of discomfort; 3. How much more extensive were the background of treatment, best evaluated actual treatment, the staff and relief of discomfort in this alcohol program; 4. For patients of younger age will be necessary to adapt both the information transmitted and delivered documentation.



## The Assessment of Oculomotor Disturbances in Patients to Opioids Addicted

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### Abstract

According to the concepts of regulation of mental activity by cortico-subcortical loops, normal operation of all the structures constituting the loop is a prerequisite for their physiological functioning [1]. The oculomotor loop participates in the control of saccadic eyeball movements. Chronic use of psychoactive substances can lead to structural and functional changes in the central nervous system [2]. Patients addicted to opioids may experience symptoms similar to those in people with changes in the cerebral cortex [2,3]. In order to investigate oculomotor disorders in people addicted to psychoactive substances test parameters of eye movements were used as a marker to assess the impact of psychoactive substances on the central nervous system (CUN) [4]. Sixty patients from the substitution program group were examined. The study included 24 women and 36 men (mean age  $39 \pm 7.7$  years) including 29 HIV(-) subjects and 31 HIV(+) ones enrolled in methadone substitution program during an average of 53 months. The study was conducted twice: before and about 1.5 hours after administration of therapeutic doses of methadone. All the subjects were tested for saccadic refixation twice. In both parts of the test saccadic velocity, mean latency, mean duration and mean amplitude were measured.

**Results:** It was found that the average latency time before methadone administration was  $204,2 \pm (64,2)$  ms, whereas after the administration of a therapeutic dose of methadone the average latency time was  $207,8 \pm (58,9)$  ms. The statistical analysis showed that the mean latency was not statistically significant. There was a statistically significant difference in the average velocity of saccades ( $p=0,03$ ) before and after the administration of a therapeutic dose of methadone. The results were verified by Student's t test for dependent samples ( $t=2,24$ ). It was observed that the mean amplitude of the test decreased after the administration of methadone but the values were not statistically significant. The increase of the mean duration values in patients addicted to opioids after the administration of a therapeutic dose of methadone was observed. The statistical analysis revealed that the duration decreased significantly after methadone. The statistical analysis confirms the change in the saccadic refixation parameters in patients addicted to opioids. Chronic use of psychoactive substances may lead to structural and functional changes in the central nervous system that can cause cognitive dysfunction.

## Assessment of Risk Behaviors of Opioid Addicted Patients Treated with the Substitution

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### Abstract

Substitution treatment of opiate addicts is by far the most effective method of addiction management. Substitution pharmacotherapy combined with psychotherapy reduces risk behavior, and facilitates proper functioning of the patients within society. Returning the individual to normal social roles (professional, family) is an important goal for patients chronically treated with opioid replacement therapy (ORT). Thirty one patients from the substitution program were examined. The study included 7 women and 24 men (mean age  $39 \pm 7.7$  years). To assess the tendency for the risk behavior Iowa Gambling Task (IGT) test was used. The IGT is Continuous Performance Task test, which simulates situations that require decision-making. The IGT is a psychological task that simulates real-life decision making. The principal of the test is to simulate games and gambling. In the task there are four decks of cards, containing the winning and losing cards of different monetary value. An individual has to choose a deck, which will provide the player with the card of the highest profit. The first two (of four) choices (four decks of cards) were among risky choices, making a large profit, while even a greater loss (the total win record was lower than the loss record). Two other choices (decks of cards) were the safe ones, because even though they brought little profit, loss was even smaller (the total win record was higher than the loss one). The study was conducted twice: before and about 1.5 hours after administration of therapeutic doses of methadone. After administration of methadone the number of safe decisions and the number of risky decisions was different from the corresponding number of these decisions before administration of therapeutic dose of methadone. We compared the number of risky choices and the number of safe choices of addicted subjects before and after the administration of methadone and found that the numbers were significantly different (fewer risky decisions and more safe decisions after the administration of methadone in comparison to the numbers before administration of therapeutic dose of methadone). The administration of a therapeutic dose of methadone in opioid addicted subjects decreases the number of risky behavior. Opioid addicted subjects during the IGT test about an hour after administration shun dangerous card and more beneficial. There is statistically significant difference in the number of safe and risky decisions before and after administration of the drug substitution as shown in the study.





## A Review of Youth Drinking in Spain from Different Collectives

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### Abstract

We are attending a change in the form how the Spanish youths are related with alcohol. Since some years ago in Spain has jumped to the mass media the worry by a new expression of youthful leisure that popularly is known like "botellón", consistent in the youths multitude meeting in open spaces of the cities to drink, to listen music and to speak among them. The worry by the botellón it's center in two key aspects: the caused inconveniences by the massive meetings derived from the noise and the filth that originate and in second place, by the consideration of the same one as harmful fonn of diversion, product of the high consumption of alcohol and drugs on the part of the youths. For this poster, we study various groups related to the "botellón" evaluating its approach to the reality of this phenomenon and identifying their needs for intervention. Has been interviewed 4083 young people (14-25 years), 212 parents and 63 policemen from the city of Valencia about what they mean by "botellón", the consequences associated with it, and the alternatives they think reduce this phenomenon. Police and youth refers mainly to the alcohol consume with friends. Police and parents highlighted the negative socials consequences of teenage consumption, while young people see positive consequences (socialization) and no association with performance or personal problems. The alternatives proposed by police are lower alcohol prices and to enable "botellódromos", that would not solve youth excessive consumption, and a type of alternative leisure undervalued by young people. The proposals from the parents transfer their responsibility to the administration, school, etc. and together with the policemen intend to increase youth alcohol knowledge. However, the three groups should have access to this information and become aware of the bio-psycho-social consequences of this consumption. In addition, parents have to work their level of consciousness, because they are one of the direct determinants of onset and duration of consumption. A necessary aspect in all groups would be to give more visibility to the health problem involved in alcohol consumption. It is important for parents, and in general for all groups involved, acquiring not only the vision of a social conflict but also the significant impact it has on health alcohol youth are doing. Parents generally show a very low awareness of this phenomenon and therefore their level of responsibility for the solution is very low. Results highlight the need to work with young people the impact that their alcohol consumption, and overall practice of bottle, generated both in themselves and among his closest. Finally it's proposed the need for more global action on the phenomenon, including the notion of leisure culture transmitted to the young.

## Redesign of Community Prescribing Service within Addiction Services in NHS Lanarkshire (NHSL)

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### Abstract

Non-medical prescribing for nurses and pharmacists has been a service delivery option since 2004. This coincided in NHSL with the new GP contract implementation and cessation of GPs prescribing to patients on opiate substitution. To maximise service delivery from Addiction Services in NHSL, pharmacist prescribers were offered positions to work with a clinical caseload. NHSL offers several Non-Medical Prescriber (NMP) clinics and employs a full time pharmacist within the redesigned "Community Prescribing Service (CPS)". These developments have allowed the CPS to evolve with a skill mix of prescribers and a different model to many other addiction services. As patient numbers continue to increase, demands on the service have increased, but the CPS development has allowed increased capacity and improved service for patients with no loss of efficiency, clinical effectiveness or increased staffing costs. The use of NMP increases the number of practitioners working within the CPS, producing a greater balance and mix of prescriber types. A "vision" of the prescribing service with the aim of providing clearer guidance on the development of the CPS and its impact on the delivery and care of patients has been produced. Allocation of patients to the most suitable prescriber and beneficial level of care. To ensure service delivery remains consistent and clear, whilst also providing a high standard of care and support for the prescribers, there has been a review and development of protocols and guidelines for use by the CPS. Recruitment of appropriate and experienced prescribing staff to CPS. The medical support level is at the maximum level attainable with the budget restrictions and is supplemented by pharmacist and nurse NMP. The poster shows how the redesign is being used to allocate the patient to the level of support and prescriber they require. Patients can be transferred between addiction team members and prescribers depending on need and level of support required. A benefit of the CPS is that patients receive treatment and support appropriate to the individual. A checklist of key components is being developed to assess each patient against the criteria annually, the key components include sexual health and dental checks, BBV testing etc. and the checklist ensures documentation on the patient's health and well-being. The medics within the CPS have more of a consultancy role with increased time for medical patient review. The CPS as a whole is delivering a higher level of service with increased levels of co-ordination and clinical governance with improved levels of adherence to guidelines, while the service is providing greater level of support and safety for the patients and prescribers involved. The redesign of the prescribing service (CPS) within addictions services is demonstrating many benefits. The redesign is maximising treatment and prescribing by matching the levels required and providing the most appropriate prescriber to deliver care to the patient. The use of NMP should be encouraged in other areas/services and brings increased diversity, knowledge and multidisciplinary patient care to services.



## Benzodiazepine Prescribing Within Drug and Alcohol Services in NHS Lanarkshire (NHSL)

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### Abstract

Benzodiazepines were reported in a significant number of Drug Related Deaths (DRD) in NHSL in 2010 and diazepam was the benzodiazepine named in toxicology for all DRD involving a benzodiazepine in 2009 and 2010. Concomitant consumption of benzodiazepines and opiates is a well-known risk factor for overdose which may lead to respiratory depression and death. As part of the response to attempt to reduce the increasing number of DRD within Lanarkshire, the addictions service sought to reduce the risk from the co-prescribing of benzodiazepines to patients on opiate substitution. Diazepam is known to have a value on the illicit market, which depends on many factors but predominantly the strength of the tablet. A guideline was developed for the service to use for patients who were either prescribed diazepam and an opiate substitute (irrespective of prescriber) or illicit street diazepam and prescribed opiate substitute. The guideline recommended increased regime of supply and supervision of the opiate substitute to daily and an increase in the frequency at which the diazepam was to be collected (if prescribed), corresponding to the opiate substitute frequency. The guideline recommended a preferred formulation, 2mg diazepam tablets. The guideline was launched within the service and briefings conducted at each individual community addiction team. An evaluation and monitoring data collection system was introduced to assess the changes the policy made to prescribing. The guideline was developed and briefings conducted before 31/3/2011 with the date for the implementation of the guideline agreed as 1/4/2011.

Within first 3 months: Overall reduction in total diazepam prescribing was evident.

Prescribing of 10mg diazepam nearly stopped; Prescribing of 5mg diazepam significantly reduced; Within 12 months: 16% reduction in number of prescriptions issued from the service; 35% reduction in volume of benzodiazepine prescribed from the service; This has demonstrated the guideline being used effectively and efficiently. The prescribing within the service continues to be monitored. As a result of the success the GPs in NHSL wish to adopt and use the guideline to standardise practice and reduce prescribing of diazepam. The effect on reported DRD has also been recorded. Although only a single year comparison, this shows an opposite trend for the numbers of DRD involving diazepam in NHS Lanarkshire in comparison to the Scottish figures. Scotland's figures have increased while the figures recorded in NHSL decreased from 17% to 11%. Prescribers implemented the guideline effectively and patients were made aware the appointment prior to the change, with very few complaints, and most appreciative of the change and increased safety. The guideline has become regular practice by the addiction teams. Significant results in reducing prescription numbers and the volume. Service changes for prescriber and patient stakeholder groups were evaluated and a report being prepared. Continued monitoring of the prescribing within the service. Expansion and monitoring of guideline to GP surgeries as adopted. Increased use of Non-Medical Prescribers to deliver diazepam reduction benzodiazepine clinic(s) commencing January 2013 and will be evaluated and monitored.

## The Initial Effects of Methadone Maintenance Program in Regional Hospital and NGO "Labyrinth" In Gjilan/ Kosovo

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### Abstract

In June of 2012, Gjilan Regional Hospital has started implementation of methadone maintenance program (MMT), a project of the Global Fund and the Kosovo Ministry of Health. In the program have been involved 29 clients of NGO "Labyrinth" Gjilan branch. The involvement in this program was voluntarily based, previously has been carried out the relevant tests and psychiatric interviews. This study aims to assess the initial effects of MMT program, to identify the types of injected drugs, reductions of criminal behaviors, lifestyle improvement, and improvement of social status and the fulfillment of the client expectations involved in the MMT. Data from clients cartels involved in the program were analyzed with SPSS-20. Has been analyzed the type of consumed drugs, criminal behavior before and after involvement in the program, employment status and dropout rate from MMT. Has been estimated the impact of other variables such as: gender, age and marital status on the results obtained with the MMT. In the study were involved 29 client all male, median age 42 yrs SD 8.86, married 20 (69%), unemployed, 23 (79.3%), in the abusing experiences prevails heroin in 16 cases (55.2%), health-threatening behavior (overdose) were identified in 15 cases (51.7%) and criminal behavior before involvement in MMT had 23 (79.3%) cases. Average doses distributed to client were 70 mg/day program, the program voluntary dropout rate was 20.7% (6 cases) and criminal behavior is reduced for 79.3%. Initial results, after 9 months of MMT program are encouraging, criminal behavior has decreased for 79.3%, MMT program dropout rate is 20.7%, none of cases on overdose and average savings of euro 210 / month for each client have contributed to the improvement of clients' social status. The initial result fully justifies the further development of the MMT project.



## Addiction Policy Continued – Proposed Addition to Europad Statements in Barcelona 2012

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### Abstract

The objective was to supplement the existing 'Europad, Barcelona statements 2012'. I use the EQUATOR survey report in 'Heroin Addiction and Related Clinical Problems' to propose 4 new statements to be integrated in the Barcelona statements.

The matters are: Less restrictive treatment, with the safest drug (buprenorphine = buprenorphine+naloxone in efficacy) gives more employment (by comparing the four least restrictive countrise with two restrictive ones). Benzodiazepine prescription to those dependent on it may reduce the use of much more dangerous alcohol and other drugs. Only combining opioid with benzo does not seem to give overdose. Detoxification must be stimulated only when the addict is psychosocially ready for it.

I hope to contribute to the policy-making of the conference, pinpointing these crucial matters.

## Norepinephrine Transporter Gene and Specific Personality in Heroin Abuser

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### Abstract

Noradrenergic pathways have been suggested to play a crucial role in the motivation-reward system of heroin dependence (HD), but so far the study of human norepinephrine transporter gene (NET;hSLC6A2) in the pathogenesis of HD has never been examined. The purpose of this study was to determine whether the polymorphisms of NET gene are associated with HD. Nine single-nucleotide polymorphisms (SNPs) of the NET gene ([rs7194148, rs28386840, rs2242446] in promoter region, [rs1532701, rs40434, rs13333066] in intron 1, [rs187714] in intron 3, [rs5569] in exon 9, and [rs42460] in exon 14) were analyzed in total 965 Han Chinese subjects. The Chinese version Tridimensional Personality Questionnaire was introduced to assess personality traits in HD patients and examined the association between personality traits and these SNPs of NET gene. No statistically significant differences in genotype frequencies of NET polymorphisms between HD patients and controls, although, individuals with A allele of rs1532701 and T allele of rs13333066 have significant protective effect in the development of HD after multiple logistic regression analysis. Moreover, the AATA haplotype frequency in block (rs1532701-rs40434-rs13333066-rs187714) has a significant association between HD patients and controls. However, the nine polymorphisms of NET gene did not influence novelty seeking and harm avoidance scores in HD patients. The AATA haplotype (rs1532701-rs40434-rs13333066-rs187714) of NET gene possibly plays a protective factor in the development of HD, but NET gene is not associated with the specific personality trait in HD patients.

## Lack of an Association between SNPs within the Cholinergic Receptors Genes and Smoking Behavior

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### Abstract

Cigarette smoking is the most common form of tobacco use and is a major preventable cause of cancer and cardiovascular disease. Smoking has a significant heritable component of about 30-60%. Recent genome wide association studies have identified novel single nucleotide polymorphisms (SNPs) within the cholinergic receptors, nicotinic, 3 (rs578776), 5 (rs16969968) and  $\beta 3$  (rs6474412) associated with nicotine dependence in Western European populations. We suppose that the cholinergic receptors SNPs are associated with smoking behaviour (ever vs. never smoking, number of cigarettes smoked per day in smokers) in Czech middle European population. Variants within the cholinergic receptors were analysed by PCR-RFLP in adult (aged 26-65 years) 1,191 males and 1,368 females (post-MONitoring of CARdiovascular disease study). The WHO protocol was used to examine smoking status and number of cigarettes smoked per day. There were 32.1% current and 27.6% past smokers in males and 22.5% current and 13.8% past smokers in females. The mean number of cigarettes smoked per day was  $15.7 \pm 8.7$  in males and  $11.3 \pm 6.4$  in females. The call rate was over 96.3% for each SNP and genotype distributions of all three analysed polymorphisms were within Hardy-Weinberg equilibrium (all  $P > 0.15$ ). We have not confirmed the original results and SNPs rs16969968 ( $P = 0.78$ ), rs578776 ( $P = 0.16$ ) and rs6474412 ( $P=0.95$ ) were not associated with smoking status (never-smokers vs. ever-smokers) in entire population, if co-dominant model of analysis was used. Additionally, this was valid for both the male and female subpopulations, if analysed separately and after adjustment for age. Finally, in ever smokers, the number of cigarettes smoked per day was also independent of different genotypes, regardless of which polymorphism (and gender) was analysed (all  $P$  values over 0.49). We detected, that the association between the cholinergic receptors – nicotinic (-3, -5 and - $\beta 3$ ) and smoking behaviour may be population dependent. Different genetic background or environmental conditions could modify the effect of analysed polymorphisms.



## Gender Group Treatment in Center for Treatment of Drug Addiction

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### Abstract

Single-gender groups are the most common way of implementing the treatment of traumatic experience, because trauma is often sexual or physical in nature, and clients are likely to feel more comfortable with others of the same gender. The clinicians are the same gender as the group (although having a group leader of the opposite gender can create positive new experiences that may be healing for trauma survivors). The outpatient supportive women's group in Center for Treatment of Drug Addiction provides safe environment for resolving the consequences of trauma and prevent relapses with psychoactive substances. In such a group women are encouraged to express their feelings and to explore the self-destructive behaviours that might occur. The gender group aims at establishing a safe and positive environment, providing support in transition period – addiction recovery (relapse prevention), stress management in every-day situations, recognition of emotions, addressing less adaptive behaviors and encouraging more adaptive behaviours – intrapersonal (self-recognition, self-control, self-discipline), interpersonal (listening, empathy, co-operation, problem solving, reasoning) and system (responsibility, feedback, cooperation in group) skills. After the treatment women display a more assertive behaviour and are able to express their feelings more openly. The group of open format takes place once a week for 60 minutes and it is co-led and long-term (1 year or more). Clients are women who are sexually, physically and/or emotionally abused. The majority of them is drug-addicted, however in order to enter the group they must be drug-free (toxicology – urine samples). As a therapeutic group it integrates approach to PTSD (Post Traumatic Stress Disorder) and SUD (Substance Use Disorder): supportive therapy with elements of CBT (Cognitive-Behavioral Therapy), psycho educational approach, personal attention, problem-solving and supportive ways rather than confrontational ways. After the treatment women display a more assertive behavior and are able to express their feelings more openly.

## Study of Relapsing Causes in Drug Users in 2010 – Iran, Kermanshah

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### Abstract

The aim of this study was to determine the causes of relapse in drug users. In this study we used a two-part questionnaire, that its validity and reliability has been confirmed, and assessed the 491 clients who had referred to Substance abuse clinics in Kermanshah by using Random quota Method: Results: The mean age of subjects was  $32.41 \pm 13.64$ . Respectively most common factors that have a large impact on Relapse was Psychological causes with 66.7 percent, social factors with 57.5 percent, and physical factors with 39 percent and family factors with 32.4. They introduced respectively associated with addiction and inappropriate friends, family problems, drug craving as major causes of Relapse. Several factors are involved in the relapse process that in this study, perspective was psychological and social factors. We must apply appropriate intervention to prevent Relapse causes.

## Replacement Therapy in the Treatment of Addicts with Dual Psychiatric Diagnosis - Five Years of Experience

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### Abstract

This paper aims to show the experience of our institution in the application of replacement therapy in the treatment of opiate addicts with a dual diagnosis. Retrospective analysis of the treatment of opiate addiction with a dual diagnosis treatment at the hospital's Institute for Addiction Zenica-Doboj Canton in the period 2008-13 years. In this period, 345 were treated opiate addicts and in 149 (43.18%) was placed on a dual psychiatric dg. 110 patients (73.82%) were treated with methadone and 39 (26.18%) with suboxone. All treated patients showed a significant reduction of symptoms with those basic symptoms that patients with psychotic and personality disorders better to treatment with methadone and patients with affective disorders have responded better to treatment Suboxone. Opiat agonist therapy in addition to the favorable effect on the treatment of opiate addiction has significant secondary effects on core symptoms of psychopathology of opiate addicts as confirmed by the experience of our institution.



## Extended-Release Naltrexone as Jail and Prison Re-Entry Treatment for Opioid Dependence

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### Abstract

Heroin relapse following incarceration is routine and contributes to overdose and mortality. We are investigating the effectiveness of extended-release naltrexone (XR-NTX) vs. Treatment as Usual (TAU) as opioid relapse prevention in two clinical trials: a) among incarcerated persons leaving NYC jails, and, b) among community-dwelling persons on parole, probation, or recently release from jail/prison. Method used: A) An RCT of XR-NTX (Vivitrol) injection prior to release from jail, vs. TAU, is recruiting N=40 opioid dependent adults incarcerated in NYC jails and not seeking methadone/buprenorphine treatment. A 2nd XR-NTX injection is given post-release. Follow-up visits (1, 2, 4, 8 weeks post-release) document sustained opioid relapse (primary outcome). B) a 5-site N=400 RCT of 6 months of XR-NTX vs. TAU among opioid dependent parolees is recruiting n=80 participants at the NYU/Bellevue site. Within the jail re-entry RCT, to date 32 participants have been randomized: 17 to XR-NTX and 15 to TAU. Screening, recruitment, randomization, and in-jail XR-NTX injections appear feasible. 4 week post-release follow-up rates are: 56%, XR-NTX; 53%, TAU. 4 week post-release opioid relapse rates are lower to date among XR-NTX participants: 40% vs. 87% (p. XR-NTX is a new, potentially effective option for opioid treatment among criminal-justice-involved populations. XR-NTX is appealing to individuals not interested in methadone or buprenorphine agonist treatment.

## Risk Behaviours of Illicit Drug Users while Travelling

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### Abstract

Despite various formal limitations, an increasing number of illegal drug users, especially those stabilised on substitution therapy, set off to travel abroad, away from their permanent residence. The aim of the study was to identify and determine the frequency of potential travel-related risk behaviours of illegal drug users included in programmes of Centres for prevention and treatment of drug addiction in Slovenia.

A combination of qualitative and quantitative research approaches was used to test the hypotheses. The study was carried out in two phases. The first phase included semi-structured interviews conducted in a group of drug users willing to participate in the study. Based on the analysis of transcripts and additional data a questionnaire Risky behaviour of illegal drug users during travels was developed. Twenty-five personal interviews were conducted. The questionnaire was filled out anonymously and voluntarily by 776 individuals in 14 Slovene Centres for prevention and treatment of drug addiction. The results confirmed that drug users travelling away from their permanent residence are more likely to share their injecting equipment, and engage in unprotected sex, drug-related crime, and more often use drugs while travelling. But illegal drug users who travel abroad do not stop taking their substitution therapy. The findings of this qualitative study provide insight into potential risks that drug users are exposed to while travelling abroad. The results of quantitative analysis also showed a low prevalence of travel-related risk behaviours, including the sharing of injecting equipment, and engaging in unprotected sex and drug-related crime.

## Arts Therapies as the Main Therapeutic Tool in a Drug Rehabilitation Center

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### Abstract

In this paper we intend to look into which way Dramatherapy, Dance/Movement therapy, Art therapy and finally Music therapy techniques could be very helpful for drug addicts treatment. In addition, we examine the ways in which personality, behavioral and cultural changes can progressively occur. Because we acknowledge addiction to be primarily a cultural phenomenon, as well as mental, moral, legal, and social phenomenon, we therefore deal with it by using the enlightening stimuli of culture. Dramatherapy through metaphor makes it easier for raw and painful experiences to be expressed. Story making, storytelling, and role playing based on myths, release emotions through the theatrical paradox and "aesthetic distance". In Dance/Movement therapy groups the patient has the opportunity to confront with his own body. The same body he mistreated and exposed it to the harmful repetitive act of substance abuse. During a Music therapy session, the group achieves a positive reaction to rhythm and reflection through the progressively building of what we call group rhythmic co-ordination. Art therapy provides the transitional space, where boundaries can be tested in a safe ground, negative emotions can be more easily expressed and at last an internal locus of control can be gradually formed against these unconscious forces. In the first phase of the therapeutic process our work is focused on strengthening their decision to stop the substance abuse. Our goal is to alter the depressing feelings deriving from their past life and to redefine their relationship with their body. We also aim to promote cultural activities in order to cope with their difficulty to act as being part of a group. In the rehabilitation phase, we aim to encourage a life rehearsal working mostly on relational issues. This is extremely important for the individuals, as they improve their interpersonal skills as far as employment and general well-being is concerned. In terms of numbers, the success of this therapeutic center is represented by a percentage of 80% of clients who remain clean for at least five years after the end of the treatment. To sum up, arts therapies have a very positive impact in drug addicts as opposed to behavioral therapies or substitution treatment. Additionally, they create a cultural environment, which functions as a container for the group and eventually provides a more positive way of living. Finally, successful drug rehabilitation means a radical change, which can be easily compared to the alteration of the pressure that the individual feels inside the civilization, as Freud states.





## Drug and Alcohol Abuse among Burmese Refugees in Thailand

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### Abstract

It is an exploratory analysis of a hugely understudied topic in a relatively inaccessible area of the world. This study explores the mental health problems of drug and alcohol abuse among Burmese refugees in Thailand. There has been much in the news recently about the evolving democratic situation in Burma, Aung San Suu Kyi, and the possibility of refugees returning to Burma. This study focuses on how substance addictions can complicate the peace-building and repatriation process. The study forms part of a chapter on Drug and Alcohol Abuse in the upcoming volume, *The Burma Border, a Case Study for Global Mental Health Workers*. Many displaced people turn to substance abuse to cope with the daily traumas of murder, violence, forced labor, and rape amidst limited opportunities for education and employment. The study describes programs of prevention education to reduce substance abuse and associated social problems, as well as treatment methods for recovery from addiction on the Thai-Burma border.

## Alcohol Related Health Consequences in Slovenia (2000-2010)

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### Abstract

Alcohol use is a major preventable risk factor for chronic diseases, injuries and violence, as addiction and more than 60 different diseases and injuries are caused by alcohol abuse. In the world abuse of alcohol is the third most important risk factor for morbidity and disability and eighth for mortality. The issue of alcohol abuse in Slovenia represents an important public health problem.

## Smoking-Related Psychopathology in East Asia and Australia: A Test of the Hardening Hypothesis

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### Abstract

The so-called hardening hypothesis posits that the relationship between tobacco smoking and mild psychopathology in Western countries reflects the decline in smoking prevalence in response to anti-smoking campaigns and anti-smoking stigma. The idea is that most smokers who have the psychological resources to quit have already done so, leaving the remaining smoking population characterized by comparatively poor psychological wellbeing and high levels of nicotine dependence. The current study examined this idea by assessing mood and trait correlates of heavy smoking in a Western country where smoking is relatively uncommon and highly stigmatized, Australia, and in the East Asian countries China and Japan, where smoking is more normative. The following groups of young adult men and women aged 19-31 years were recruited both online and through newspaper advertisements for paid research participants: current heavy smokers, defined as smokers who smoke at least 20 cigarettes per day and who have done so for at least one year prior to present; never-smokers, defined as those who have never smoked cigarettes; and ex-smokers, defined as former heavy smokers who have not smoked for at least one year prior to present. Measures included a demographics questionnaire, the Fagerstrom Test for Nicotine Dependence (FTND), the Depression Anxiety Stress Scales (DASS-21), the Negative Mood Regulation (NMR) scale, the Alcohol Use Disorders Identification Test (AUDIT), and the Frontal Systems Behavior Scale (FrSBe). The total sample size after deletion of cases with missing data, outliers and those who did not qualify (e.g., those who claimed to be non-smokers but scored above 0 on the FTND) was 412. Overall, among current smokers FTND scores were significantly positively correlated with DASS Depression, Anxiety and Stress, FrSBe Apathy, Disinhibition and Executive Dysfunction, and AUDIT, and negatively correlated with NMR. Multivariate analysis controlling for age and gender indicated that across both samples current smokers scored significantly higher than never-smokers and ex-smokers on DASS Depression, Anxiety and Stress, FrSBe Apathy, Disinhibition and Executive Dysfunction, and AUDIT, and significantly lower on NMR. East Asian smokers reported significantly higher levels of nicotine dependence than Australian smokers and the differences between smokers and non-smokers on indices of psychopathology were greater among East Asians than among Australians, presumably reflecting the higher levels of nicotine dependence in the former sample.

The findings clearly contradict the hardening hypothesis and are instead consistent with either a pre-smoking trait interpretation of group differences or an interpretation invoking chronic addiction to account for smoking-related psychopathology.



## Evaluation of the English Alcohol Improvement Programme (AIP)

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### Abstract

To conduct an evaluation a) to assess the extent to which the AIP impacted on the rate of increase of alcohol-related hospital admissions and b) to cast light on the ways in which this initiative contributed to efforts to reduce alcohol-related harms more generally. Collection of key documents (policy documents and local documents relevant to AIP implementation); analysis of key statistics; interviews with key stakeholders:- all Regional Alcohol Managers and other members of RAM Offices; Department of Health policy team; members of Alcohol National Support Team; and other policy/ delivery and practice players at Primary Care Trust and regional levels; semi-structured telephone interview survey of PCT alcohol leads ; case studies:- 2 Early Implementor areas and 2 non-Early Implementor PCTs; and attendance at key meetings. There was no evidence that the AIP had an impact on lowering the rate of increase in ARHAs. There were regional variations in the rate of increase in ARHAs but all regions show a similar, increasing trend over time and no obvious changes were associated with the introduction of the AIP. There was no evidence that the rate at which ARHAs were increasing was different in EI compared to non EI sites or that the AIP had a differing effect on EI compared to non EIs. There was inadequate data to assess cost effectiveness. However in the context of figures on the cost of alcohol problems to the NHS, the total direct expenditure on the AIP programme (£7.7 m in 2008/9; £9.8 m in 2009/10; £4.9 m in 2010/11) may be expected to yield only a modest impact at a population level. The models developed regionally varied and were appropriate to very diverse environments and patterns of need. While a simple outcome evaluation might conclude that this was a 'policy failure', a more subtle systems approach to evaluation, recognising complexity in the realities of policy development, concludes that the AIP contributed to raising awareness, stimulated a more strategic/coordinated response to alcohol related harm at local level and supported capacity building and skills development in the workforce.

## Buprenorphine Treatment with Minimal Psychosocial Intervention

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### Abstract

We will present our experience in private practice of opioid medication treatment in Israel, and its impact on country policies and practices. Historical review Retrospective Data of patient retention in treatment. A short story of opiate medical treatment in Israel is as follows: Methadone was introduced in 1978 and by present there are 4500 patients treated. Till the introduction of Buprenorphine in 2002 there was a large deficit of therapeutic availability. The waiting list for Methadone was longer than a Year. Beside this the treatment was provided with a lot of barriers and in a very authoritative fashion. There was also psychosocial treatment available, but it was exclusively for drug free patients. According to regulation, Primary Medicine and general psychiatric do not provide almost any service for this population. At this time our clinic comes to the scene of treatment in Israel and introduces a whole new concept of treatment. Hebetim Clinic as a private sector "player" took the initiative in 2004 and provided minimal treatment without any governmental support neither for therapy or drug provision. Inspired by the spirit of Motivational Enhancement Treatment, the aim of the clinic was to make possible for every patient to get a buprenorphine prescription immediately and with no barriers and as cheap as possible. We will present our treatment protocol, that includes minimal psychosocial treatment, for economic reasons and the results of our experience, that at the end (December 2012) influenced the ministry of health and was one of the catalyzators for adopting Suboxone as a free medicament. This minimal treatment, that was a result of lack of treatment facilities in the country proves to be very effective and with minimal side effects. We treated 1440 patients 1297 of them visit the clinic more than one time. From them 48% are still in treatment, while 10.5% were referred to public facilities and 5.6% were withdrawn from opiates at all. Patients come from all over the country, Some patients travel for 3-4 hours once a month to get the prescription. At the beginning just 2-3 pharmacies in the country agreed to provide the medicament, but gradually more and more pharmacies began to do this. Our experience shows the therapeutic effect of buprenorphine itself and can be taken in account as a second best choice for treatment in countries that confront social problems and lack of resources and influenced by an obsolete drug free policy, as Israel. After all this patients and years of experience we are fully convinced that this treatment is much better than no treatment. At the end in 2012, our approach was adopted by the ministry of health in a large scale and soon Suboxone will be provided free to all patients, hopefully while lowering barriers for treatment.



## Changing Trends in Methadone Use and Abuse

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### Abstract

Methadone has a long and successful history as a potent analgesic and a highly effective medication for reducing the morbidity and mortality associated with opioid addiction. However, diversion, abuse, and deaths associated with many opioid medications, including methadone, have become a significant public health concern in the U.S. Over time, the patterns of use of methadone have changed from a street drug used by heroin addicts to lessen the problems with heroin to its use as a medication for chronic pain and its diversion for nonmedical use. The shift in the reasons for its use has also resulted in changes in the characteristics of the users in terms of race/ethnicity, gender, and age. Longitudinal data were analyzed from emergency department visits (DAWN), treatment admissions (TEDS), drug poisoning deaths (NCHS), retail sales (ARCOS), and items identified by toxicology laboratories (NFLIS) to identify trends over time. Individuals entering treatment for problems with illicit, non-prescription methadone, as compared to heroin admissions, are increasingly White and female. Admission rates for females for emergency department visits and treatment admissions are increasing. In terms of age, those individuals with a primary problem with other opiates or synthetics are younger, those with a primary problem with heroin are older, and users of non-prescription methadone are most likely to be 25-34. The rates for methadone deaths peaked in 2006-2007, retail sales leveled off after sales of 40 mg diskettes were limited, and the number of methadone items identified in toxicology laboratories has remained stable since 2010, but rates of emergency department visits have continued to increase.

Use of methadone in combination with benzodiazepines is increasing and the extent of problems with methadone varies by state and differing state controls on dispensing of these drugs. Over time, individuals who have misused or abused illicit methadone are becoming more similar to those who seeking services for problems with other opiates and synthetics and more dissimilar to those using heroin. Increasing problems are seen among females using methadone. Treatment admission and death data show a bimodal picture of younger abusers who are using the drug for euphoria and older patients using the drug for pain. Use of benzodiazepines is a common problem with the use of methadone. The variations in prescription monitoring programs in each state make it difficult to initiate a broad regional response to misuse of methadone.

## The Impact of Intravenous Use of Synthetic Cannabinomimetics on the Heroin Addict

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### Abstract

In spite of the fact that Spice has been considered illegal in Romania since 2010, the consumption of these new synthetic substances has turned itself fast into a rising trend, according to our National Anti-drug Agency (NAA). While heroin still remains the most popular illicit drug for intravenous use, the constant need to experience new sensations has led to the injection of these cannabinoid-like products, without being aware of the physiological effects. The fact that these substances possess a high affinity and efficacy makes them extremely potent. What is more concerning about their pharmacology and toxicology is that they have to be evaluated in a context in which it appears that most of the ingredients listed on the packaging are actually not contained by the sold products. In order to assess the consequences of the intravenous use of Spice products on the mental and physical health status of patients with both heroin and Spice history, we have chosen to illustrate a case series and make a comparison between heroin injection and cannabinoids injection, based on their experiences. Although Spice addiction characteristics resemble those of any other type of drug addiction, the physical dependence, coupled with the psychological craving for Spice was far more pronounced. The users described that the more they injected, the greater was the craving for a new amount of substance and for an increased frequency of administration as compared to heroin. The effects of Spice use consisted of anxiety, prolonged insomnia, cold sweat, restless leg syndrome and considerable loss of weight. The negative consequences of Spice consumption were noticed as having a far greater impact on physical and mental health than those of heroin use. This growing public health issue requires an efficient monitoring system and it can only be prevented by approaching these patients from a bio-psychosocial perspective and supporting their reintegration into society.



## Predicting Gambling Problems in Online Poker Players: Sex Differences in Personality Characteristics. Development of a Continuous Scale Based on DSM-IV for Measuring Gambling Problems

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### Abstract

To investigate sex differences in personality characteristics of online gamblers with different degrees of gambling problems. A second aim of the study was to test a continuous scale based on DSM-IV, instead of more commonly used dichotomous scales, for measuring gambling problems. A total of 323 online poker players, 291 males and 32 females (mean age 28.9 yrs), filled in an internet-based survey. The questionnaire consisted of a continuous variable measuring gambling problems based on the DSM-IV (1994) [1] criteria for pathological gambling. The personality characteristics sensation seeking [2], obsession-compulsion and depression [3], and external locus of control [4] were also measured. Female gamblers tended to score higher on gambling problems than males. Sensation seeking, obsession-compulsion, and depression predicted gambling problems in males, while only depression predicted gambling problems significantly in females. Suicidal ideation correlated significantly with gambling problems for both men and women. In the general population, males have been found to have more gambling problems than females, but the findings of this study show that among actual players, gambling problems tended to be more severe among female players. It is thus concluded that female gamblers may run a higher risk for the development of problems than males. The findings might be useful for clinicians treating problem gamblers as well as for legislative efforts. The benefits of the use of a continuous scale for measuring gambling problems are recognized as far as the measurements of sex differences are concerned.

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## Intentional Self-Poisoning Attempts in Persons with Psychoactive Drug Misuse (According to the Multidiscipline Emergency Hospital Data)

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### Abstract

Psychoactive drug including alcohol misuse is the significant risk factor of suicidal behavior. The goal of the study was to define social-demographic and clinical characteristics of self-poisoning suicide attempts (SPSA) patients in multidiscipline emergency hospital. 102 patients, mean age 41,7+1,9 years, 29 (28,4 %) males and 73 (71,6 %) females, with SPSA were investigated. Specially elucidated formalized investigation card consisting of 268 items was used. The majority (55%,  $p < 0,01$ ). Dependency on psychoactive substances is the powerful factor influencing SPSA. The obtained data provide important information for additional anti-suicidal activities such as professional training, preventive measures, and community education.

## Brief Intervention for Alcohol Problems: Evaluation of Attitudes among Nursing Students

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### Abstract

This study evaluates the effect of a brief intervention addressing alcohol consumption, and attitudes and level of knowledge of nursing students regarding alcohol use, harmful use and dependency. This is a quantitative, analytical, experimental and prospective cohort study. The sample was composed of 120 students of a nursing undergraduate program at the Federal University of Uberlândia MG Brazil. The students were divided into two groups, one received the course (experimental group) and the other did not (control group). Data were collected through a structured questionnaire addressing socio-demographic information, the Alcohol Use Disorder Identification Test, another questionnaire addressing knowledge concerning alcohol consumption and care, and The Seaman & Mannello Nurse's Attitudes toward Alcohol and Alcoholism Scale. Data were collected before and one month after the course was administered. Results from students from both groups revealed that the older the student the more positive the attitudes related to their availability to care for alcoholics. It was verified among students from the experimental group before the intervention that the higher the alcohol consumption the more positive attitudes in relation to personal attitudes and skills to work with alcoholics. The conclusion is that the brief intervention has positive potential to generate changes in the attitudes of future nurses who will be responsible to provide this type of care. Therefore, this course should be included in the curriculum of nursing programs.



## Attitudes of Nursing Students towards the Use of Psychoactive Substances, Religious and Spiritual Aspects of Care

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### Abstract

The aim of this study was to identify the possible relations between attitudes and perceptions of nursing students about religious and spiritual care offered at health services for users of alcohol and/or drugs, before and after an educative intervention.

**Method:** The sample consisted of technical and higher-education Nursing students, affiliated with public and private institutions in Barra do Garças/MT, Brazil. In the educative intervention phase, 62 higher-education students were included and, in the psychometric study, technical students participated as well. In compliance with the inclusion and exclusion criteria, 246 individuals took part in the evaluation of the DDPPQ-br and 188 in the TSRS-br study. The research questionnaire was applied before and one month after an intervention, which involved questions on general information; knowledge in Nursing care delivery to alcohol and other drugs users; scale of perception about the emphasis on religious and spiritual care in health services (TSRS-br) and two attitude scales, the DDPPQ-br and the Short Alcohol and Alcohol Problems Perceptions Questionnaire (SAAPPQ). The interviewees' mean age was 23 years ( $Sd \pm 4.83$ ). The results evidenced increased knowledge and a significant improvement in students' attitudes after the educative intervention, but the same was not found with regard to their perception concerning the emphasis put on religious and spiritual care during care delivery involving alcohol and drugs use at the services. No relations among these variables were observed either. As regards the psychometric properties of the DDPPQ-br, a Main Components Analysis confirmed the construct validity of the 16-item instrument, divided in five factors. The global internal consistency found corresponded to  $\text{Alpha}=0.85$ . Like the original instrument, the TSRS-br continued with ten items, divided in two factors. The kappa coefficient to evaluate test-retest reliability varied between  $=0.22$  and  $0.47$ , while the global internal consistency coefficient  $\text{Alpha}=0.85$ . In conclusion, the academic world should continue investing in a broader discussion about substance use and abuse and its interfaces with the implementation of religious and spiritual care, which can be developed through a help relation, besides improving forms of examining the effectiveness of educational interventions to work in this area. The instruments used in this study for that purposed showed satisfactory reliability and construct validity coefficients.

## Drugs Use by Adolescents and Their Perceptions about Specialized Treatment Adherence and Dropout

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### Abstract

The aim of the present study is to know the life course of the adolescent during a anti-drug treatment, from the first experimentation to the perceptions on the treatment. Based on qualitative research we seek for understanding of the acts and behavior of the individuals by giving priority to their point of view. The gathering of data was performed by means of a semi-structured guideline of interviews. The adolescent participants of the study belonged to or had already abandoned the Center for Psycho-Social Care for Alcohol and Drugs II in Ribeirão Preto-SP. The data were analyzed through thematic categorization of content. Fourteen adolescents - predominantly male with an age between 14 and 19 years - were interviewed, eight of them are participating in the treatment and six had abandoned it. The major part had a school education below the appropriate level for their age. Marihuana was the most used drug. The adolescent who abandoned treatment had more experimentation of other drugs in comparison to those who were under treatment. The network of relationships composed of other drug users appeared to be very influent for the use of the drug, for the experimentation, as a factor which increased the desire/ intensity of use and as a reason for abandoning the treatment. Another aspect mentioned was the bad usage of free time and the recreational activities which favor the contact with drugs. The drug was related to an escape from conflicts and own feelings. With regard to the specialized treatment, many adolescents started it on referral by judicial authority or by the family. Among the favorable factors of maintaining the treatment were the network of relationships without drug users, the family participation, the "power of will" as well as the relationship with the professional treatment team. The factors which predispose the abandonment of treatment were accessibility to the drugs, the inadequacy of treatment, the network of friends, the absence of familiar support and the reluctance to abandon the use of drugs. Finally, the adolescents suggested that an attractive and efficient treatment should dispose of a professional team appropriate for working with the adolescents. The activities proposed by the treatment should arouse their interest and motivate them, and the treatment must be attentive to the needs of these individuals at night and during weekends when the use of drugs occurs more intensively. The study concluded that the findings made are able to contribute to the elaboration of suggestions for therapeutic interventions addressed to adolescent drug users, thus favoring their adhesion to the treatment.





## Predictors of Cocaine and Crack Use in Outpatients Treatment

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### Abstract

The present study examined predictors (biological, psychological and social) that influence in the outpatient treatment of the cocaine and crack users. A cross-sectional was undertaken. The research was developed at the CAPSad in Ribeirão Preto, SP, Brazil, using a clinical sample of 95 outpatients, 42 (44.2%) of whom were cocaine users and 53 (55.8%) crack users. Predictor variables included results from the: Sociodemographic information, Severity of Dependence Scale (SDS), Cocaine Craving Questionnaire-Brief (CCQ-B) and the Addiction Severity Index (ASI-6) measured at the start of treatment. The sample predominantly included male, adult, white users with low education levels, Catholic and active in informal work, without any difference between the groups (cocaine and crack users). No differences were found between cocaine and crack users with regard to the most used drug, age of first use, duration of drug consumption, in years and days, binge drinking (in life), severity levels of alcohol dependence and craving. Crack users showed higher severity levels of drug dependence (SDS and ASI6). Drugs use and family and social support were the most impaired areas among these users. Correlations between area scores: drugs use, psychiatric, legal/justice, family/social support on the ASI and SDS scores were statistically significant. In addition, a negative correlation was found between ASI-6 areas: drugs use, alcohol use, legal/justice, and a positive correlation between the family area and the severity level of the craving. Correlations were also identified among most ASI-6 areas; exceptions were the family and employment/financial areas. Age was negatively correlated with drugs use, legal/justice, and positively with the medical area of the ASI. No distinctions in drinking consequences were found between cocaine and crack users. A positive correlation was found between total ASI score with SDS, but opposed to total CCQ-B scores. In conclusion, the relation between cocaine and/or crack use and biological, psychological and social aspects are complex and multidimensional. Therefore, assessing the peculiarities of cocaine and crack use permitted the identification of crucial elements in health and social aspects, which can contribute more appropriately to guide and plan quality care to this population.

## Cortical Excitability Changes Caused By Total Sleep Deprivation in Bipolar Depression: A TMS-Hdeeg Study

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### Abstract

During depressive episodes, a reduction in slow-wave sleep was reported in many studies. According to the synaptic homeostasis hypothesis, slow-wave sleep decreases if synaptogenesis and synaptic potentiation are hampered. Sleep deprivation therapy response rates are similar to those observed with antidepressant drugs, but the response becomes clinically relevant in a matter of hours after the beginning of treatment, whereas drugs need weeks. However, the electrophysiological effects of sleep deprivation in the human brain are not known. It has been demonstrated, in rats, that the more wakefulness is prolonged, the more synaptogenesis and synaptic potentiation are promoted. Synaptogenesis and synaptic potentiation are associated with higher cortical excitability. We studied if total sleep deprivation (TSD) therapy causes changes in human cortical excitability. We collected, during the TSD period, electroencephalographic (EEG) potentials evoked by transcranial magnetic stimulation (TMS) in twenty-two IAPatients with bipolar disorder during a depressive episode. Cortical excitability was measured both from the local and global EEG response to TMS. We demonstrated a pattern of increasing cortical excitability throughout TSD treatment. This increase was more pronounced in responders. Nonresponders always showed lower cortical excitability, on average, than responders. These findings suggest that in humans sleep deprivation promotes synaptogenesis and synaptic potentiation, consistently with previous animal studies; moreover, they suggest that the promotion of synaptogenesis and synaptic potentiation is linked with the response to TSD, consistently with previous studies on other therapeutic tools for depression, such as ECT or antidepressant drugs. A noninvasive measurement of the changes in cortical excitability associated with mood disorders could be a fundamental tool in disentangle their pathophysiology.



## The Effects of Total Sleep Deprivation on Brain Connectivity in Patients with Bipolar Disorder during a Depressive Episode: A TMS/EEG Study

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### Abstract

There is a growing body of evidence suggesting that the pathogenesis of mood disorders is linked with a dysregulation in the immune system, leading to elevated serum concentrations of different cytokines. After passing the blood-brain barrier, cytokines can impair the glutamate-buffering capacity of astrocytes, causing oligodendrocyte death through glutamate excitotoxicity. Consistently, in patients with bipolar disorder, post-mortem gene expression studies demonstrate downregulation of key oligodendrocyte and myelination genes, and neuroimaging studies suggest disrupted white matter integrity, which could alter the functional connectivity between different brain areas. It is tempting to speculate that critical bipolar illness phases could be associated with altered functional connectivity, with opposite findings in stable euthymia. Sleep deprivation is a fast-acting therapy for depression, with response rates similar to those observed with antidepressant drugs, but with clinically relevant improvements of mood in a matter of hours after the beginning of treatment. However, the electrophysiological effects of sleep deprivation in the human brain are not known. We studied if total sleep deprivation (TSD) therapy causes changes in functional connectivity between different brain areas. We collected, during the TSD period, electroencephalographic potentials evoked by transcranial magnetic stimulation in twenty-two patients with bipolar disorder during a depressive episode. In order to quantify functional connectivity, we used Significant Current Scattering, a recently developed index that measures the average distance of significantly activated sources from the site of stimulation. We demonstrated a pattern of steady functional connectivity throughout TSD treatment, both in responders and in non-responders. Non-responders always showed lower cortical functional connectivity, on average, than responders. Clinical improvement after TSD does not appear to be linked with better functional connectivity. The differences described between responders and non-responders are probably due to higher anatomical and functional impairment, already present at the beginning of treatment, of cortical circuits.

## Clinical Outcome in Patients with Long-Acting Injections V. Oral Medication in Schizophrenia: A Descriptive Study

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### Abstract

Compliance to long-term medical treatments has been shown to be lower than adherence to acute treatments, with a consequent worsening of clinical conditions (Laan et al. 2010). Efficacy of antipsychotic medications has been experimentally confirmed (Heeg et al. 2008), but their effectiveness is biased by psychotic patients' generally low compliance. Antipsychotic long-acting injections (LAIs) are the standard choice to increase compliance and consequently improve outcome when adherence to oral medications is low (Leucht et al. 2011). The aim of this study was to discriminate differences in outcome between patients on oral medication and those who are regularly administered a LAI treatment. We assessed patients on several psychopathological and clinical measures, assuming a between-group difference of exposure to antipsychotic medications. We collected psychopathological and clinical data of 100 schizophrenic patients who are regularly treated within our department; we divided our sample in two subgroups according to the type of treatment (oral vs. LAI). We matched patients depending on sex, age, schizophrenia subtype and age of onset, and compared psychopathological variables on 32 couples. We did not find any statistically significant difference between the two subgroups, as regards the outcome: patients who on oral antipsychotic treatment were comparable to patients treated with LAIs, in terms of psychopathological and clinical rates. Overall benefit of LAI over oral medication is far from conclusive (Haddad et al., 2009). Our study shows no relevant difference in terms of outcome when patients with similar clinico-demographic profiles are compared.



## Symptom Intensity In Schizophrenia: Does Familiar History of Psychiatric Disorders Matter?

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### Abstract

Genetic factors and gene-environment interactions together contribute over 80% of the liability for developing schizophrenia. Schizophrenia runs in families and there are significant variations in the incidence of the disorder, with urbanicity, male gender, and a history of migration being associated with a higher risk for developing the illness. We collected data from the charts of 100 schizophrenic patients attending our psychiatric outpatient services, in order to investigate the possible implications of psychiatric familiarity on the severity of the illness. We defined two distinct subgroups of patients on the basis of familiarity (at least one parent or brother with a psychiatric diagnosis) and matched patients for age and illness onset. Each patient was evaluated with psychometric scales (BPRS and PANSS for symptom intensity, NRS for extrapyramidal side-effects of antipsychotic medications, SWN for the subjective well-being of patients on treatment with neuroleptic drugs). We estimated the global severity of symptoms on the basis of psychometric results and number of hospitalizations during the last three years. We correlated psychometric scores with familiarity for a psychiatric disease. We confirmed a higher prevalence of psychiatric diagnoses among patients' families compared to the general population: 29% of our patient sample was found to have at least one parent or brother with a reliable psychiatric diagnosis. Surprisingly, patients with a positive familiarity did not show a worse psychopathological profile compared to patients with a silent familiar history: BPRS and PANSS scores were significantly lower in the schizophrenic group with at least one parent or brother affected by a defined psychiatric diagnosis compared to the schizophrenic subgroup with a silent familiar psychiatric history ( $p$  value  $< 0.05$ ). SWN, NRS and Number of hospitalizations scores were found to be similar between groups. Shared genetic and environmental risk factors for any psychiatric disorder in affected relatives do not appear to determine worse clinical outcomes in Schizophrenia. This finding may at least in part be explained by earlier recognition of onset in the context of families with a complex psychiatric history. Close monitoring by mental health professionals could contribute to a lower intensity of symptoms in schizophrenic patients with a positive familiarity for psychiatric diagnoses.

## A Neuroeconomics Approach to Explore Social Decision Making in Schizophrenia

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### Abstract

In this study we explored the strategic behaviour of schizophrenic patients playing the Dictator Game (DG) and the Ultimatum Game (UG). The UG involves two players, the Proposer and the Responder; the Proposer is given a sum of money and has to offer the Responder a part of it. The Responder may either accept the offer or reject it. If he or she chooses to accept the offer, the sum of money is divided between the two according to that offer. If he or she regrets the offer, then both players receive nothing. To maximize his or her payoff, the Proposer is supposed to use a mentalizing ability. The responder, on the other hand, might face a conflict between "rational" thinking (the goal of maximizing his or her payoff) and emotional arousal concerning social norms. Previous data suggest that unfair offers are frequently rejected by healthy participants, due to social punishment or aversion to unfairness. In DG, the Proposer is free to choose whether or not to offer a given sum of money to the Responder. Since people affected by Schizophrenia have impaired mentalizing ability, we hypothesized they would not show an increase in their offers as Proposers in UG compared to DG and would not refuse unfair offers as Responders. 19 schizophrenic patients and 10 controls were tested with DG and UG. Participants underwent 24 trials of DG as Dictators, 24 trials of UG as Offerers and 24 trials of UG as Responders. The trials were played in a computerized version. For economic reasons, we decided to use as change value 10 glass fiches for each trial, instead of money. In the UG-Responder trials, all participants received the same 24 offers in a fixed random order. In the DG and in the UG, participants played with two different types of players: pictured avatars, distinguished by a numerical code, and 12 video-registered confederates of the experimenter (6 males and 6 females). Replies and offers made by avatars and confederates were predetermined by the experimenter, following the conventional rules: if the offer made by the participant was less than 3, the offer was rejected. If the offer was 4 fiches or more, the offer was accepted. If the offer was 3 fiches, 50% of them was accepted, 50% rejected, in a random way.

**Results:** As supposed, in the schizophrenic group UG mean offers were not significantly higher than DG offers, while controls showed the opposite. Compared to controls, schizophrenic patients showed a higher propensity to accept unfair offer. Moreover we noticed that schizophrenic patients' behaviour was not influenced by the type of player (avatar vs human being). The main goal of our research was to study how schizophrenic patients allocate a resource when asked if sharing it or not, and how their behaviour changes during a negotiation, in which strategic mentalizing can help to gain some advantage. The "Homo Economicus" model predicted by traditional theories describes the individual involved in economical negotiations as a selfish, rational trader, whose leading purpose is to maximize his utility function. Neuro-economy contradicts this model supplying data that show a more emotive, irrational behaviour in normal people involved in bargaining tasks. Our study presents data that assimilate schizophrenic subjects to "Homo Economicus": in fact, compared to normal people, schizophrenic patients show "more rational" bargaining behaviour, due to ToM deficit.



## Cannabinoids and the Hypoxic Ventilatory Response

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### Abstract

Cannabinoid receptors have been identified in brainstem respiratory areas and in carotid body chemoreceptor cells. The latter generate the stimulatory hypoxic ventilatory response (HVR). Exogenous cannabinoids, for instance 9-Tetrahydrocannabinol, affect respiration, but the results are variable from depression to no effect. There is apparent lack of information on the influence on HVR of cannabinoids. This information might be of applicable nature in case of respiratory depression. This study seeks to determine the respiratory effects of a cannabinoid congener, WIN 55212-2. The compound was injected intravenously in increasing doses of 1, 5, 10, 25, 35, 50, and 100 mcg/kg in anaesthetized, paralysed, and mechanically ventilated rabbits. The dosing was cumulative and given at 40 min intervals. After each dose, respiratory responses to acute eucapnic hypoxia (7% O<sub>2</sub> in N<sub>2</sub>) were taken. Respiration was assessed from the phrenic nerve electrogram. Minute neural phrenic output was calculated as a product of peak phrenic amplitude (an index of tidal volume) and respiratory rate. We found that the cannabinoid decreased neural resting respiration in a dose-dependent manner, leading to apnea at 50 mcg/kg and over. Concerning the HVR the results were variable, ranging from no effect up to 5 mcg/kg, a decrease of peak HVR at the intermediate doses 10-35 mcg/kg, which sharply contrasted with a resurgence of hypoxic stimulation at doses of 50 mcg/kg and over, even though the pre-hypoxic respiration was arrested by these doses of the cannabinoid. The results show that cannabinoids may have a dose-dependent dichotomous action on hypoxic responsiveness; attenuation at small concentrations, likely mediated by the carotid body CB<sub>1</sub>, and stimulation at high concentrations. The exact determinants of the latter are unclear, but may plausibly be related to the attenuation of D<sub>2</sub>-dopamine receptor signaling in the carotid body, normally inhibitory for respiration, by excessive ligand binding to CB<sub>1</sub>.

## Results of a Six-Month, Randomized, Controlled, Confirmatory Phase 3 Trial Comparing the Efficacy and Safety of Buprenorphine Implants to Placebo Implants, and Sublingual Buprenorphine/Naloxone for Opioid Addiction

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### Abstract

The objective was to assess the safety and efficacy of buprenorphine implants compared to placebo implants and sublingual buprenorphine/naloxone in a clinical trial. Titan Pharmaceuticals, Inc. has developed a sustained-release, implantable formulation of buprenorphine (BPN) that delivers constant, low levels of BPN for up to six months with minimal fluctuations in steady-state plasma concentrations, and offers potential treatment advantages over sublingual (SL) BPN by ensuring patient compliance and limiting diversion. Across four completed Phase 3 studies, treatment with buprenorphine implants (BI) was well-tolerated and efficacious in significantly reducing illicit opioid use, retaining patients in treatment, controlling withdrawal symptoms and opioid cravings, and improving global disease severity. In this six-month confirmatory efficacy and safety study, 287 opioid-dependent patients were enrolled at 20 sites in the United States. Following brief induction with sublingual buprenorphine/naloxone tablets (12-16mg/day), participants were randomized in a double-blinded design to either BI or placebo implants (PI), or open-label SL BPN tablets. Urine samples were collected thrice weekly, and routine assessments of other clinical symptoms of opioid dependence and safety were conducted. Study participants also received regular counseling. Over the 24-week study, BI was clinically and statistically superior to PI on the percentages of opioid-negative urines (p. BI provide a safe and effective treatment for opioid dependence while potentially addressing the concerns regarding diversion that occurs with the SL BPN formulation. The U.S. Food and Drug Administration (FDA) Advisory Committee recently supported approval of BI. The decision of the FDA is pending.



## Methods for Real-World Postmarketing Data on Prescription Drug Nonmedical Use and Diversion

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### Abstract

The objective was to describe general principles of postmarketing surveillance and identify categories of data sources to detect real-world signals of misuse and abuse (nonmedical use), and diversion of prescription medications. The method involved describing the general principles of postmarketing surveillance and identify categories of data sources to detect real-world signals of misuse and abuse (non-medical use), and diversion of prescription medications. Postmarketing surveillance tools can be tailored to provide brand and geographic specificity, and improved timeliness of reporting. Candidates for postmarketing surveillance should include prescription medications known or suspected of having potential for abuse. Data should provide brand and geographic specificity and improved timeliness of reporting for evaluation of nonmedical use and diversion. There are currently no publicly funded data sources fitting these three criteria in the US or the European Union; however, there are proprietary systems that do so. Complementary data sources or revision of existing surveillance tools provide for a broad picture of nonmedical use and diversion of prescription medication known to have potential for abuse. Depending on the drug class, some data sources are more sensitive than others. Data will not only help in understanding the real-world prevalence of prescription medications nonmedical use and diversion but also will contribute to the development of risk mitigation strategies.

## Changes in Adult Tobacco Use and Intention to Quit in Greece amidst the Economic Crisis and After Recently Implemented Smoke-Free Legislative Measures: Results from the Hellas Health IV Study and 5-Year Trends

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### Abstract

In Greece the prevalence of smoking is one of the highest globally. The objective of the present survey was to explore the epidemiology of tobacco use in Greece and to indicate trends in smoking prevalence and in intention to quit by demographic and socioeconomic variables between years 2006-2011. A national household survey Hellas Health IV was conducted from October 4th to October 23rd 2011. Respondents were selected by means of a three stage, proportional to size sampling design. A sample of 1,008 adults (mean age 47.2 years (SD=17.4 years) and range from 18 to 87 years) were interviewed. Results were compared with those from the similar 'Hellas Health I' study, which was conducted in 2006. Smoking prevalence is estimated to 38.1% (45.7% among men vs. 31.1% among women  $p < 0.001$ ). Women and age group  $> 54$  years have less likelihood for being current smokers (45% and 51% respectively) and highly educated Greeks are 1.74 times more likely to smoke. Socio-economic status does not affect smoking prevalence in Greece. Prohibition of smoking in the house is less likely for singles ( $p < 0.012$ ), in singles ( $p = 0.022$ ), in those of high ( $p = 0.023$ ) and low ( $p = 0.023$ ) socioeconomic level, in those of middle educational level ( $p = 0.025$ ) and in rural areas ( $p = 0.003$ ). Trends in smoking prevalence and intention to quit among Greek adults seem favorable during the past 5 years. There has been a significant reduction in overall smoking prevalence as well as a significant increase in the intention of quit smoking. This allow us to believe that current financial situation in Greece along with the weakening of the Greek population's purchasing power and the enforcement of smoking bans has drawn a major impact for lower smoking rates in Greece.





## Kinesiotherapy in a Drug and Alcohol Rehabilitation Program

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### Abstract

The objective was to present a good practice of sports rehabilitation methods for people with standalone problems with dependency of psychoactive substances or with comorbidity, and to show different methods and applications of sports rehabilitation in different stages of drug and alcohol addiction treatment in six different programs. The method involved showing the practice of the sports rehabilitation program in Centre for treatment of Drug Addiction and Center for Alcohol addiction in Ljubljana, Slovenia, and to show six different programs of kinesiotherapy for six different stages of drug and alcohol addiction treatment. The program presented is an ongoing work in development with which I first started in 2010. Although the program is fairly good in its current state, there is clear room for improvement in a number of fields, such as infrastructure, and better relapse prevention or methods used. The clear goal of the poster is to show different ways and methods of using kinesiotherapy for reaching different variety of goals, ultimately leading to drug and alcohol abstinence along with better overall wellness.

## Opioid Substitution Treatments in Different Closed Environments

**Senninger JL\* and Senninger A**

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### Abstract

The opioid substitution treatment has proved its worth, but also its capability of misuse, even in confined environments, like enforced psychiatric hospitals, special hospitals, penitentiary institutions. The experience of prescription in these different places demonstrates that sometimes, the treatment aimed at the institution rather than the patient, because of the rules and potential dysfunctions of these institutions. The associated addictions and comorbidities complicate the care. So, a new harm-reduction policy with, for example, consumption reduction have to be accepted. Such a practical experience in a French prison is described, with its legal implications. On the contrary, in completely closed institutions, like the hospitals for dangerous patients, such a policy is impossible. A comparison between the results in these two institutions is particularly instructive.

## Review of School-Based Drug Abuse Prevention Programs in High School Students

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### Abstract

The purpose of this article was to review school-based programs implemented in high schools for substance abuse prevention and suggest recommendations for future interventions. An extensive literature search was conducted to collect studies for inclusion in this article using the databases PubMed, ERIC, and CINAHL. Keywords that were used included "substance abuse" or "drug abuse" and "high schools" and "intervention" or "program." The search was done for the time period 2005 to November 2012 as a Cochrane Review was done in 2005. A total of 1,235 articles (1,155 from PubMed, 57 from ERIC and 23 from CINAHL) were screened for inclusion. Inclusion criteria for including studies in this review were: (1) publication in English language; (2) inclusion in one of the three databases listed above; (3) time period 2005 to November 2012; (4) done in high school setting; (5) focused on prevention of alcohol, tobacco, or other drugs; (6) conducted an evaluation and used a quantitative design for evaluation. Exclusion criteria were (1) articles in languages other than English; (2) done outside of high school settings; (3) qualitative articles and (4) review/discussion articles. A total of 18 studies were identified with 12 different interventions; for one intervention there were five studies and for two interventions two studies each. Theory has been used by seven interventions. The theories that have been used are: (1) cognitive perception information and behavioral skills, (2) social learning (n=2), (3) behavior image model, (4) PRECEDE-PROCEED model, (5) theory of reasoned action, and (6) motivational enhancement therapy. High schools are an important venue for designing and implementing substance abuse prevention programs. Seven interventions were able to demonstrate statistically significant changes from before to after the intervention with regard to substance use. More theory based interventions need to be designed.



## Prevalence of Drug and Alcohol Use among Students of Nurse Faculty of Tirana

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### Abstract

The objective of this study was to estimate the prevalence of drug and alcohol use and misuse among the students of Faculty of Nurse at Medical University of Tirana. This is a cross-sectional study performed during February–March 2012 at the Faculty of Nurse. In this study were 100 students, 50 % male and 50% female. From these students 35% were drug users, from which 10 of them use more than one drug. According to their declaration in questionnaires, 95% say that they can stop drug use. 100% of students refers that they smoke regularly, 90% use alcohol mainly during weekends. 20% of students use marihuana regularly. 10% use stimulants, 5 % use opioids, 2.5% use antidepressant drugs and benzodiazepina. 62% of male students and 38% of female refers for alcohol or drug use, but girls use mostly “light” drugs like marihuana and mostly tobacco. As in other countries, even in Albania and at Faculty of nurse, alcohol and drug use is becoming a growing problem, particularly from male students.

## The Success of MMT in Georgia

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### Abstract

The main route of HIV transmission is injective drug use in Georgia (58-60%). The most popular injective narcotics are opioids. For the last two years the main injecting opioid has been home-made desomorphium, so-called “crocodile” that has extremely dangerous mental and physical health consequences. Although prevalence of HIV among drug users is only 1-3%, the high number of IDUs and high prevalence of hepatitis C (from 65 to 80% according to the different studies) in this population could be the predictor of HIV increase. Methadone maintenance treatment (MMT) has been implementing throughout the country since 2005 as one of the important strategies to decrease drug related risky behavior, increase adherence to ARV treatment among HIV+ persons and improve the physical and psycho-social status of the patients. 46 randomly selected HIV positive drug-users undergoing MMT with intensive psychological counseling have been studied for three years. They received ARV therapy before inclusion in MMT at least six month. Risky behavior, quality of life, level of depression, anxiety and other data were measured before starting MMT and after 3, 6, 12, 18 months. The illegal use of psychotropic-narcotics was checked through random urine-testing three times per patient per month. The study showed significant improvement of patients' status. The remarkable decrease of depression and anxiety was observed (dynamic of average scores of depression - 24, 14, 14, 13, 14 and anxiety-46, 40, 40, 41, 39). Life quality increased in comparison with the starting data (76, 85, 86, 88, 93). The positive answers on psychotropic-narcotics were observed in 6.7% on average and even those patients didn't admit any kind of injection-related risky behaviors. The analyses of data showed that combination of MMT, ARV and psychological counselling significantly improves the physical and psycho-social status of HIV positive IDUs, improves life quality and treatment adherence , dramatically decreases use of illegal psychotropic-narcotic drugs and decreases the risk of spread of HIV and other blood-transmitted diseases among injecting population in Georgia.



## The Training of General Practitioners in the Management of Alcohol Dependence and Their Involvement in the Treatment of Alcohol Dependence

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### Abstract

The involvement of general practitioners in the treatment of alcohol dependence is based on voluntary participation. The aim of this study is to determine whether the training that medical practitioners had on alcohol dependence plays a role in their eventual involvement in the treatment of alcohol dependence. A questionnaire based survey was conducted amongst 77 general medical practitioners in the Free State province, South Africa. The population was selected through a random selection process and informed consent was obtained from individual participants. The questionnaires were filled in during personal interviews with the participants.

The poster reports on the part of the questionnaire that deals with the training of participants. Participants had to indicate whether they had specific training on the management of alcohol dependence during pre-graduate training, post graduate training and/ or in-service training. Their current involvement in the treatment of alcohol dependence was divided into four categories, namely "no involvement", "refer for detoxification and follow-up", "refer for detoxification only" and "conducting detoxification and medical relapse prevention". More than 50% of the participants indicated that they are not involved with the treatment of these patients or prefer to refer them. About 10% referred for the purpose of detoxification, but were involved in medical relapse prevention, while 36% took responsibility for both detoxification and medical relapse prevention. There seem to be no difference with regard to academic training or in-service training, probably due to the small sample involved. However, while 59% of the participants who indicated that they had their training at the local university were involved in both detoxification and medical relapse prevention, only 33% of participants who indicated that they trained at another university participated in alcohol dependence treatment to the same extent. Also; while 60% of all participants between the ages of 40 and 60 have some medical involvement with the treatment of alcohol dependence, only 32% of participants under the age of 40 are medically involved in these cases. The small sample size precludes definitive proof that training plays a role in the level to which medical practitioners become involved in the treatment of alcohol dependence. The tendency for locally trained doctors to be more involved in the treatment of alcohol dependence and the age-related trend in involvement suggests that historical factors may play a role.

## Factors Predicting Receiving Methadone Maintenance Treatment after Discharge among the Inmates with Intravenous Heroin Use: A Follow-Up Study in Taiwan

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### Abstract

Intravenous heroin use is one of the major causes of human immunodeficiency virus (HIV) infection in current Taiwan. To prevent the spreading of HIV infection in the population with intravenous heroin use, Methadone Maintenance Treatment (MMT) was introduced into Taiwan. Although MMT has been proved to be effective for reducing heroin use and HIV infection in previous western studies, heroin users may have ambivalent attitude toward receiving MMT, even rejected to receive it. Thus, the aims of the three-year study were to enroll the inmates with intravenous heroin use to examine their attitude toward receiving MMT cross-sectionally and the factors related to the attitude, as well as the predictors of receiving MMT after discharge from the jails. We recruited 315 inmates with intravenous heroin use from four jails in southern Taiwan. A series of data were collected, including their attitude toward receiving MMT, socio-demographic characteristics, histories and pattern of heroin use, HIV serostatus, perceiving family support, severity of heroin dependence, depression, and decision balance for heroin-using behaviors. The factors related to the attitude toward receiving MMT were examined by using the multiple regression analysis in a cross-sectional model. The status of receiving MMT after discharge from the jails was determined and the predictors of receiving MMT were determined by using Cox proportional hazard regression. The results found that those who have ever received MMT had a more favorable attitude toward MMT than those who have never received MMT. Among those who have never received MMT, those whose HIV serostatus were positive and who perceived higher family support, less benefits and more adverse results from using heroin had a more favorable attitude toward MMT. Among those who have ever received MMT, females and those who perceived more adverse results from using heroin had a more favorable attitude toward MMT. During the period of follow-up, 295 subjects have discharged from the jails. Of them, 150 (50.8%) have received MMT. The results of Cox proportional hazard regression found that having ever received MMT and positive HIV serostatus could predict receiving MMT after discharge from the jails. Based on the results of this study, we suggested that the predictors of receiving MMT after discharge from the jails can serve as the basis of intervention and follow-up for improving the heroin users to receiving MMT after discharge from the jails.