A Categorical Framework for Addicted and Chronic Pain Opioid Users

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ISAM-CSAM Abstract Compilation - Calgary

September 23-26, 2009

CSAM Bulletin

November 2009 Edition
Message from the Editor:

It is my extreme pleasure and honour to introduce you to this premier issue of the Canadian Journal of Addiction Medicine. It is the culmination of many months of planning, deliberation and hard work on behalf of many individuals. It is a “work in progress”, and will continue to “morph” as we improve our skills and experience, as well as with the contributions of our members and fellow clinicians in the field. We are proud to be able to include in this issue, the complete set of abstracts from the 2009 joint CSAM / ISAM scientific meeting which took place in Calgary in September 2009. Due to space considerations, all references were removed form the abstracts, and will be made available on the CSAM and ISAM web sites. We thank all the authors and presenters at the conference for their contributions and tremendous efforts in bringing these materials to light.

You will also continue to see the “CSAM Bulletin” within the contents of the CJAM, and it will include the traditional materials which were included in past issues. The Bulletin will continue to be the official “Newsletter” of CSAM, and will contain materials unique and important to CSAM and its members.

As we continue to grow and expand our publication, we would welcome your submissions and materials. You will find short descriptions of the type and style of materials that may be considered for submission. If your materials fall outside of these guidelines, please do not hesitate to contact us for further consideration.

In the future, we will also be extending invitations to expand our editorial board, and article reviewers. Please stay tuned for further details and information.

We hope that you enjoy this premier issue, and others to come, and as always welcome your feedback and comments.

Respectfully yours,

Michael Varenbut

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The Canadian Journal of Addiction Medicine is the official publication of the Canadian Society of Addiction Medicine. It is a new publication whose goal is to provide a unique Canadian forum for presentation of evidence-based, peer-reviewed clinical information and scientific materials, to clinicians working in the field of Addiction Medicine.

The “Bulletin” section within the CJAM, will contain the traditional sections and materials contained in past issues of the “CSAM Bulletin”.

Submissions to the Journal are invited in the following formats:

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This section will include clinical investigations on any aspect of addictive disorders. Manuscripts describing scientific results will be considered for publication provided that there is strong clinical relevance. Typically, articles will contain new data derived from original research. Text should not exceed 12-14 double spaced manuscript pages, or 3000 words (not including an abstract of no more than 250 words).

Short Reports
This may include preliminary communications or case reports on unique, unusual & interesting or otherwise important aspects of addictive disorders. Approximately 1500 words, or 6-10 double spaced manuscript pages, up to 4 figures / tables.

Reviews
This section would typically include In-depth reviews of current understanding, diagnosis, or treatment of addictive disorders. Should not exceed 5000 words or approximately 20-30 double-spaced manuscript pages, up to 8 figures / tables, (not including an abstract of no more than 250 words)

Letters to the Editor
Brief commentaries of alternative viewpoints regarding papers previously published in the Journal. Should not exceed 500 words.

Book Reviews & Meeting Highlights
Additional sections to be added in future issues
A Categorical Framework for Addicted and Chronic Pain Opioid Users

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Abstract

Patients presenting with early refills, escalating doses, frequent “lost” prescriptions and non-responders to opioid medications continue to be challenging. When presented to the patient, suspicions such as drug abuse or addiction often result in denial or angry responses. Understanding and treating the opioid addict and physically opioid dependent chronic pain patient requires knowledge of both addiction and chronic pain and a means of classification that provides direction for treatment. A categorical and dimensional framework that distinguishes between the chronic pain patient and the addict abusing opioids is presented, which will allow the clinician to assess and treat appropriately.

Perspective

This article presents a nosology of opioid abusers so that the spectrum will allow clinicians to assess, identify, and treat opioid addicts and chronic pain patients using opioids appropriately.

Key Words

Addicted, chronic pain, categorical framework

Introduction

Non-palliative chronic pain patients on chronic opioid therapy continue to challenge clinicians particularly if they are non-adherent to prescribed opioid treatment plans. Patients presenting with early refills, escalating doses, frequent “lost” prescriptions and non-responders to opioid medications continue to be challenging. Suspicious of drug addiction when presented to the patient often result in denial or angry responses; the patient claiming they are not addicts but just have untreated pain. Many clinicians in ‘primary care’ and ‘pain practices’ continue to struggle with requests for pain relievers for old injuries with little objective evidence of physical injury. Physicians often refer to patients who present as non-adherent to their medication use as problematic opioid users or opioid misusers. This has led to many physicians refusing to prescribe opioids for chronic pain resulting in under treatment of legitimate chronic pain individuals while other physicians become overly liberal prescribing opioids to addicts or to patients who are diverting their medications for profit.

Part of the problem facing physicians prescribing opioids is that there is not yet an accurate means of diagnosing and classifying those patients with problematic opioid use. These patients are actually a diverse group including legitimate under treated individuals suffering from chronic pain, substance abusers, diverters as well as those suffering from concurrent chronic pain addiction, and other psychiatric comorbidities. Some of these patients are treated in Pain Clinics while others find their way to Addiction programs. These programs usually work independently of each other.

Pain programs are often thought of as programs that believe that pain is under-treated and are often accused as being too liberal in prescribing opioids to individuals who may have addiction while addiction treatment programs are often thought of as being abstinent based and insensitive to the needs of the patient with chronic pain.

Before these patients can be adequately managed, there needs to be a framework that allows some degree of classification. Recognition of aberrant drug taking behaviours in the non-palliative chronic pain patient and risk factors in the aetiology of addiction are beginning to allow us to identify the various groups of individuals that make up the problematic opioid user. Categories have been proposed in the past by Passik and Hajela and this article proposes a framework that expands on previous work done by both individuals while encompassing new information regarding aberrant drug taking behaviours and addiction resulting in a quasi-dimensional nosology that provides direction for treatment.

Prevalence

Literature suggests that the prevalence of chronic pain is estimated to be between 2% to 40% with the median being 15%. In America, a survey by Clark JD published in the Journal of Pain Symptom Management in 2002 showed that 9% of the population suffer moderate to severe chronic non-cancer pain. Conversely, the prevalence of drug and alcohol addiction (substance dependence) in the general population is estimated to be 7% to 15%. Seven million (2.8%) had used prescription psychotherapeutics non-medically in the United States in the past month. Of these 5.2 million had used opioids. In comparison, 2.4 million had used cocaine.

The prevalence of addiction in the chronic pain population is relatively unknown. According to a key paper by Porter published in a letter to the New England Journal of Medicine in 1980 reporting hospital rates of addiction in pain patients,
the rates was about 0.03%\(^9\). This reported low addiction rate was probably due to the fact the authors were only looking at addiction rates for inpatient cancer patients on opioids for acute pain management\(^1\). The addiction rates for long term opioid use in chronic non cancer pain in an outpatient setting is likely higher, and the prevalence of opioid addiction varies among clinical settings. Initial reports by Portnoy and Foley in 1986 estimated addiction risk at 5%\(^20\). Fishbain has since reported subsequent higher estimates up to 19%\(^6\). A review of literature conducted in tertiary pain clinics by Chelminski in 2005 found prevalence to be 3% to 19%\(^5\). Despite these data, an accurate report of true addiction in the non-palliative chronic pain patient remains uncertain, as the clinical criteria used to determine addiction remain un-standardized.

A more recent structured evidence based review of the literature by Fishbain and Rosamoff in 2008 showed that among chronic pain patients receiving chronic opioid analgesic therapy, the addiction rate was 3.27% but for all those patients with no history of current or previous addiction, the rate dropped to 0.19%. However, the rate of aberrant drug taking behaviour was 11.5% and for those with no history of current or previous addiction the rate of aberrant behaviour dropped to 0.59%\(^5\).

### Aberrant Drug Taking Behaviours

It is known that the DSM-IV-TR criteria for substance dependence (addiction) do not specifically diagnose addiction in the non-palliative chronic pain patient on chronic opioid therapy\(^2\). Several authors have been looking at aberrant drug taking behaviours as predictors of addiction\(^5, 7, 16, 17\). There are some aberrant drug taking behaviours that are “more” or “less” predictive of addiction as shown in Table 1.

One study concluded that 4 or more aberrant drug taking behaviours especially oversedation, felt to be intoxicated, early refills and increasing doses on own correlated more with behaviours especially oversedation, felt to be intoxicated, early refills and increasing doses on own correlated more with addiction\(^6\). Chronic pain patients with psychiatric comorbidities without addiction will also have significant different aberrant drug seeking behaviour, but these aberrant behaviours will be “less” predictive for addiction as shown in Table 2.

### Chronic Pain, Addiction and psychiatric co morbidity

Both Chronic pain patients and addiction patients have high degrees of psychiatric comorbidities. Chronic pain patients commonly present with depression, anxiety, substance use disorders, somatisation disorders and personality disorders. For example, 18% to 32% of chronic low back pain patients are found to have major depression during the course of their treatment\(^2\). In addicts, depression, anxiety, personality disorder and ADHD are common. 17% and 60% of individuals with drug addiction have depression or anxiety disorders at presentation\(^13\).

### Chemical-coper

The clinical term ‘chemical-coper’ was used to describe the chronic pain individual who is over reliant on medication due to poor coping skills and psychiatric co-morbidity. This individual will exhibit aberrant drug taking behaviours but usually those “less” indicative of addiction (Table 2)\(^16\). The “chemical-coper” is the patient with poor coping skills who may self medicate to try to use opioids to relieve not only their pain but also their negative emotional states. There may also be psychiatric co-morbidities of major depression, anxiety, bipolar and personality disorders. They may or may not have a concurrent disease of addiction.

### Framework for managing the opioid misusing or problematic opioid patient

It is important to have a framework when working with the chronic pain and addiction patient as this is a very diverse group of individuals, each requiring differing approaches to their management.

In 2003 Passik and Kirsh\(^18\) proposed 3 distinct groups:

- The first group is the “solid citizen” who are uncomplicated chronic pain patients with no history of substance abuse
- The second category is the “chemical-coper” who are the chronic pain patients with psychiatric co-morbidity and has poor coping skills and over reliant on medication to manage negative emotions.
- The third group is the “addicted patient” with pain

This categorization however does not take into account the solely addicted patient who may have little or no pain but uses it as an excuse to obtain opioids or the diverter who obtains opioid purely to divert for financial gain.

In a 2004 article in the Canadian Society of Addiction Medicine Bulletin Hajela described 3 groups\(^8\):

- Category A are the purely addicted patients who have little pain but may use pain as an excuse to obtain opioids
- Category B are the chronic pain patients who have no evidence of addiction but could have non persistent aberrant drug taking behaviours for undertreated pain (pseudoaddiction)
- Category C are patients who are complicated and they have both addiction and chronic pain

This categorization however does not take into account the pure chemical-coper who is a chronic pain patient with significant...
With more research and increased understanding of aberrant drug-taking behaviours as a means to separate the chemical-coper from the addicted chronic pain patient, it becomes important to update the categorization of the chronic pain and addicted patients. A way to encompass all the groups of individuals who present with opioid misuse or problematic opioid use is urgently required. This heterogeneous group of individuals includes the addicted with no legitimate pain, the addicted with legitimate pain, the chronic pain patient with psychiatric co-morbidity (chemical-coper) but with no addiction, the chronic pain and addicted patient with psychiatric co-morbidities, the diverters (diverters may appear to be model solid citizen patients) and all those in between. All these groups are likely not to be well demarcated but rather they exist as a spectrum but it remains important to think of them in particular groupings as a guide to clinical approach and management. It is also notable that studies have also concluded that not only is the type of aberrant behaviour important in diagnosing addiction but also the number of aberrant behaviours.

### Table 1

<table>
<thead>
<tr>
<th>Aberrant Behaviours Probably “more” Predictive of Addiction</th>
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<tbody>
<tr>
<td>Selling prescription drugs</td>
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<tr>
<td>Prescription forgery</td>
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<tr>
<td>Stealing or “borrowing” drugs from others</td>
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<tr>
<td>Injecting oral formulations</td>
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<tr>
<td>Obtaining prescription drugs from non-medical sources</td>
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<tr>
<td>Concurrent abuse of alcohol or illicit drugs</td>
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<tr>
<td>Multiple dose escalation or other non-compliance with therapy despite warnings</td>
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<tr>
<td>Multiple episodes of prescription “loss”</td>
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<tr>
<td>Repeatedly seeking prescription from other clinicians or from emergency rooms without informing prescriber or after warning to desist</td>
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<tr>
<td>Evidence of deterioration in the ability to function at work, in the family, or socially that appear to be related to the drug use</td>
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<tr>
<td>Repeated resistance to changes in therapy despite clear evidence of adverse physical or psychological effects from the drug</td>
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</tbody>
</table>

Table 2

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<tr>
<th>Aberrant Behaviours Probably “less” predictive of addiction</th>
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<tr>
<td>Aggressive complaining about the need for more drugs</td>
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<tr>
<td>Drug hoarding during periods of reduced symptoms</td>
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<tr>
<td>Requesting specific drugs</td>
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<tr>
<td>Openly acquiring similar drugs from other medical sources</td>
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<tr>
<td>Unsanctioned dose escalation or other non-compliance with therapy on one or two occasions</td>
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<tr>
<td>Unapproved use of the drug to treat another symptom</td>
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<tr>
<td>Reporting psychic effects not intended by the clinician</td>
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<tr>
<td>Resistance to change in therapy associated with “tolerable” adverse effects with expressions of anxiety related to the return of severe symptoms</td>
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In encompassing all of the subgroups of individuals suffering from chronic pain and addiction who present with problematic opioid use or misuse, it is important to include all the categories as suggested by Passik and Hajela. Also with research on aberrant drug-taking behaviours, it is becoming possible to categorically assign the presenting patients into various subgroups to more effectively manage them so that chemical-copers (chronic pain patients with no evidence of addiction) are not labelled and treated like addicts or that addicts (who may or may not have pain) be given controlled judicious amounts of opioids.

### Proposed new categorical framework in the chronic pain and addicted patient

The proposed new framework still has 3 major categories but the 2nd category (Category B) complicated category is subdivided into 2 groups containing the ‘chemical-coper’ with no addiction and the addict with chronic persisting pain.

- **Category A** – is the purely addicted patient with no evidence of pain. The patients however may use pain as an excuse to obtain opioids for personal use or diversion. There is often a high degree of aberrant drug-taking behaviours but mostly in the “more” predictive for addiction category and there is often a strong past or present history of addiction and positive urine drug screens.

- **Category B** – is the complicated group which can be divided into 2 subgroups
  - **Subcategory B1** is the addicted patient with legitimate chronic pain and often will have aberrant behaviours “more” predictive of addiction. These patients often will have positive urine drug screens for illicit substances.
  - **Subcategory B2** is the ‘chemical-coper’ who is a chronic pain patient with psychiatric comorbidities and little or no history of past or present addiction. They often have aberrant behaviours “less” predictive of addiction. These patients will usually have negative urine drug screens for illicit substances.
Category C - is the “solid citizen”; chronic pain patients with little aberrant drug taking behaviours or history of addiction. These patients are often very compliant and adherent to treatment recommendations.

Previously mentioned points to consider are that these patients likely exist as a spectrum and will overlap with no discrete boundaries. However, most patients can easily be placed into their respective groupings and can be managed accordingly.

Category A patients differs from category B1 in that there is little legitimate pain in category A. Both groups have a strong addiction history and aberrant behaviours “more” predictive of addiction and usually + UDS (Urine Drug Screens) but category B1 patients likely have a legitimate reason for their pain while category A patients do not. Category C and B2 patients both have legitimate reasons for their pain but C patients do not have psychiatric co-morbidities and aberrant drug taking behaviours. Aberrant drug taking behaviours for B2 are likely to be those “less” predictive for addiction and they will have little history of addiction and usually negative UDS’s. Due to the presence of psychiatric co-morbidities in Category B2, the aetiology of pain in these individuals are usually more centrally mediated.

The entire spectrum usually has individuals being over reliant on opioids with high degrees of psychiatric co-morbidities.

The following schematic diagrams illustrate the points:

**Categorical Framework**

- **Addiction and Chronic Pain Patient**
  - **Category A**
    - Addicted Patient
    - No legitimate reason for pain
  - **Category B**
    - Addiction & Chronic Pain Patient
  - **Category C**
    - Chronic Pain Patient
    - No evidence of addiction with good coping skills

- **Category B Spectrum**
  - **Subcategory B1**
    - Primarily Addicted + legitimate reason for chronic pain
  - **Subcategory B2 – Chemical Coper**
    - Primarily Chronic Pain + poor coping skills but little evidence of addiction

Note that dimensionally, the categories on the “A” side have more indicators for addiction while those on the “C” side have less or none.

Both A and B1 patients have significant indicators for addiction but A patients do not have legitimate pain and could be diverters and malingerers using pain as an excuse to obtain opioids for their addiction. B1 patients have legitimate chronic pain from all causes including centrally and neuropathic origins.

B2 and C there are little or no indicators of addiction but B2 (chemical coper) tend to be over reliant on medications due to poor coping skills and/or psychiatric co-morbidities with aberrant behaviours “less” predictive of addiction.

Note that the B category describes a spectrum where there is concurrent addiction and chronic pain. The chronic pain can be from all aetiologies from centrally mediated to neuropathic sometimes with little nociceptive correlation.
However dimensionally, those on the B1 spectrum tend to have more indicators of addiction with aberrant behaviours “more” predictive of addiction.

All these categories overlap and some may even blend together. No discrete boundaries exist and patients are on a dimensional scale between categorical groups. The purpose of the categorization is to provide a framework to more optimally approach and clinically manage these patients. It must be accepted that it may be difficult to categorize these patients in one assessment and it may require several visits or follow-ups over a period of time before the aberrant drug taking behaviours start to show a pattern.

Conclusion

This article outlines a categorical framework to look at the patients who present with problematic opioid use or misuse opioids when prescribed for chronic pain conditions. This group presents as a heterogeneous group which includes addicts with or without legitimate pain, chronic pain patients with or without psychiatric comorbidities but no addiction (chemical-copers and solid citizens), diverters as well as those suffering from both addiction and chronic pain conditions. With the use of various aberrant drug taking behaviours, a history of past or present addiction or use as well as with urine drug testing, it has become possible to separate these groups into categories. This categorical framework will assist clinicians in their diagnostic approach and management of this very complicated group of individuals.

Appendix

Definitions:

Chronic Pain - Pain lasting more than 3 to 6 months22,23. Pain that extends beyond the period of tissue healing and/or with low levels of identified pathology that are insufficient to explain the presence and/or extent of pain11.

Opioid misuse/Problematic Opioid use - Deviation from a prescribed program of opioid treatment2.

Aberrant Drug taking behaviours - A negative interaction/behaviour between patients and their opioid medications resulting in non-adherence outside of expected norms14.

Drug addiction/opioid addiction/iatrogenic opioid addiction - defined as clinical presentation that matches DSM IV criteria for substance dependence2.

Substance Dependence-DSM IV term to describe a set of physical and behavioural conditions that diagnoses the disease of substance addiction

Chemical-coper-Patients with psychiatric comorbidity and poor coping ability who may self medicate to relief not only their pain but also their negative emotional states13,16.


Diversion - Diversion of prescription opioids from their intended recipient and may or may not be intentional for profit or criminal10,12.

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Genetics (NIDA)
Clinical Implications Of Research On Genetics Of Drug Addiction – NIDA
Jag H. Khalsa, Ph.D., Ahmed Elkashef, M.D.
Substance abuse/dependence is associated with enormous social, economical, and medical cost (estimated at $336 billion in the US alone) and genetics contributes to its vulnerability. For a number of years, researchers have been looking for genetic connection to drug addiction. Finally, genetic research has identified several genes, for example, genes for dopamine receptors, genes or gene clusters that code alcohol dehydrogenase (ADH), nicotinic acetylcholine receptor subunits, and GABA receptor and so on. Research also suggests that genetic factors might be operating at various stages of development of drug addiction. Further, genetic research has begun to make important contributions to the understanding of underlying phenotypes and endophenotypes for substance abuse disorders. However, for a clinician treating drug abusing patient, the most important question remains: so what? How does a psychiatrist, a clinical psychologist, and other health care provider caring for drug abusing patients, use this genetic information today? This symposium, for the first time at ISAM, will present the most current research findings on genetics of drug addiction. The speakers like Drs. Ming T. Tsuang and Ming Li and others will present data from their large twin, linkage, and other studies and show how clinically relevant information can be used in the near future when caring for drug abusing patients. Finally, the mechanisms of funding at NIDA/NIH will be also presented.

Family, Twins And Molecular Genetics Studies Of Drug Addiction: Implication For Treatment And Prevention
Tsuang, Ming (USA)
We utilized family studies to demonstrate that substance use disorders did, indeed, run in families, which suggested (but did not prove) that genes influence the susceptibility to these conditions. Then, in the Harvard Drug Study, we turned our attention to the analysis of twins in the Vietnam Era Twin Registry in order to identify the relative contribution of genes and environment to liability for substance use disorders. In identifying opioids as the drug class with the most unique genetic contribution, we began molecular genetic analyses of opioid dependence with a genetic linkage study involving over 400 affected sibling-pairs and their family members ascertained from Yunnan Province, China, which borders the Golden Triangle, source of a large proportion of the world’s heroin supply. The results of our linkage analyses identified several regions of the genome that potentially harbor risk genes for opioid dependence. Throughout, we have been engaged in fundamental work to refine the phenotypes of importance in the spectrum of substance use disordered behavior, including initiation, regular use, problem use, relapse, withdrawal, and physical dependence, among others. The future research on substance must apply both a top-down, phenotype-driven approach and a bottom-up, gene-driven approach to simultaneously inform each other. With this approach important phenotypic subtypes or phenotypes should become the object of molecular genetic investigations, and genetic similarities among subsets of affected individuals should become the object of phenotypic classification and fundamental epidemiologic analysis. Ultimately the genetic approach to studying drug abuse will facilitate future treatment of substance abuse disorders.

Progress In Genetics Research On Tobacco Dependence And Its Clinical Implications
Li, Ming (USA)
Despite increasing public awareness of the health risks of using tobacco products, approximately 1.2 billion people worldwide smoke tobacco daily. It is estimated that 4.2 million people die annually from tobacco-related diseases. In the US, tobacco smoking kills more than 438,000 citizens each year and is responsible for about 7% of total US health care costs, an estimated $157.7 billion each year. This high prevalence highlights the importance of studying the genetics determinants of tobacco dependence. Although it is well documented that genetics contribute significantly to vulnerability to addictions to tobacco dependence, genes underlying tobacco dependence are largely unknown. Recent genome-wide linkage studies have implicated several common genomic regions in the etiology of addiction to tobacco dependence. Among them, the regions on chromosomes 9, 10, 11, and 17 have received the strongest support. On the other hand, significant efforts have been made in finding genes for addictions in human through candidate gene-based or genome-wide association studies. Of the genes identified so far, several genes such as ANKK1, Neurexin-1 and -3, especially nicotinic acetylcholine receptor subunit genes, have received much attention recently. Current efforts aim to not only replicate these findings in independent samples but determine which genetic variant(s) cause such associations.
Methadone Maintenance Treatment & Heroin

The Value Of Case Management In A Methadone Maintenance Treatment Program
Carolyn Plater (Canada), Jeff Daiter & Michael Varenbut,

Substance dependence is a chronic and multifaceted problem affecting millions of Canadians. The substance abuse treatment field must continually change and evolve its services in order to better address the needs of its clients. Over the last two decades case management has been gaining popularity and is becoming a very integral component of substance abuse treatment programs worldwide.

Case management is a client centered and supportive strategy that involves a range of functions including assessment, planning, linking, monitoring, and advocacy. Research has demonstrated that case management in the addiction population has resulted in improved quality and continuity of care. In addition case management has been shown to improve treatment participation and retention, improve the coordination and delivery of services and also improve recovery outcomes.

The work presented represents a large study that demonstrates how case management is a valuable and effective adjunct to traditional methadone maintenance treatment programs. Implications and limitations are also discussed. Our large study includes 397 patients currently enrolled in a methadone maintenance treatment program that utilizes clinical case management.

Normalising Heroine Prescription
KAYE Bart (Switzerland), Cheminat, Catherine, Lacroix, Ludovic, Zullino, Daniele

The prescription of Diaphine (heroin) started in Geneva in 1996, with overall positive results.

Until 2006, this program was not integrated in the other classical substitution facilities.

In 2006, this program was integrated in the classical methadone substitution facility.

The main goals were increasing visibilité, ensure sustainability, integration of patients in classical substitution facility, recognize treatment by all carers, expanding the multidisciplinary team, a gain in economic resources, facilitate the transition between different care modalities and offer extended hours.

Some problems encountered as reciprocal stigma between the patients, the impression loosing sense of exclusivité, a certain disruption of team routine with the loss of landmarks and time table changed made the work complicated but interesting.

Conclusion: Those problems are quickly and naturally overcome. The goals are achieved on a short time base. Our experience proves that the integration of the heroine prescription is not only feasible but offers also a lot of benefits both for patients and for carers.

Norwegian OMT – a high threshold program in transition, or: the last days of the self righteous?
Helge Waal (Norway), Nikolaj Kunoe, Philip Lobmaier, Asbjoerg Christophersen
Norwegian OMT is built on the original concepts of Dole and Nyswander as adapted by Gunne in Sweden. The program has the characteristics of high threshold programs with criteria for entrance, detoxification before upstart, control procedures and possibility for compulsory termination on unsatisfactory progress. It has nevertheless expanded from 280 patients in 1998 to 4913 in 2008. National average on yearly retention is 89 %. Yearly follow up demonstrates consistently that only 15-17 % had used heroin at least once last 30 days. characteristics.

Troublesome differences in program structures and results between the different treatments sites, a national high level of overdose mortality and open drug scenes in some of the larger cities cause concern. Some “hard-to-reach” and “difficult-to-treat” groups seem to remain out of treatment. Addicts complain of humiliating control and treatment settings. Some have gone abroad to have easier access to treatment.

On this basis several changes is to be implemented. The basic concept of OMT as a shared care project is maintained but the only criteria for treatment is to be opioid dependency and wish for OMT. Urinary controls will only be allowed for monitoring of risks, not of treatment. Involuntary termination is deemed improper unless caused by medical necessity.

This policy changes will be implemented from January 2010, and many ways the strict rehabilitation oriented Norwegian system then approaches the mainstream European harm reduction policy. The question is whether the benefits outweigh possible weakening of the systems positive properties].

Long-term, tunnelled central venous catheters for patients in injectable diacetylmorphine treatment? A case study.
Kaye Bart (Switzerland), Thomas Rathelot, Ihsan Inan, Thierry Musset, Anne François, Barbara Broers, Ludovic Lacroix, Catherine Cheminat

Introduction: Injectable diacetylmorphine (heroin) substitution treatment is a treatment option in Switzerland for severely dependent heroin addicts, on very strict conditions, since 1994. Still, poor venous access is frequent in long-term intravenous heroin users and can be a limitation to access to this form of therapy. Hereby we report the case of a woman who received a tunnelled central venous catheter (TCVC) to enter the Geneva heroin prescription programme in order to receive her medication and medical follow-up.

The case: Mrs A (37 years old) is an intravenous heroin addict since age 18 years. She is pharmaceutical assistant, has one son (14 years old), tried oral opiates maintenance therapy without success, had several incarcerations and multiple hospitalisations.
for abscesses, anaemia, etc. Larynx cancer was diagnosed in 2005 and operated, with a second intervention in 2006. Since she had very poor venous access she got a central venous port device for investigations and chemotherapy. Upon discharge she refused to have taken out the central venous port device; she used it further for injecting street heroin, being informed about risks and taught about hygienic measures, which she applied consciously. She could use the port until March 2007 when it was completely blocked and external. After its removal Mrs Z spend between 6 to 9 hours per day searching for venous access, injected in a wound that infected, developed severe anaemia on spoliation. Follow-up screening of her cancer was impossible. She demanded a new central venous port device, expressing even the wish to have metastatic cancer disease in order to get you a new port. The clinical ethical commission approved her request, especially if she could be accepted in the heroin prescription programme, which was accepted, also by Mrs A.

It took 9 months and many discussions to find a surgeon who accepted to proceed. For reasons of frequency of injecting and amount of medication it was decided to insert a tunnelled Groshong catheter, in February 2008. Mrs Z started heroin substitution treatment upon discharge and she is still in the program (June 2009). Although she had been very reluctant to all forms of addiction treatment until then, she adhered quickly and, especially in the first six months, showed an incredible improvement in health, psychological and social status, and contact with her son. Her “special” situation needed no adaptation of the program, was well accepted by staff and other patients, and did not induce any other request for a central catheter. After 9 months the catheter had to be replaced, there were no other hospitalisations over the 15 months follow-up. She is considered cured for her larynx cancer.

**Conclusion:** We report the case of a severely dependent heroin addict with important medical problems, for whom the pose of a long-term tunnelled central venous catheter has been beneficial for the medical follow-up, addiction care, as well as the patient and her family’s well-being. Still, indication had been carefully considered and the follow-up intense.

**Tobacco**

**The Effects Of Nicotine And Non-Nicotine Tobacco Constituents On Cigarette Craving, Withdrawal And Self-Administration In Male And Female Smokers: Implications For Smoking Cessation**

**Barrett, Sean (Canada)**

Although nicotine is widely believed to be the primary addictive component in tobacco, nicotine-specific treatments are not effective for most smokers and it is possible that non-nicotine tobacco constituents are also important. In order to begin to clarify the relative roles of nicotine and non-nicotine tobacco constituents in smoking reinforcement, this study directly compared the effects of the acute administration of nicotine (via nicotine and placebo inhalers), nicotine-containing tobacco, and denicotinized tobacco, on smokers’ subjective responses and motivation to smoke. 20 smokers (12 male) completed four randomized blinded sessions where they administered cigarette/inhaler puffs and were given the opportunity to self-administer their preferred brand of cigarettes. Overall participants rated the nicotine inhaler as being less pleasant than each of the other conditions and nicotine-containing and denicotinized cigarettes were both rated as being more ‘satisfying’ than either of the inhaler conditions. Moreover, overall nicotine-containing and denicotinized cigarettes each significantly attenuated self-administration, craving and withdrawal relative to the inhaler conditions and these effects tended to be more pronounced for the nicotine containing cigarettes. Interestingly, a sex X condition interaction revealed that both denicotinized tobacco and nicotine inhalers had moderate withdrawal relieving effects in men, while in women denicotinized tobacco had very robust withdrawal relieving effects and nicotine inhalers were ineffective. Findings suggest tobacco in the absence of nicotine may be more effective in acutely reducing smoking abstinence symptoms than nicotine in the absence of tobacco especially in women. Clinical implications of these findings for the development of optimal smoking cessation programs are discussed.

**A prospective study demonstrating the efficacy of a novel multi-modal technique for smoking cessation**

**Daiter, Jeff (Canada), Michael Varenbut, Carolyn Plater**

Habitual cigarette smoking is a complex, chronic condition with both physiologic and psychological components, making it one of the difficult substance dependencies to place in sustained remission. Yet, it remains the most preventable cause of morbidity and premature mortality worldwide. Unfortunately, it remains as the number one cause of preventable death in Canada and each year kills more people than AIDS, alcohol, drug abuse, car accidents, homicides and suicides combined. Applying multimodal techniques for the treatment of nicotine addiction is a well known and legitimized approach utilized to improve rates of permanent abstinence in smokers attempting cessation. While the numbers of patients receiving help and advice regarding smoking cessation is increasing, the multi modal approach appears to be currently underutilized by clinicians and therefore smoking cessation strategies are not being optimized. The work presented represents a pilot study that utilizes a combination of cognitive behavioural strategies (12 weeks of structure group therapy), amelioration of cued conditioning (electronic cigarette), pharmacotherapy (varenicline) and lung age as assessed by Pulmonary Function
Testing as a means to maximize smoking cessation beyond that currently demonstrated in the literature.

**Combination pharmacotherapy for smoking cessation: Can we do better?**

**White, Will (Canada), Shawn Currie, David Crockford, Scott Patten, Nady el-Guebaly**

Despite important advances in pharmacotherapy for smoking cessation, treatment outcomes remain relatively poor. As a reference point, even with the current gold-standard monotherapy varenicline, less than half of patients maintain initial cessation from smoking at 12-weeks. Combination therapy is a well-established method to improve outcomes in other chronic diseases (e.g. hypertension, diabetes mellitus). The authors here present findings from a single-arm, open-label pilot study of combination therapy with baclofen and bupropion for smoking cessation, to highlight the potential promise and to encourage further study of combined therapy approaches for this difficult-to-treat condition.

**Adolescent**

**A multi-state modeling of transitions between tobacco and cannabis use among adolescents: progression from onsets to daily uses**

**Aurélie Mayet (France), Stéphane Leglèye, Bruno Falissard**

**Aims:** Each substance use may follow a stage process leading from onset to regular use, and use of one substance could have an influence on another substance use. Aim of the study was to describe, on a simulated cohort of adolescents, the transitions between tobacco and cannabis uses, and the transitions from initiations to daily uses for these substances. Methods: Data came from French nationwide cross-sectional survey carried out in 2005 involving 29,393 teenagers aged 17. A homogenous Markov multi-state model was fitted. Modelled substance use process was: no lifetime use → 1 (2) substance(s) experiment → 1 (2) substance(s) daily use, with pathways between tobacco and cannabis. Model also took into account gender and parental social category (PCS) as covariates. Results: The possibility to initiate tobacco appeared 17.6 higher than the possibility to initiate cannabis. When subject has been experimented a substance, risk of another substance experiment was highly increased. Transition intensity from tobacco initiation to daily use was 4.8 higher than the one from cannabis initiation to daily use. Female gender represented a weakness factor towards tobacco use. However, girls appeared protected towards cannabis use. A lower PCS was associated with an increase of substance daily use. Conclusion: Multi-state modelling provides a good description of substance use phenomenon among adolescents: tobacco appears more accessible than cannabis, and tobacco use evolves more to dependence. Results also comfort the existence of an escalation process from initiation to dependence, strengthened by the fact that experiment a substance predisposes to experiment another.

**Substance dependence in a sample of Egyptian adolescents**

**Erfan, Salwa, M. Abdel Wahab; L. El Ray; H. Fathy (Egypt)**

**Objectives:** To Assess the impact of co-morbidity on the severity of dependence and the effect of stress and the type of patients coping style.

**Methods:** study group consists of 40 male inpatients aged 12-19 who met ICD-10 criteria for substance dependence; they were chosen sequentially form 2 hospitals over a period of one year. Control group consists of 40 males from same age group with no history of substance use or other psychiatric disorders. Both groups were subjected to psychiatric case history, live event stresses, coping processes scales, Coopersmith Self-Esteem Inventory. Patients were subjected to ICD-10 symptom checklist for mental disorders, and the Addiction Severity Index (ASI).

**Results:** the mean age of onset was 14.4. The most prevalent substance used was cannabis (70%) followed by alcohol (65%). Patients had significantly lower self esteem ($P=0.000$), 60% had suicidal ideations. Patients had higher scores on all scales of Live Event Stressor Scale; difference was significant for family ($P=0.003$), emotional ($p=0.008$), and total scales ($p=0.012$). Scores was higher on helplessness ($P=0.013$), denial ($p=0.000$), and mental disengagement ($p=0.000$) subscales of Coping Process Scales. 60% of patients had co morbidity psychiatric disorder, 25% of patients were depressed. Patients with co morbidity showed greater impairment on most of ASI subscales, difference was statistically significant for medical subscale ($p=0.01$).

**Conclusions**

Stress and impaired coping processes are major risk factors for substance dependence. Co morbidity is common among adolescent substance dependent patients.

**Binge Drinking Rates and Consequences in Canadian Universities**

**S. Vakili (Canada), David Hodgins, Shawn Currie, Nady el-Guebaly**

**Objective:** To report on binge drinking rates, it’s associated harm, and related factors in Canadian Universities. In addition, we looked at social norming as a possible tool to help reduce binge drinking rates in university and college campuses.

**Method:** Data was collected via an online survey of 2532 students in a Canadian University. The survey collected information on drinking and drug use, demographics, and social norm beliefs. One hundred and thirty two students were followed for two years and sent feedback based on their own drinking, or the drinking practices and beliefs of their peers in order to assess the utility of this type of social norming in reducing binge drinking rates.

**Results:** Binge In our sampled University 65% of males and 56% of females reported some binge drinking, and 11%
of males and 6% of females binge drank 4 or more times in the two weeks prior to the survey. Sixty two percent of our sample reported experiencing negative consequences in the past month as a result of their own drinking, and 66% reported experiencing negative consequences as a result of others’ drinking. Normative data collected supports social norming as influential in maintaining high drinking rates on campuses.

Conclusions: Binge drinking is a significant health risk in post-secondary institutions. Social norming is a promising approach to help reduce this practice and associated risks.

Serving Homeless Youth With Addictions: A Toronto Experience

Sharon Cirone (Canada)

Homeless adolescents and youth present with a variety of medical, mental health, and alcohol & substance use disorders. Concurrent mental health and addictions issues are particularly prevalent. For any youth living on the street, access to care is fraught with many barriers. Several unique programs have developed in Canada to meet the needs of this population.

The SHOUT Clinic in Toronto, Canada provides primary care, consultation psychiatric care, counseling and many other supportive services for homeless and street involved youth under 25 years of age.

The presenter is a Family Physician who has worked with this organization for 12 years. She will present the common profiles and presentations of this population and the approaches and services offered at the SHOUT Clinic.

Alcohol

Alcohol-induced psychotic disorder: a comparative study on the clinical characteristics of patients with alcohol dependence and schizophrenia

Gerhard P Jordaan (South Africa), DG Nel; R Hewlett; RA Emsley

Objective: Alcohol-induced psychotic disorder (AIPD) is a rare complication of excessive alcohol use for which limited comparative studies are available. The aim of this study was to prospectively investigate demographic and psychopathological characteristics in patients with AIPD, schizophrenia and uncomplicated alcohol dependence. We postulated that AIPD is a discrete clinical entity that can be differentiated from schizophrenia and uncomplicated alcohol dependence by means of standardized clinical assessments.

Method: Twenty-eight patients with AIPD, 21 with schizophrenia and 20 with uncomplicated alcohol dependence were assessed utilizing psychiatric rating scales including the Positive and Negative Syndrome Scale (PANSS).

Results: Patients with AIPD had significantly lower educational level, later onset of psychosis, higher level of depressive and anxiety symptoms, fewer negative and disorganized symptoms, better insight and judgment and less functional impairment compared to patients with schizophrenia.

Conclusion: This study provides further supportive evidence that AIPD can be clinically distinguished from schizophrenia.

World of warcraft and alcohol: a secret love story?

Gabriel Thorens (Switzerland), Khan R, Khazaal Y, Zullino D

Introduction: World of Warcraft (Wow) is the leading online role playing game with an average total reaching 10 million players all over the world in December 2008. Traditionally studies on alcohol and drug exposition in the media tend to focus mainly on audiovisual media, showing that media focus on the subject does have an impact on alcohol consumption. We launched an investigation to collect information and content related to alcohol mentioned in Wow.

Methodology: A systematic review of specialized internet sites (thotbot.com, judgehype.com, etc.) was undertaken to take stock of all in-game items, as well as an extensive game play experience. We searched all references alluding to alcoholic drinks, alcohol related products and quests in the game.

Results: We found 93 different alcoholic beverages: 33.3% beers, 31.2% unspecified alcoholic beverage, 15.1% liqueurs: (rum, tequila, whiskey), 9.7% fantasy alcohol (magical drink), 8.6% wine, 2.2% cider. They all have the ability to “inebriate” your virtual character, resulting in the disability of movement and vision depending on the “dose” ingested. 26.8% of the alcoholic beverages are shown to also have positive effects such as boosting energy, endurance or restoring magical powers. None are formally described as bad or harming for the virtual character.

In October every year, there is an in-game event called brew-fest where the central theme is beer with quests and rewards (a special beer mug which gives you the ability to drink from a barrel for example).

Conclusion: Alcohol is present in the online game industry with an emphasis on beer. Alcohol is depicted in a rather humorous and convivial manner. As in most of the heroic fantasy scenarios, beer is associated with dwarfs (friendly and entertaining characters). Alcohol has no central role in Wow but is present in all places in the game where you can buy food or drink. Alcohol can enhance your virtual character’s abilities (strength, energy…) and there are no warnings that alcohol can be harmful.

In the USA the entertainment software rating board rates Wow as teen (not suitable for children under 13 years old) and points
out the alcohol related content. In most European countries there are regulations prohibiting advertisement for alcohol on television and especially alcohol advertisement targeting the youth. Video games such as Wow might be a way for the alcohol industry to promote alcohol consumption and bypass legislations related to age limit and advertisement restriction.

**Urine Creatinine as a marker for Alcohol intake**

**Michael Varenbut (Canada), Jeff Daiter & Carolyn Plater**

Alcohol is commonly abused by a high percentage of methadone patients; with research results illustrating rates of occurrence are significantly higher than those of the general population. Alcohol use in this population poses a major health risk, exacerbates psychopathology, and increases the risk of death by accidental overdose.

Alcoholism is a leading cause of death for patients in treatment, and alcoholic opiate dependent patients have overall lower survival rates over a 10-year period when compared with patients who were moderate drinkers. Despite all of these factors, screening patients for alcohol is not routine practice in the methadone community.

Given the serious implications and consequences of alcohol use while on methadone maintenance treatment it is important for providers to discover other biomarkers for alcohol in settings where alcohol is not regularly tested.

A common marker in drug screen urinanalysis is Creatinine. Studies have shown that consumption of large amounts of fluids can decrease one’s urine creatinine levels. In terms of alcohol specifically, consuming 7 alcoholic drinks per week or more resulted in lower urine creatinine levels than those who consumed fewer drinks.

The work presented represents a wide scale study that concludes how the presence of a low urine creatinine is a useful indicator for the presence of ethanol in the urine. Implications and limitation are also discussed.

**Criminal Justice And Addiction Treatment**

**Best Practices in Addiction Treatment In the Criminal Justice System**

**Haber, Paul (Australia), Sandra Sunjic, Deborah Zador**

The vast majority of prison inmates in NSW Australia have a history of injecting drug and/or alcohol misuse, which often contributes to criminal behaviour. Accordingly, intoxication, withdrawal and substance dependence are commonly seen in prison inmates and a number of treatment services have evolved to address these issues.

This presentation will summarise the key treatment programs that currently operate in NSW prison settings. Treatment Systems for intoxication and withdrawal have evolved, and every new prison entrant is assessed by a Justice Health Registered Nurse. Opioid maintenance is available and may be initiated in prisons using both methadone and buprenorphine and there are more than 1000 inmates currently on opioid treatment.

The presentation will focus on two new programs in NSW, the Connections and Compulsory treatment program.

The Connections program was commenced in 2007 and is designed to facilitate post-release engagement in health care services with a view to reducing relapse to harmful drug use and associated criminal recidivism.

The Compulsory Treatment program was commenced in 2006 and is the first of its type in Australia. Prisoners are sentenced to this program which is abstinence based, and does not permit use of opioid replacement.

**Criminal Justice And Addiction Treatment In Egypt**

**Gawad, Tarek, MD (Egypt)**

Dr. Gawad will discuss new legislation in Egypt for first-time drug offenders that promotes the creation of programs to function as treatment alternatives to incarceration. Model treatment programs and proposals will be discussed in context of the Egyptian criminal justice system and addiction treatment system.

**The Criminal Justice System And Therapeutic Communities**

**Bunt, Greg (USA)**

Gregory Bunt, M.D. (US-NY) will discuss the relationship between drug courts, probation, parole, and other incarceration alternative programs to Therapeutic Communities. He will also discuss how changes in criminal law affect treatment options, specifically recent changes in state laws that allow for more treatment options. New changes in law allow judges to have more flexibility in sentencing, and allow judges to refer offenders to treatment in lieu of prison. Over 5,000 people who were sent to prison for nonviolent drug offenses in the last year will now have opportunities for treatment. The collaboration between the Criminal Justice System and treatment systems in the US and abroad will be discussed.

**Drug Courts and California’s Proposition 36: Treatment in lieu of Incarceration**

**Rawson, Rick (USA)**

Drug addiction creates both public health and a public safety concerns for communities and societies. Addiction is clearly a medical/psychiatric/behavioral disorder in which the brain is profoundly altered in ways that impacts all areas of a person’s functioning. Addicted individuals are sick people who need treatment, but at the same time, addiction generates serious illegal behavior. Historically, societies have developed parallel systems for addressing the public health needs of addicted individuals (addiction treatment) and criminal penalties (including incarceration in jails and prisons). In the past 20 years, Drug Courts and related efforts have attempted to create synergies between these two systems by mandating treatment for individuals arrested for non-violent drug-
related crimes. The drug court movement is poised to expand with increased Obama administration funding and is one of the most promising frameworks for jointly addressing the public health and public safety issues posed by drug addiction in the US. This presentation will describe the rationale, methods and evidence for support of drug courts. A related development has been the California voter initiative which has resulted in nearly a billion dollars for mandated treatment rather than incarceration for nonviolent drug offenders. California’s Proposition 36 (Substance Abuse and Crime Prevention Act) has different terms and conditions than the drug court model and these differences have resulted in considerable discussion and debate about the most effective way to connect the criminal justice system and the addiction treatment system. Results from Proposition 36 will be contrasted with those from drug courts.

**Chronic Pain**

Measuring Change And Amplifying Awareness In A Chronic Pain And Addiction Group

Daniels, Karen (Canada), Kelly Rose, BA, Nady el-Guebaly, MD

**Abstract:** Co-occurring chronic pain and addiction creates complex challenges for the patient and the clinician. Current estimates of addiction problems amongst chronic non-malignant pain patients indicate that between 3% and 19% of chronic pain patients experience addictions. These addictions include opiates, street drugs, alcohol and at times other prescription drugs or over-the-counter drugs.

At the Addiction Centre total of 60 participants were seen in ten Chronic Pain and Addiction Psycho-educational groups (averaging 10 sessions each) over a period of 5 years. In a group setting, careful identification of treatment objectives, effective change measures, and transparency with these tools can be helpful in both shaping best practice and moving patients along the continuum of change towards higher functioning and life satisfaction. The goals and objectives of the Chronic Pain and Addiction Service and the change measures being used to measure changes with these objectives were reviewed two years ago. This process and the systematic literature review to select suitable reliable and valid change measures which followed will also be discussed. The results from the two most recent groups (14 participants) and the strategies for involving patients in the process of exploring the results of their progress will be discussed.

A Nosology For Addicted And Chronic Pain Opioid Users

Lim, Ron (Canada), William Campbell

Patients presenting with early refills, escalating doses, frequent “lost” prescriptions and non-responders to opioid medications continue to be challenging. Suspicions of drug addiction when it is presented to the patient often results in denial or angry responses. Understanding and treating the opioid addict and opioid dependent chronic pain patient requires knowledge of both disorders and a means of classification that provides direction for treatment. A nosology that includes a categorical and dimensional framework that distinguishes between the chronic pain patient and the addict abusing opioids is presented, which will allow the clinician to assess and treat appropriately.

**Chronic Pain And Addiction Treatment At The Foothills Addiction Centre**

Daniels, Karen (Canada), Heidi Friesen, Ron Lim

The management and treatment of chronic pain and addiction patients misusing opioids is complex as these patients are made up of a diverse group of etiologies including legitimate, under treated pain patients, substance abusers and patients suffering from concurrent chronic pain and addiction. There may also be psychiatric co-morbidities and chronic medical conditions complicating functioning.

The continuum of pain and addiction treatment in Calgary, Alberta will be described as well as the development of the current treatment program provided at the Foothills Addiction Centre Pain and Addiction Service. This will include specifics about the treatment models used (chronic disease model, mindfulness based stress reduction, model of adjustment) and self-monitoring strategies that assist patients to become more self aware, self responsible and be the self managers of their chronic pain and their medication use.

Statistics from the last 5 years will be presented. 90 patients have participated in the Chronic Pain and Addiction Groups with varying levels of participation. Patterns arising from these statistics and from satisfaction questionnaires, including an expressive arts pilot project will be reviewed. Ideas and directions for further treatment and research directions will be discussed and feedback invited.

**Decade Lecture #1: Current and Future Management of Opioid Dependence**

Van den Brink, Wim (Netherlands)

Opioid dependence is a chronic relapsing disorder causing serious human suffering and substantial social problems to the patient, his environment, and society as a hole. In the last decades much has be learnt about the underlying causes and mechanisms of the disorder and different treatments have been developed, tested and implemented.

It is now a well-known fact that abstinence oriented treatments using standard methadone or buprenorphine reduction schedules or rapid detoxification procedures using naltrexone...
Psychiatric Comorbidities

Brief DISCERN, a simple tool for the assessment of mental health and addiction related websites

Khazaal, Yasser (Switzerland), Riaz Khan, Joel Billieux, Daniele Zullino

Objective: To extract and to validate a brief version of the DISCERN which could identify mental health and addiction related websites with good content quality.

Method: The present study is based on the analysis of 388 mental-health and addiction-related websites with the DISCERN and a standardized tool for the evaluation of content quality (evidence-based health information).

After extracting the Brief DISCERN, several psychometric properties (i.e. content validity through a Factor analysis, internal consistency by the Cronbach’s alpha index, predictive validity through the diagnostic tests) were investigated to ascertain its general applicability. Results: A Brief DISCERN composed of two factors and six items was extracted from the original 16 items version of the DISCERN. Cronbach’s alpha coefficients were more than acceptable for the two distinct domains: treatments information (alpha = 0.87) and reliability (alpha = 0.83). Sensibility and specificity of the Brief DISCERN cut-off score of 16 in the detection of good content quality websites were 0.357 and 0.945, respectively. Conclusion: The Brief DISCERN seems to be a reliable and valid instrument for the evaluation of mental-health and addiction-related web sites.

Practice implications: The Brief DISCERN is a simple tool which could facilitate the identification of good information and addiction related information on the web by patients and general consumers.

Management of co-morbid substance use and depressive disorders

Crockford, David (Canada)

Depressive disorders are present in 25-50% of treatment seeking patients with substance use disorders. Presence of a concurrent disorder predisposes to worse treatment outcomes including higher rates of relapses to substance use, persistence and recurrence of depressive symptoms, worse treatment adherence, fragmentation of care, and higher likelihood of suicide. Depressive disorders contribute to the development of SUD over time and vice versa via. The overlap in biopsychosocial factors will be examined including neurobiology findings of increased amygdala activity and decreased dopaminergic activity during abstinence, greater likelihood of negative life events, isolation and avoidance, as well as problematic support networks to tie these to treatment interventions. Often the substance use is addressed first, with supportive management and monitoring of depressive symptoms, as many depressive syndromes resolve with abstinence alone. However, up to 20% of abstinent patients will have persistent depressive symptoms, so means to identify those patients needing earlier initiation of specific depressive treatments will be discussed. While the presence of SUD is sometimes rationalized as the basis for treatment non-response or exclusion from psychiatric treatment, current evidence suggests these views lack foundation as the efficacy of antidepressants for depressive symptoms is comparable whether or not a SUD is co-morbid, particularly for the alcohol use disorders. The current empirical evidence regarding the management of co-morbid depressive and SUD will be reviewed emphasizing an integrated approach involving antidepressant medications and evidence-based psychotherapies.

Group cognitive behavioral therapy for patients with concurrent depressive and substance use disorders – lessons learned

Galperyn, Kasia (Canada), Kelly Rose, David Crockford, Saneeta Saunders

Objective: Co-morbid depressive disorders are present in 25-50% of treatment seeking patients with substance use disorders predisposing to worse treatment outcomes. Cognitive behavioural therapy (CBT) is a recognized evidence based treatment for depressive and substance use disorders
Psychiatric symptomatology and its relationship to concurrent substance use in a low threshold methadone maintenance population of prescription opioid users

**Fulton, Heather Canada), Sean P. Barrett, Sherry H. Stewart**

**Objective:** Several studies have demonstrated high prevalence rates of psychiatric disorders in methadone maintenance treatment (MMT) programs. However, the nature of the relationship between psychiatric symptomatology in this population and substance use, specifically the types of substances that are used while in treatment, is not well understood. Method: 62 individuals enrolled in a low threshold MMT program predominantly for prescription opioid use took part in the present study. Participants were interviewed about their current and lifetime substance use using a modified Addiction Severity Index and current psychiatric symptoms using the Psychiatric Diagnostic Screening Questionnaire (PDSQ). Results and Conclusions: 90.2% of clients reported using alcohol, illicit or non-prescribed prescription medications in the past 30 days and 77.4% of participants screened positive for a current psychiatric disorder (not including alcohol or drug dependence). Likelihood to be currently using substances was significantly related to screening positive for any psychiatric disorder, and which substances were used by participants varied by type of psychiatric symptomatology. For example, individuals screening positive for eating disorders were significantly more likely to use crack cocaine in the past 30 days, while individuals screening positive for depression were significantly more likely to use prescription opioids in the past 30 days than those not screening positive. Screening positive for any disorder, except psychosis and hypochondriasis, on the PDSQ was associated with using non-prescribed benzodiazepines in the past 30 days. Implications for future research and treatment will be discussed.

**Prenatal Disorders – NIDA**

**Sub Abuse Comorbidty In Prenatally Drug Exposed Children**

**Khalsa, Jag (USA), Ivan Montoya**

Substance abuse remains one of the major problems in the world today with millions of people abusing legal and illegal drugs resulting in serious morbidity and mortality. It is estimated that approximately 5.5% women use an illicit drug during pregnancy. During the 1980s the National Institute on Drug Abuse supported extensive research to determine the consequences of in-utero exposure to drugs of abuse (e.g., marijuana, cocaine, opiates, methamphetamine) during pregnancy. In general, research findings reported from several cohorts showed premature deliveries, low birth weight infants, infants with small head circumference, impairment of cognition, memory, neurological deficits, poor school performance and other behavioral problems in young children and adolescents. This symposium, for the first time at ISAM, will present medical comorbidity associated with drug abuse during pregnancy. This will include research findings on cardiovascular, metabolic, endocrine/hormonal complications, infections-associated consequences, and nutritional status in young children and adolescents. Speakers like Drs. Bandstra, Messiah, and others will present these other relevant data on medical morbidity of in-utero exposure and directions for future research. In addition, mechanisms of funding at NIDA/NIH also will be discussed.

**Cocaine Abuse In Pregnancy: Impact Upon The Developing Fetus, Child And Adolescent**

**Bandstra, Emmalee (USA), Connie E. Morrow, Veronica H. Accornero, Audrey Y. Ofir, Elana Mansoor, Sarah E. Messiah, Lihua Xue and James C. Anthony**

**Background:** Cocaine abuse by pregnant women and its effects on the offspring have received considerable attention for several decades.

**Objective:** To summarize the outcomes of a large well-retained urban cohort of prenatally cocaine-exposed (CE) and non-cocaine-exposed (NCE) children enrolled at birth and followed with serial comprehensive assessments.
Methods: The Miami Prenatal Cocaine Study (MPCS) birth cohort included 476 (253 CE; 223 NCE) full-term African American infants delivered at the University of Miami Jackson Memorial Hospital. Child assessments and caregiver interviews have been completed at 1, 4, 8, 12, 18, and 24 months; 3, 5, and 7 years; and 12-14 years (83% retention); and are ongoing at 16-17 and 18-19 years.

Results: CE compared to NCE children had significantly lower birth growth parameters and demonstrated poorer infant neurobehavioral functioning, more maladaptive maternal-child interaction, higher rate of learning disorders, and increased deficits in language, sustained attention, and executive function.

Discussion: In utero cocaine exposure is associated with significant adverse outcomes through early adolescence. Ongoing studies will discern whether such deficits persist, whether so-called “sleeper” effects emerge, whether PCE increases drug dependence in later adolescence, and whether these findings differ by sex/gender. The MPCS also provides an opportunity to study the impact of PCE on child growth and cardiometabolic risk, as discussed by Dr. Messiah in this symposium, led by Drs. Khalsa and Montoya.

Growth And Cardiometabolic Risk Among In Uteri Drug Exposed Adolescents

Messiah, Sarah (USA), Tracie L. Miller, Steven E. Lipshtultz, Kristopher L. Arheart, Emmalee Bandstra

Objectives. Little is known about how prenatal cocaine exposure affects cardiometabolic health in late adolescence. The goal of this new award (K01 DA026993-01, funded on 07/01/2009) is to examine how in utero cocaine exposure might alter occurrence and trajectories of growth and the development of cardiometabolic disease risk factors. Methods. Using data from the Miami Prenatal Cocaine Study (MPCS) this study will examine the relationship between in utero cocaine exposure, anthropometric growth and development of cardiometabolic disease risk factors in African American children at ages 16-18 years (total N ~ 400) to (1) longitudinally compare anthropometric measures (height, weight, body mass index, waist circumference, and body composition) among children/adolescents who were or were not prenatally exposed to cocaine; (2) compare cardiometabolic risk factors (fasting glucose, insulin, lipids, CRP, blood pressure) cross-sectionally and (3) determine the specific effects of pre/postnatal exposures of cocaine controlling for effect modifiers (nicotine, alcohol and marijuana exposure, stress, anxiety and depression in children and mothers) on: (a) Overweight and obesity, (b) Underweight, and (c) > 3 cardiometabolic risk factors (often referred to as “metabolic syndrome”). Results. Analysis through 7 years of age showed the cocaine-exposed children have persisting deficits in head circumference. We will present findings here to determine if cocaine-associated deficits in infant growth predict long-term growth at age 12 and 16, and thus potential health-related outcomes. Conclusions. Findings from this investigation should inform both the fields of substance use and cardiovascular research about subsequent cardiometabolic risks of cocaine ingestion during pregnancy in offspring.

Ineonatal Abstinence Syndrome: Biophysiological Correlates Of Expression

Jansson, Lauren M. (USA), Janet A. DiPietro, Andrea Elko, Martha Velez

Opioid-exposed infants typically exhibit symptoms of impairment of the ability to regulate internal homeostatic processes and organize appropriate behavioral responses. The symptoms expressed by affected infants are widely variable, for reasons unknown. Vagal tone is a measure of the functioning of the autonomic nervous system, which is a crucial regulator of neural homeostasis and physiological adaptability.

Objective: This study examines whether cardiac vagal tone, an indicator of parasympathetic neuroregulation, provides a marker for autonomic dysregulation subsequently expressed as neonatal abstinence syndrome (NAS) in prenatally opioid-exposed newborns.

Method: Electrocardiogram data (ECG) were collected on 65 methadone exposed infants on postnatal days 1 and 3; heart period (HP) and vagal tone (V) were quantified.

Results: In general, boys had more severe NAS expression than girls. Infants with lower V on day 1 had significantly higher NAS symptomatology on day 3. Neither additional prenatal cocaine exposure nor non-compliance with the treatment regimen was associated with NAS severity; both were associated with lower HP (i.e. faster heart rate) and lower V.

Conclusions: Results support the hypothesis of a biologic vulnerability of autonomic regulatory functioning in methadone exposed infants with more severe NAS expression, as well as male infant vulnerability to more severe NAS expression.

Who Fellowship Presentations

Clinical Observation Of The Relationship Between Cannabis Use And Psychosis; And Alcohol Use And Depression

Suleman, Antonio (Mozambique), António P. Palha

Objectives: Mozambique is a country with many drug problems which need to be examined. One significant problem is the co-morbidity of addiction and mental health disorders, such as Psychosis and Depression. The objective of this project is to examine the relationship between cannabis use and Psychosis and alcohol use and Depression. We also are researching factors that are related to the co-morbidity.

Methods: We have conducted two years of clinical observation while treating drug abusers in our clinics at Inulene Psychiatric hospital, Maputo Central Hospital both in Maputo, South of Mozambique and São João Mental Health Center in Nampula, North of Mozambique. Most of them are man, age from 15 to 55 and was been observed and treated for 3-4 weeks.

Results: Cannabis as the principal addictive substance being used by our population and they also present clinical symptoms of Psychosis. This relationship has been observed repeatedly in our sample. Several related factors have been identified, such as
poverty, low cost of cannabis, use by those doing agricultural work, use by students to increase their creativity. At this time we are also observing an increase in cases of alcohol consumption and it is associated in many cases with depressive disorders.

The reasons here for alcohol abuse are: traditional drinks are produced by rural families, low cost of alcohol, and that alcohol is easily accessible.

**Conclusions:** Our preliminary observations indicate that there is a trend which needs to be further examined. This trend suggests a relationship between cannabis and psychotic disorders and alcohol and depressive disorders. More research needs to be conducted in this area in order to identify risk and protective factors associated with this co-morbidity. Possible effective treatment for this co-morbidity also needs to be investigated in order to better treat the increasing number of patients presenting with these symptoms are our clinics in Mozambique.

**ADHD (Attention Deficit Disorder/ Hyperkinetic) In Patients With Substance Abuse: Clinical And Approaches Of Co-Morbidity Gigena Parker, Dario (Argentina)**

Despite the progress in the study of comorbidity, there is low specificity of the diagnosis in this population. This paper explores the comorbidity from a clinical point of view in all its dimensions from a model of drug abuse treatment. The study first reviews the prevalence of ADHD in this population and investigates the diagnostic overlap with Substance Abuse, Bipolar Disorder and Personality Disorders, analyzing the child, adolescence and adulthood presence of the disorders traits. A review of the latest therapeutic strategies and specific recommendations in these patients, in particular the effectiveness of treatment for this co-morbidity also needs to be investigated in order to better treat the increasing number of patients presenting with these symptoms are our clinics in Mozambique.

**Methods:** To meet the objectives, research methodology is both quantitative and qualitative. Both approaches allow information on individual and global social and personal characteristics that are associated with the symptoms of ADHD and substance abuse. Knowledge about consumer attitudes toward drugs, and the dimensions of the problem of ADHD and associated behaviors were explored.

An exploratory and descriptive-correlational study as to consumption of legal and illegal drugs, the pattern of consumption, the relationship between consumption and symptoms of ADHD (and associated symptoms) in patients who met the diagnostic criteria of the disorder were explored.

**Participants:** 34 patients over 16 and under 50 who are in treatment for substance abuse.

**Results:** Preliminary results show that the presence of ADHD symptoms in subjects in treatment for substance abuse is high, but the symptoms are more prone to confusion include: irritability, impulsivity, emotional liability and aggression which overlaps with personality disorders of cluster B, bipolar disorder and for adolescents with conduct disorder and oppositional defiant. All improve the symptoms of both disorders with the comprehensive and integrated treatment in the studied parameters (family, social, academic, etc.).

**Conclusion:** Although we can not restrict only to ADHD treatment, patients reported that treatment for this problem contributed significantly in alleviating the symptoms studied, we found a higher rate of abstinence and improved primary and secondary symptoms of ADHD.

**Demographic And Clinical Characteristics Of Opioid Drug Users In A Community Mobile Clinic**

Sonali Jhanjee (India), Hem Sethi

**Aims:** To study the demographic and clinical characteristics of opioid drug users attending a community mobile clinic in a metropolitan city of India.

**Methods:** Oral Substitution Therapy with Buprenorphine for opioid dependent drug users is being carried out through a mobile clinic in East Delhi. The information on various socio-demographics factors and clinical characteristics were gathered on semi-structured proforma at baseline.

**Results:** Majority of opioid dependent(mainly heroin) drug users(n=104) were male(97.1%). 40.4% of the sample were young drug users belonging to the 18-25yrs age group. Most were married(58.7%) and belonged to nuclear family(48%), 33% were illiterate and 32% were presently unemployed. The mean age of initiation of opioid use was 20.3±7.3 and mean duration of opioid use 10.8±8.9. The mean age of initiation of injectable drug use was 24.4±9.0yrs and mean duration of injectable drug use 3.2±2.3yrs. Among the opioid dependent males attending clinic, around 67.3% had the history of injecting drug use while 49% were still injecting drug(current users) in the last one month. The highest rates of injecting drug use were among those who were between the age of 18-25yrs and the significant risk factors for IDU were being unmarried(OR=3.699, CI=1.247-10.977) and having sex with sex workers( OR=2.990, CI=1.453 – 7.753). 78.4% of IDU’s reported sharing of syringes and other injection related paraphernalia.

**Conclusions:** Studying various demographic and clinical characteristics will help to define intervention in this high risk population.
Behavior

Addiction to palatable food: neuronal and behavioral response to intermittent access to sucrose

Timofeeva, Elena (USA), J. Martin

Food addiction is characterized by compulsive engages in frequent episodes of uncontrolled eating, or binging [1, 2]. To study the neuronal mechanisms of addiction to palatable food we have developed two animal models that demonstrate the compulsivity and binge episodes of sucrose consumption. The first group (AIS) of rats had ad libitum access to sucrose during four days per week while following three days was maintained on regular chow. The second group of rats (RIS) had an access to sucrose and chow restricted to 2h per day during four days per week while following three days was maintained on regular chow. The AIS rats did not demonstrate the binge episodes of sucrose consumption. However, the AIS rats significantly increased the number of licks, but decreased the volume per lick, of sucrose. Conversely, the RIS rats demonstrated increase in the number of licks and the volume per licks of sucrose, and the binge episodes of sucrose consumption. The chronic restraint stress (RS) decreased food intake in control, chow-fed rats, but not in AIS and RIS rats. In the brain, the AIS and RIS rats demonstrated lower activation of the paraventricular hypothalamic nucleus and the lateral septum in response to RS. These results suggest that (i) intermittent access to sucrose without food restriction leads to manifestation of excessive (compulsive-like) consumption of sucrose, (iii) the intermittent access to sucrose combined with food restriction provokes the binge episodes of sucrose consumption, and (iii) both regimes of intermittent access to sucrose affect the response to stress.

Systematic Literature and Measurement Review of Behavioral Addictions

Martin, Cayla (Canada), Tanya Mudry, David Hodgins, Nady el-Guebaly

In 2007 the Norlien Foundation (a foundation supporting programs and initiatives aimed at Albertans, specifically adolescents, children and those suffering from addiction) teamed up with researchers from the University of Alberta and the University of Calgary with the goal of investigating behavioral addictions and their effects on the province of Alberta. While this project is composed of a series of phases, planned to continue over a 5 year time period, this presentation will discuss project 1, part of phase 1 of our research.

In project one, our goal is to complete a systematic review of literature and measurements targeting behavioural and substance addictions which include: Internet, sex, gambling, shopping, eating, exercise, working, tobacco, cocaine, cannabis, alcohol, and opiates. This will be the only comprehensive review, known to date, of these particular combinations of behaviours/substance problems. There is much controversy around the appropriate classification and conceptualization of these “addictive” behaviours. As the DSM has yet to include many of these behavioural addictions, our literature review specifically targets the conceptualizations (definition and classification) surrounding these particular problem behaviours. Our measurement review investigates the types of scales currently being implemented in diagnosis of these behavioural “addictions” and analyzes the psychometric properties. When complete, the results of both the literature and measurement reviews will be used to inform the next phases of this project, specifically the creation of new behavioural measures, and an evidence-based, comprehensive understanding of the conceptualization of these “addictive” behaviours.

Compulsive Sexual Behavior

Amadala, Stephen (Canada), Meyen Hertzsprung

That individuals may develop addiction to a normative behavior such as sex is highly controversial. Compulsive sexual behavior shares similar defining features with substance dependence. Though the presentation may vary, the central features are compulsive sex and obsessive thoughts about sex with associated consequences. I will be discussing common presenting features and modalities of treatment.

NIDA Fellowship Presentations

Women’s Interactive Screening to establish HIV risks: Results from effectiveness evaluation

Nemes, Susanna (USA), Jenny Namur Karp

Objectives: This study was funded by the National Institute on Drug Abuse (NIDA) to determine the extent to which the experience of taking the screener and receiving individualized feedback, support, and behavior change strategies affected subjects’ help-seeking behaviors, sparked them to discuss HIV risk with their primary care providers, changed their HIV testing patterns, or initiated risk-reduction behavior change.

Methods:

Recruitment Sites: Five health clinics servicing the needs of women at high risk for HIV were recruited in the U.S.

Data Collection Procedures: Data collection occurred at three points: before taking the screener, after taking the screener, and 30 days after taking the screener.

Items: The measures included self-reported items on the following:

- past and current condom use, as well as future intentions to use condoms;
- HIV testing history and intentions;
- help-seeking history, behaviors and intentions including patient-provider discussions, and use of hotlines and other resources

Results

Increased rates of patient-provider discussion about HIV risk

Of women who had never discussed HIV risk with a provider, likeness of discussion that day increased from pre-56% to post-68%.
At 30 day follow-up, 45% had talked to their provider about their WISER results

57% of women who had never discussed HIV risk with a provider prior to taking the WISER reported having done so at Time 2 (after having taken the WISER).

Change in distribution of intention to use condoms was significant

94% women liked taking the screener on the computer (contradictory to much of the literature, which indicates that providers tend to believe patients will find computerized HIV screening unacceptable)

84% women preferred the computerized method of questionnaire taking

Conclusions
- The majority of participants responded positively to the WISER, finding the computer administration simple and enjoyable to use.
- Most women found the information from the WISER to be helpful useful – both as a reinforcement and as an educational tool.
- A significantly greater percentage of women reported engaging in risk-reduction activities and help-seeking behaviors after taking the WISER.
- It is our recommendation that gender-specific HIV screening and brief intervention tools be made available in healthcare settings.

Cross-Generational Transmission Of Violence Within Families Of Alcoholic Women

Pedriali, Ana Beatriz (Brazil), Patrícia B. Hochgraf

Objective: To compare the existence of physical, psychological and sexual abuse and investigate who the abusers are within families, across three generations: present generation (partners and children), parents and siblings and paternal and maternal grandmothers of women with and without alcohol dependence, from their own reports.

Methods: The present study used family genograms to compare the presence of physical, psychological and/or sexual violence across three generations of 30 families of alcoholic women and 32 control families.

Results: It was observed that the alcoholic women not only belonged to families that suffered more physical, psychological and/or sexual violence, but also had greater involvement with violent partners than the controls did. It was also found that the alcoholic women were both the victims of violence within families and often the abusers.

Conclusions: The families of alcoholic women may be more subject to violence within the family, whether of physical, psychological and/or sexual nature. These women participate in this violence not only as victims but also as perpetrators. The results suggest that because they live in such violent homes, they end up not recognizing these acts as a problem, thus leading them to accept violence and continue it across the generations.

HCV Knowledge Level And HV Infection Among Drug Users In MMT Clinics

Du, Jiang (China)

Objective: HCV infection is becoming an important issue among drug users in China as well as in other countries. Drug treatment programs are important sites of opportunity for providing HCV education to the patients. This study measured the HCV knowledge level and implication in a group of methadone maintenance treatment (MMT) clinic. Method: 114 heroin users who were accepting methadone maintenance treatment in a MMT clinic in Shanghai were interviewed. A structured screening questionnaire, HCV Knowledge Scale, and AUDIT were used to collect the information regarding (1) the knowledge of Hepatitis C; (2) the concordance of self-knowledge of hepatitis C virus status versus actual status; (3) alcohol use among drug users. The HCV blood test results were gathered from the MMT clinic records. Results: Overall, the score of HCV knowledge is 11.3 (2.1); the score of AUDIT is 3.2 (5.4); the seroprevalence of HCV was 58.0%. 68.4% participants reported that they did not know their HCV status; 59.2% of them who reported did not know their HCV status were serologically HCV-positive; 15.3% HCV-positive participants got anti-virus treatment; 18.4% participants asked for counseling about HCV infection voluntary. Conclusions: There are significant gaps in knowledge about HCV among drug users in MMT clinic. This population, with its high prevalence of HCV, should be addressed, and intervention strategies should be provided in MMT clinics.

Cultural Adaptations Of The Therapeutic Community In A Muslim Country

Nazar, Mahmood (Malaysia)

This paper presents the practice of therapeutic community in Muslim countries, specifically in Malaysia. TC was introduced in Malaysia back in the early 1990’s with the establishment of a government drug rehabilitation center, PERSADA; the application of TC to rehabilitate drug related offenders in prison; and an NGO PENGASIH. All of these facilities are in the vicinity of the city of Kuala Lumpur. The initial practice of TC has been adopted from Daytop Village after rehabilitation officers from National Drug Agency, Prison Department and PENGASIH attended a series of training and practicum. Daytop model then did not put emphasis on religious aspects but when it was brought to Malaysia, religion was made one
of the primary components in the drug rehabilitation process. Islam, being the national religion of Malaysia was adopted into TC. All rehabilitation centers have a small mosque. It plays the function of place of worship and spiritual rehabilitation. Compulsory five time daily prayers, “Sunat” prayers, recitation of “doa”, “zikir”, reading Quranic verses and Prophet’s “Sunnah” has been a practice in spiritual-based rehabilitation in Malaysian and many other muslim countries such as Indonesia and Brunei. Daily morning and departmental meetings also discussed daily, weekly and monthly religious programs; taking care of the mosque is incorporated into the job function and specific budget and time were allocated for religious practices. Residents who do not perform their religious duties will be subjected to queries by both staffs and other residents. Some are even addressed in GMs. Counseling and penalty was imposed for recalcitrant. Studies in Malaysia found that residents readily accept religious inputs in the program, as it will be a part of their life outside the rehabilitation center. For those who are not religiously inclined, rejection is also evident. Encounter group helps them to discover the rejection. Non Muslim are invited to interact in Islamic religious program that do not involve worshipping, because it focus on common good life values. Non Muslim is also provided with their own place of worship and religious teachings in accordance to their beliefs.

Epidemiology Of Cannabis Consumption In 12-18 Year Old Adolescents In Valencia, Spain

Martinez Raga, Jose (Spain), Martinez Martinez MI, Gimeno N, Alfonso Sánchez JL

Substance use and abuse during adolescence is of particular concern as it has been identified as one of the major causes of morbidity and mortality during this unique period in neurodevelopment (Sussman et al, 2008). Data from across Europe, North America, as well as different parts of the world show a significant increase of substance use among adolescents over the last decade. Cannabis is the most widely used illicit substance by adolescents. As evidenced in epidemiological studies from developed and developing countries adolescent cannabis use has been particularly significant when compared to alcohol, tobacco or other illicit drug use. This is of particular relevance considering that early and frequent cannabis use during adolescence predicts an increased risk of cannabis dependence, as well as an increased risk of using other illicit drugs, and later symptoms of mood and psychotic disorders (Hall and Degenhardt, 2003). Information was collected using general health and nutritional habits questionnaire specifically devised for this study, but based on similar instruments used in previous surveys. A random sample of 981 adolescents aged 12 to 18 years, enrolled in Secondary Education in public and private schools in the city of Valencia (Spain) and surrounding areas participated in this cross-sectional study conducted during the academic year 2005/06, aimed at evaluating cannabis consumption patterns and trends. In addition, risk perception associated with cannabis use was assessed as well. A total of 312 students (31.80%; 33.26% of males and 30.42% of females) admitted any cannabis use, and 173 (17.65%) had used it in the previous month; therefore 55.45% of ever users were current cannabis smokers. Mean age of first use was 14.04 years (13.67 years for boys and 14.41 years for girls). There were significant differences between the age-groups in their health-risk perception associated with cannabis, with the younger age groups significantly more inclined to perceive cannabis use as adversely to their health. These results, which are important from a public health perspective, underpin the importance of developing effective prevention campaigns that addresses cannabis abuse and false beliefs associated with it from an early age.

Current Issues In Therapeutic Communities

The Therapeutic Community from a personal and professional perspective

Kurth, Don (USA)

Dr. Kurth will discuss the Therapeutic Community (TC) from a personal and professional perspective. He will share his experiences of addiction as well as going attending and eventually graduating from a TC. He will discuss life while in recovery, when he received admission into medical school, and when he went on to practice addiction medicine in a Therapeutic Community. He will compare and contrast involvement in a TC from the personal perspective of a graduate and from the professional perspective of an addiction medicine physician.

Therapeutic Communities and client outcomes: International potential and a three-country comparison

Bunt, Gregory (USA)

OBJECTIVE: To describe Therapeutic Community programs and clients in China, Malaysia and the US and assess the degree to which essential elements of TC treatment and critical substance abuse treatment elements are present in the programs.

METHOD: Fidelity of treatment practices was assessed through examining the perspective of each organization, the approach of the organization, the use of the community as a therapeutic agent, the educational and work activities offered, the therapeutic activities offered, and the stages of treatment described. Presence of critical substance abuse treatment elements was assessed by an instrument that examines organizational characteristics, client characteristics, program practices, treatment goals, and staff and client satisfaction. Baseline client data that was assessed includes demographic information, drug use history, family status, employment status, physical and mental health status, involvement with the criminal justice system, and psychosocial history. Client retention ratios will also be calculated and compared between programs.

RESULTS: TC treatment practice fidelity and presence of critical substance abuse treatment elements varied by country, as did client characteristics and retention ratios. Program and client characteristics unique to each country will be discussed.

CONCLUSION: While many fundamental elements of TCs
are consistent across the US, China, and Malaysia, each TC has unique cultural characteristics evident in client characteristics and programming. Fidelity to TC best practices also varies; the relationship between this and client progress in treatment should be studied in the future.

Rates and Correlates of Dual Diagnosis in Residential Programmes for Dependent Clients: findings from the PADDI-TC (Psychiatric and Addictive Dual Disorders in Italy) Study

Carra, Giuseppe, P. Sciarini, P. Borrelli, I. Popa, C. Montomoli, M. Clerici (Italy)

Background: In Italy, the role of private non-profit therapeutic communities (TC) – generically inspired by the Daytop model – is established in the addiction field (Carrà & Clerici, 2003). Along with community Drug & Alcohol Services residential treatment programs are among the main treatments provided throughout the country. In the last two decades, TCs have also implemented devoted residential programmes with particular skills in the diagnosis and treatment of comorbid substance-related and psychiatric disorders (Carrà & Clerici, 2006). However, little is known about comorbid psychiatric disorders rates among traditional TC clients as well as about characteristics of severely and persistently mentally ill clients referred to modified TCs (De Leon et al., 2000). The aims of the Psychiatric and Addictive Dual Disorders in Italy PADDI-TC study are to begin to fill this gap by investigating prevalence of comorbid psychiatric among people cared in Italian traditional TCs, and characteristics associated with mental illness among clients referred to modified residential programmes.

Method: A cross-sectional survey design has been used. An extensive battery of instruments was used to collect information during face to face interviews including ASI-X, MINI-PLUS, and SCID-II.

Results: In total, 23 therapeutic communities and 286 people participated in the study between November 2008 and March 2009. Though referred to a traditional residential programme, more than two thirds of clients showed some, not just minor, psychiatric disorder. Differences arise between people referred to a traditional or a modified program as regards medical severity, legal condition, most frequently abused substances, and previous treatments history.

Conclusions: The most striking finding provides evidence about high prevalence for comorbid mental disorders also among clients of the traditional TCs, questioning training for appropriate referrals as well as the adequacy of treatment provided. The need of designing differentiated therapeutic approaches - consistent with differences in severity profiles for clients of modified programmes - is also emphasized. Providing targeted service planning and policy making is actually a main concern for Italian TCs.

Chronic Pain and Addiction: Assessment, Monitoring & Treatment in the ISAM Policy Framework:

R. Hajela & M. Pohl

Chronic Non-Cancer Pain (CNCP) is a disabling condition that sometimes requires opioid agonist maintenance therapy (OAMT) to manage pain. Opioids, as psychoactive substances, have a significant abuse liability and dependence potential, where they may be the drugs of choice or ancillary drugs for people suffering with Addiction. Abstinence-based approach to treatment and recovery does require abstinence from opioids; however, OAMT, with methadone or buprenorphine, is a viable treatment option for those with Opioid Dependence, who are unable to be opioids-free. At times, CNCP may occur in someone who is on OAMT that makes the issues very challenging to deal with for care providers.

In this workshop, Dr. Hajela will review the framework for a comprehensive assessment to establish proper diagnoses for CNCP and/or Addiction, in the context of the ISAM Policy Statement in this area; and the treatment approach for OAMT in patients with or without Addiction, especially the importance of urine drug testing and monitoring. Dr. Pohl will discuss withdrawal management and residential treatment issues in an abstinence-based recovery framework. The presentations will be case-based and a panel discussion will allow for case-based questions and conundrums from the participants.

Infectious Diseases And Medical Complications Of Drug Abuse- Part 1

Naltrexone treatment and HIV risk reduction for heroin addiction: 10-years Penn-Pavlov experience

Woody, George (USA), Edwin Zvartau, Evgeny Krupitsky, et al

Data from 4 studies conducted over the past 10 years will be presented that show the close connection between the spread of HIV and intravenous heroin use in St. Petersburg and the Leningrad Region, and the value of naltrexone treatment for preventing relapse. First is an epidemiological study showing a dramatic increase in IDU and HIV beginning around 1995. Next are three double blind, placebo-controlled studies in which patients were randomized to a 6-month course of oral naltrexone or naltrexone placebo (N=270); or naltrexone implant + oral naltrexone placebo, oral naltrexone + placebo implant, or oral placebo/implant placebo (N=306). Data show a significant effect of oral naltrexone in the first two studies, and of the naltrexone implant in the third. Marked reductions were seen in heroin use, HIV risk, and psychiatric symptoms...
in patients who did not relapse. Naltrexone adherence was very important, with the implant formulation having better adherence and results than the oral in older patients, most likely because family members were less able to supervise adherence to the daily tablet.

HIV and stimulant use in a sample of ethnic drug-using men who have sex with men and women in Los Angeles

Shoptaw, Steve (USA), Allison Ober, Pamina Gorbach

Objective: To assess associations between stimulant use and HIV during the most recent sexual episodes for men who have sex with men (MSM) and/or drug users and the sexual partners of these individuals.

Methods: Respondent Driven Sampling was used to compile a sample of 779 primarily older, Black (51%) and Latino (24%), very low-income MSM (83% less than $1,000/month).

Results: Crack use was more prevalent than methamphetamine (33% vs. 22%); HIV prevalence was higher for methamphetamine users (49%) than crack users (24%). Fully 40% of the sample was behaviorally bisexual. Having unprotected sex (OR 2.77, 95% CI 1.46 – 5.26), having sex in a public sex venue (OR 3.63, 95% CI 1.52 – 8.64), having sex with an HIV positive partner (OR 6.15, 95% CI 2.14 – 17.62), having exchanged sex for money or drugs (OR 4.16, 95% CI 1.78 – 9.72), and having a higher number of sexual partners (OR 1.67, 95% CI 1.17 – 2.38) associated with methamphetamine use during sex.

Conclusions: Methamphetamine use during sex elevates risks for HIV-related sexual behaviors even among very poor MSM and deserves attention by prevention and treatment providers.

Sexually transmitted infections ad HIV in adolescent drug users: risks and promising approaches

Tross, Susan (USA)

Objective: Drug-using adolescents may be especially vulnerable to sexually transmitted infections and HIV (STI/HIV) – due to multiple risks (e.g. sexual behavior, drug use, pregnancy intention, impulsivity). Adolescent drug treatment is a valuable, but underutilized, venue in which to deliver sexual risk reduction intervention. This presentation will alert participants to the essential risks confronting drug using adolescents, and promising approaches to them in the setting of drug treatment.

Methods: This presentation will systematically review: STI/HIV epidemiology in adolescents, with attention to drug users (particularly those in drug treatment); studies of contextual (demographic, social, psychological, practical, etc.) factors associated with sexual risk behavior in them; and studies of interventions with them.

Results: Epidemiological statistics from public health databases and empirical studies, results of empirical studies of determinants of sexual risk behavior, and results of empirical studies of interventions, especially within drug treatment settings, will be systematically reviewed. These will include: intervention approaches; assessments; and outcomes.

Conclusions: Implications for intervention adaptation and/or development and implementation in drug treatment programs serving adolescents will be presented. Lessons learned – particularly about barriers and promoters of intervention delivery – will be discussed.

Challenges to Community Substance Abuse Treatment Programs

Haynes, Louise (USA) George Woody, Susan Tross, Steve Shoptaw

Substance abuse continues to be a major factor in the transmission of HIV/AIDS, via injection and sexual risk behavior. Yet most substance abuse treatment programs do not offer HIV testing services on-site or by referral (Brown, 2007). Methods: Newly developed HIV testing technology has made it more feasible for HIV testing to take place during the course of routine substance abuse treatment, and the Clinical Trials Network of the National Institute on Drug Abuse is conducting a multi-site randomized clinical trial using this new technology and an evidence-based risk-reduction counseling intervention (RESPECT). The trial enrolled 1272 participants from 12 community treatment programs across the US. Results and Conclusions: Although the results of the clinical trial are not yet available, implementation of the trial has highlighted some of the challenges of integrating infectious disease services in non-medical treatment programs, including staff training and culture change. This presentation will summarize key components of the RESPECT counseling model and address issues facing community substance abuse treatment programs in implementing risk reduction counseling and testing.

Policy

International Perspectives On Addiction: The War Against Drugs In Mexico: The Lord Of The Skies

Rueda, Sergio (Mexico), Hiram Yañez

The night of October 1, 2008, a group of six drug dealers were lined up and ordered to kneel down against a wall facing one of the main high way bridges in Juarez, named Francisco Villareal, and then executed by Sicarios (Official Drug Cartel Executioners) members of one of the main drug cartels in Mexico. Interestingly, this bridge represents one of the main symbols in the city of the current ruling political party in Mexico, which has started a fierce fight against the very powerful Mexican Drug Cartels. This is a reflection of the challenged posed by the very powerful drug cartel, known as the Amado Carrillo cartel The Lord of the Skies, which some assumed was behind the execution of the six drug dealers that night. For the last year, this has been a National pattern of executions which is the result of the very fiercely fight, taking place between the drug cartels in Mexico and the Federal Government. During the year of 2008, over 5,300 executions of drug dealers and
innocent people have taking place in Mexico (La Jornada 2009). (Rueda, Yañez, 2009)

How Do Policies, Politics And Culture Influence The Treatment Of Opioid Dependent Patients In A Country – Example Norway

Welle-Strand, Gabrielle (Norway)

I do not think any country’s treatment system can be understood unless you know something about the political and cultural context. I will therefore use my own country as an example to show how the treatment of opioid dependent patients has developed.

Like most countries Norway reconsidered the national policy concerning substitution treatment with the advent of the HIV-epidemic. In 1991 Medication Assisted Treatment (MAT) was started, but only for HIV-positive IDUs with immunodeficiency, in Oslo. In June 1992, 22 patients were included in MAT. Only in 1997 did the Norwegian parliament open up for general MAT treatment nationwide.

Presently more than 5000 patients are included in MAT, out of an estimated opiate-using population between 8200 and 12500. I will describe the development, with emphasis on the recent years and the National Guideline process. I will also discuss some cultural dilemmas, how our politicians act and how some colleagues from other countries try to influence the Norwegian situation.

The importance of knowledge brokering and the role of knowledge brokers in the formulation of Swiss Drug Policy

Khan, Riaz (Switzerland), Y. Khazaal, Gabriel Thorens, Daniele Zullino

Summary: Knowledge brokering focuses on increasing the use of research in policy formulation by organizing existing and new interactions between researchers and policy makers. These interactions often result in the emergence of research-informed policy options because researchers and policy makers are more aware of each other's needs and can be assisted in working through disagreements.

The role of knowledge broker in the formulation of the Swiss drug policy can largely be attributed to the Swiss Federal Office of Public Health (SFOPH). The federal Council’s executive decree on authorizing Heroin assisted trials (HAT) was largely due to the willingness of the Swiss government to have a pragmatic political approach to the promiscuity of the drug scenes.

The process of political action catered for the empowerment of innovation and creativity through a legal and political framework. The crucial role of knowledge brokering by the OFSP formed the basis for the implementation of a balanced Swiss drug policy keeping in mind the political vision of health promotion for all its citizens.

Advances In Treatment Matching: The ASAM Patient Placement Criteria

Gastfriend, David (USA)

Objective: In developing Patient Placement Criteria (PPC), the goal of the American Society of Addiction Medicine (ASAM) was to balance the cost-cutting of U.S. managed care companies by creating a quantitative method for characterizing patient needs and improving the quality of treatment. What is the current state of PPC development, research, adoption and impact on treatment?

Methods & Results: Efforts have moved beyond research settings to studying the factors associated with PPC adoption, their relevance to program survival and differential impact in unique subpopulations. Work may be progressing on the PPC Second-Edition, Revised (PPC-2R) Assessment Software; however development of a brief screening or triage version has stalled. A module to evaluate patient needs for non-clinical or non-traditional recovery support services, in response to U.S. President Bush’s Access to Recovery initiative has found limited use. A nationally representative survey of U.S. treatment programs has new data on the adoption of the PPC and its relationship to program survival. A major US behavioral managed care company has identified key needs for establishing intrater agreement, which is essential to establishing the PPC as standard practice. Progress has been made in international adaptation of the software, with a multi-site project in central Norway underway using a Norwegian language translation of the structured computerized interview.

Conclusions: Finally, political and economic upheavals are prompting some governments to reconsider healthcare reform. In these situations, a convergence between the desire to improve chronic disease management and the importance of health information technology is raising interest in addiction treatment and computer-assisted patient placement criteria.

NIDA - Addiction Research In International Settings

Medical and Health Consequences of Drug Abuse and Co-occurring infections: Research at NIDA

Khalsa, Jag (USA)

Currently, NIDA supports an outstanding portfolio of research on medical and health consequences of drug abuse and co-occurring infections including HIV (AIDS research), HCV, TB, STDs and others in domestic and international settings.
Examples include projects on the clinical consequences of marijuana, cardiovascular consequences of cocaine and HIV/AIDS, the metabolic and endocrine consequences of drug abuse with or without HIV/AIDS, drug-drug interactions, and the role of micronutrients in HIV disease progression. The latter was based on preliminary studies that showed that persons with low levels of antioxidant selenium, HIV infection, and drug abuse were at an increased risk of mortality. Research is underway to study the molecular mechanism of selenium, and the role of nutrition in HIV disease. NIDA also supports research on pharmacokinetic and pharmacodynamic interactions between medications used for the treatment of drug addiction, infections and mental disorders. This research is supported by using several funding mechanisms: R01, small grant research (R03), innovative research (R21), research career development grants (K), cooperative agreement (U) programs and others. The findings are disseminated via NIDA’s website, publications in professional journals (the most recent in JAIDS), and also by organizing workshops, meetings, and conferences at the national and international level. These and other NIH-funding issues will be discussed.

Research in outcomes evaluation of therapeutic communities’ worldview

Bunt, Gregory (USA)

Dr. Bunt will review studies that examine treatment outcomes for individuals who have been to therapeutic communities worldwide. Outcomes include future drug use, future employment status, future criminal activity, and future incarceration. Both long-term and short-term outcomes will be discussed and outcomes of various groups will be compared (for example, voluntary vs. involuntary). Outcomes of special populations will be reviewed, such as incarcerated individuals and persons with co-occurring disorders. Studies in this presentation are from a variety of countries in Europe, Latin America, and Asia.

Opportunities in substance abuse research for HIV prevention and Care in developing countries

Woody, George (USA)

This presentation will give an overview of international research opportunities to study addiction treatment as a way to reduce HIV risk. It will focus on studies that have been completed, are underway, or planned in collaborations between treatment researchers at the University of Pennsylvania and sites in Brazil, China, Iceland, Indonesia, the Republic of Georgia, Russia, and Ukraine. The availability of well-trained investigators and varying local conditions will be emphasized as important in selecting topics and study designs.

Studies to be discussed will include HIV incidence and cocaine abuse in Brazil; reducing HIV sex risk by treating marijuana abuse and ADHD in Brazilian adolescents; methadone and buprenorphine maintenance for preventing HIV in China; long-acting injectable naltrexone for preventing relapse to amphetamine dependence and reducing HIV risk in Iceland; studying varying levels of counseling for increasing retention in methadone and reducing HIV risk in Malaysia; comparing daily observed methadone with Suboxone for reducing buprenorphine, other opioid injecting and HIV risk in the Republic of Georgia; studying the relationship between increased heroin addiction and HIV risk in Russia, and how both oral and implant naltrexone might reduce each; and studying the impact of methadone maintenance on heroin addicts in Ukraine, and behavioral interventions that might help increase adherence to antiretroviral therapy.

Substance Use Disorder & ADHD

Medication and Diversion

Sam Chang & Detective Steven Walton

No abstract provided

Utility of various screening instruments for attention-deficit hyperactivity disorder (ADHD) in research participants seeking treatment for cocaine dependence

Berhane, Semhar Salina, A.L. Mahony, MA, D.J. Brooks, MA, J. J. Mariani, MD, F. R. Levin, MD

Aims: To date, there are scant data assessing the clinical utility of commonly used ADHD screening instruments in substance-abusing populations. The purpose of this study was to assess the sensitivity, specificity, positive and negative predictive values of commonly used screening instruments for attention-deficit hyperactivity disorder in cocaine-dependent individuals seeking treatment. Using the Conner’s Adult ADHD Diagnostic Interview for DSM-IV (CAADID) we predicted that interrater reliability on the CAADID between trained research therapists would be high and that the ADHD Rating Scale (AARS), Wender Utah Rating Scale (WURS), and the Adult ADHD self-report scale (ASRS-v1.1) Part A would have clinical utility to screen individuals for the presence/absence of ADHD.

Methods: The AARS, WURS, ASRS, and CAADID instruments were completed; all participants were screened during 2008. The interrater reliability of the CAADID was determined using a kappa coefficient along with the sensitivity, specificity, positive and negative predictive values of each of the screening instruments using the CAADID as the gold standard.

Results: The sample consisted of 32 participants, 82 % male; 29% Caucasian, 39% Hispanic, 25% African American and 7% Other; 41 +/- 20 years. Interrater reliability was high (kappa = .89). Sensitivity was 1 for both the AARS and WURS, with specificity being .95 and .91 respectively. Although specificity for the ASRS was high (.82), its sensitivity was low (.4). PPV and NPV were high among the AARS and WURS (PPV = .83, .71; NPV = 1,1). However, the ASRS revealed low PPV (.33) and high NPV (.9).

Conclusion: The CAADID is a reliable instrument for diagnosing ADHD among cocaine abusers. All screening
Further momentum has arisen from growth in addiction-related somatic and psychiatric diseases, and in particular from the development of medication assisted treatment models such as OMT. The growth in biomedical knowledge has also supported the need for specialized educational efforts and career systems.

An addiction-related medical specialty has been suggested twice earlier, only to be turned down by the medical association. A new proposal adjusted for present day demands, has now been accepted in the medical association. The proposal is in line with specified intentions from the Ministry of Health.

The presentation describes the discussion and arguments and details plans for specialty organization, educational systems, and criteria for consultancy and consequences for the treatment organizations.

A regional college on Addiction Medicine: example of collaboration to share academic and practical knowledge between primary care physicians and addiction specialists

Hammig, Robert (Switzerland), Olivier Simon, René Stamm, Jacques Besson, Barbara Broers

In concordance with the law, the Swiss Federal Office of Public Health (SFOPH) encourages initiatives to improve addiction care. In Switzerland, general practitioners (GP) are currently the backbone of opiate substitution treatment (OST – mainly methadone).

In the early 90ties, in several cities in the French speaking area, local groups were set up, with help from the SFOPH, to provide teaching, supervision and intervision to GPs involved in OST. In 2001, on request of the GPs, the "Collège romand de médecine de l'addiction" (COROMA, college on addiction medicine) was set up as a network linking all physicians in the addiction field in the French and Italian speaking part of Switzerland. COROMA's mission is to improve the quality of medical addiction care, to improve interprofessional collaboration and to develop tools to transfer scientific knowledge to the field.

The organization is simple: an advisory board, composed of members of different working groups, organise seminars in all regions, meetings between ambulatory public and private addiction centres, public health projects. Knowledge transfer is assured mainly via biannual journal "Flash Addiction", the publication of books (Addiction: frequent medical problems; Addiction: frequent psychiatric problems), a website www.romandicaddiction.ch, the development of interactive e-learning modules (form@tox) and the organisation of a yearly one day congress. In other parts of Switzerland similar networks have been set up (www.fosumos.ch).

Our presentation will shortly tell the history and specificities of this regional network, describe the different activities and...
Even stroke can result from bacterial embolism, as found among such as cellulitis, bacterial pneumonia, and infective endocarditis. Ensuing from untreated septicemia, as well as other presentations.

Bacterial infections occur at a high rate and with serious complications. Among drug abusers, at greatest risk.

Introducing naltrexone in developing countries and among endogenous people

Some theories predict that the presence of naltrexone or nalmefene in the brain directly decreases the craving for alcohol. If true, the medicine should be given during abstinence (following detoxification) in order to delay the first sip of alcohol. Furthermore, the medicine would have to be used continually forever, since the craving would return if the medicine was gone. The evidence, both preclinical and clinical, is contrary to this direct action hypothesis. Opioid antagonists produced no delay in rats starting to drink alcohol when access is first returned or in the initial rate of responding for alcohol when the lever is first available again. Most telling, 22 naltrexone trials and 3 nalmefene trials giving the antagonist after detoxification failed to find a significant delay in the time until the first sip of alcohol but did find significant benefits once drinking while on the antagonist had occurred. Both the preclinical and clinical studies provide consistent evidence for two mechanisms by which naltrexone and other opioid antagonists work: 1) The antagonist blocks the “first-drink effect”; i.e., it reduces the duration of a binge that has already started. 2) The antagonist paired with drinking extinguishes the craving for alcohol and drinking. Additional evidence for extinction comes from the fact the benefits from a constant dose of naltrexone are not constant but rather increase progressively over the course of treatment, following an extinction curve, and the benefits persist even when the medication has been removed from the body.

Introducing naltrexone in developing countries and among endogenous people

Infectious Diseases & Medical Complications Of Drug Abuse – Part II

Bacterial Infections Among Drug Abusers

Bacterial infections occur at a high rate and with serious consequences among drug abusers. Commonly occurring pathogens include the staphylococci group, including MRSA, the “flesh-eating” bacteria (necrotizing fasciitis, increasingly occurring in the groin area as Fournier’s gangrene), tetanus, and botulism. Consequences can be skin abscess or more complex abscess of spine ensuing from untreated septicemia, as well as other presentations such as cellulitis, bacterial pneumonia, and infective endocarditis. Even stroke can result from bacterial embolism, as found among methamphetamine injectors. Besides the obvious paths of infection, such as contaminated needles and equipment often used by individuals who use drugs by injection, other conditions common among drug abusers provide effective means of transmitting disease. Poor hygiene promotes bacterial infection. Equipment used for smoking or snorting cocaine, methamphetamine, and heroin can also carry bacterial infection, especially glass or metal pipes that cause blistering of the lips and tongue, with resulting sores that can abscess and provide a vector for disease transmission. The drugs themselves may be contaminated, as in the case of black tar heroin, where the presence of clostridia causes wound botulism and tetanus when injected intramuscularly. Harm reduction measures are the most direct means of reducing occurrence and transmission of bacterial infections. A comprehensive approach would include needle exchange programs, education and vaccination campaigns, as well as greater vigilance among addiction medicine clinicians in assessing drug abusers in treatment to screen for and treat bacterial infections.

Community Viral Load: A Novel Proposed Population-Based Biomarker Of HIV Presentation And Treatment: A Focus On Substance Use

Das-Douglas (USA)

Objective: We describe a novel biomarker, community viral load (CVL), a measure of a community’s viral burden or infectiousness. In individuals, HIV viral load (VL) is related to infectiousness. A recent cohort study showed that VL among injection drug users predicts HIV incidence.1 However, no jurisdiction has used population-level data to characterize CVL and its distribution.

Method: We used San Francisco’s (SF) surveillance registry to calculate CVL, defined as the mean of the most recent VL of all HIV-infected individuals in a particular community from 2005-2007. We tested differences in CVL by various characteristics, including injection drug use, using the Kruskal-Wallis test. We mapped the distribution of CVL by neighborhood (ArcGIS 9.3) to visually explore spatial differences.

Results: Overall SF CVL was 22,562 copies/mL for 11,598 unduplicated individuals. There were statistically significant variations (p<0.0001) in CVL by various demographic characteristics, including injection drug use, socioeconomic status, race/ethnicity, sex, and neighborhood. CVLs among IDU (31,881 copies/mL) and MSM-IDU (32,364 copies/mL) were higher than the overall SF CVL and among MSM (18,731 copies/mL). Homeless individuals had the highest overall CVL (41,978 copies/mL).

Conclusions: Even in richly-resourced San Francisco, the differences in CVL are consistent with well-characterized disparities in the HIV epidemic such as among injection drug users, the homeless, and economically disadvantaged. CVL may be a useful surveillance indicator that reflects the effectiveness of HIV prevention and treatment interventions and could be used to target the communities and risk groups, such as injection drug users, at greatest risk.
Where To Begin: Addressing Hepatitis C In Opioid Treatment Program

Hasson (USA)

It is estimated that more than 3.2 million Americans (Centers for Disease Control, 2009) and nearly 180 million people worldwide, or 3% of the world’s population, are infected with the hepatitis C virus (HCV; World Health Organization, 2008). With no vaccine currently available to prevent HCV infection and the cost of treatment for chronic hepatitis prohibitively expensive, particularly in developing countries, HCV has been labeled by the World Health Organization as a “viral time bomb.” Injection drug use continues to be the primary route of transmission of HCV, accounting for nearly 90% of all new infections. The current therapy of choice utilizes a combination of pegylated interferon and ribavirin, which has been shown to produce significant long-term benefits in merely 50% of those individuals receiving the treatment. For the most part, individuals infected with HCV are asymptomatic, though in 50% – 80% of adult cases, the immune system cannot eliminate the virus and the disease ultimately becomes chronic. This presentation will describe aspects of the Targeted Capacity Expansion/HIV Treatment Program, which is directed at educating injection drug users presenting for treatment about HCV.

Has The Hepatitis C Epidemic Culminated Among Drug Users? Blood Borne Infections Among Drug Users In Oslo, Norway

Wusthoff, Linda (Norway), Kjell Skaug, Rikard Rykkvin, Joakim Hauge, Tore W. Steen

Background: Bloodborne infections, particularly HIV and hepatitis C (HCV), remain an important public health problem among injecting drug users (IDUs). From 2002-2008, the City of Oslo has, in collaboration with The Norwegian Institute of Public Health and Fürst Medical Laboratories, performed a one-week health-survey amongst IDU’s in Oslo, to monitor the incidence of blood-borne infections.

Material and methods: One week a year, from 2002 to 2008, IDUs in Oslo have been offered an annual health examination. The collected EDTA plasma specimens are examined for hepatitis A, B and C viruses, retroviruses HIV-1/2 and HTLV-I/II by serological and molecular virological methods.

Results: During the test period, only a few HIV-infected cases have been detected. Among those, only one HIV-positive was not previously diagnosed. On the other hand, several of the drug users are infected with HTLV. From 2002 to 2008, there has been a reduction of hepatitis B and C infections. In addition, in 2008 the number of HCV-infections among “new” drug users (drug use ≤4 years) was significantly lower than it has been during the previous years.

Conclusion: The hepatitis C results from 2008 indicate that there might be a change in drug habits amongst drug users in Oslo. This trend is also confirmed by a study performed by the Norwegian Institute of Alcohol and Drug Research.

Treatment of recent hepatitis C virus infection in a predominantly injection drug user cohort: the ATAHC Study

Paul Haber (Australia), Margaret Hellard, Gail V. Matthews, Jason Grebely, Kathy Petoumenos, Barbara Yeung, Pip Marks, Ingrid van Beek, Geoff McCaughan, Peter A. White, Rosemary Ffrench, William Rawlinson, Andrew Lloyd, John Kaldor and Gregory J. Dore for the ATAHC Study Group

Introduction: Treatment of acute hepatitis C virus (HCV) infection produces high sustained virological response (SVR) rates, but few studies have examined outcomes among injecting drug users (IDUs). We evaluated the efficacy of treatment of recent HCV infection (acute and early chronic HCV), within a predominantly IDU-acquired HCV population.

Methods: The Australian Trial in Acute Hepatitis C (ATAHC) is a prospective study of the natural history and treatment of recent HCV infection. Participants are eligible if they are within 6 months of their first anti-HCV antibody positive result and have documented anti-HCV seroconversion within 24 months, or acute clinical HCV within the past 12 months. HCV participants received PEG-IFN α-2a (180 µg/week, n=74) and HCV/HIV participants received PEG-IFN α-2a (180 µg/week) with ribavirin (n=35) for 24 weeks.

Results: Between June 2004 and February 2008, 167 participants with recent HCV infection were enrolled (79% injected in previous 6 months). Among 74 HCV participants receiving PEG-IFN α-2a, the SVR was 55% overall and 72% among adherent participants (n=50). In multivariate analyses, baseline factors associated with reduced SVR included decreased social functioning and current opiate pharmacotherapy. Among 35 HCV/HIV participants receiving PEG-IFN α-2a/ribavirin, the SVR was 74% overall and 75% among adherent participants (n=32). Among all adherent participants (n=82), there were 11 non-responders, 1 viral breakthrough and 8 viral relapses.

Conclusion: Treatment of recent HCV among IDUs is effective. Strategies to enhance adherence among IDUs with recent HCV infection should improve treatment outcomes.
**Workshop: History, Principles and Practice of 12-Step Program**

**Munoz, Anatolio (Chile), Campbell, Bill (Canada) & Galanter, Marc (USA)**

**Objective:** Health care providers working in the field of Addiction Medicine need to be familiar with the history, philosophy and structure of the 12 Steps, as they form the backbone of recovery from Addiction and are part of treatment programs in many countries around the world.

**Method:** A lecture format with an interactive style will be used to impart information about the life history of the founders of AA - Bill Wilson and Dr. Bob Smith. The discussion will include the circumstances under which AA began. The principles of the 12 Steps and 12 Traditions will be reviewed and analyzed over time to ensure relapse prevention and enhance personal growth in recovery.

**Conclusions:** Anticipated outcome of this workshop would be to increase the knowledge base and confidence of care providers to effectively incorporate Twelve-Step Facilitation in their practice.

**New Findings**

**Crack Cocaine And Powered Cocaine Use Among Opioid Addicts In A Low Threshold Methadone Maintenance Program: Is All Cocaine The Same?**

**Barrett, Sean (Canada), H.G. Fulton, S.H.Stewart, C. MacIsaac**

Evidence suggests that cocaine use among those receiving methadone treatment is both pervasive and pernicious, yet few studies distinguish between crack cocaine and powder cocaine use. The present study aimed to determine whether there were meaningful differences in the patterns and consequences of crack cocaine and powder cocaine use in this population. 64 patients attending a low-threshold methadone maintenance program completed structured face-to-face interviews where they provided details regarding their crack cocaine, powder cocaine and other substance use. 91% (58/64) reported a history of crack cocaine use, 89% (57/64) powder cocaine use. Although 100% (57/57) of the powder cocaine users also reported use of crack cocaine the patterns and consequences of their use differed across several domains. For example powder cocaine use initiated and peaked at a significantly younger age than crack cocaine use while crack cocaine use was more likely to be associated with symptoms of dependence as well as involvement in criminal activity to procure its use relative to powder cocaine use. In addition, although both crack and powder cocaine were reported to be frequently co-administered with other substances, crack cocaine was more likely to be co-administered with prescription opiates, while powder cocaine was more frequently reported to be mixed with cannabis.

Findings indicate that patterns of crack cocaine and powder cocaine use may differ in clinically relevant ways and that there may be utility in treating these substances as separate entities when investigating their patterns and consequences of use.

**Birth & Development Outcome Among Children Of Substance Abuse Women Attending a Special Child Welfare Clinic in Norway**

**Hjerkinn, Bjorg (Norway), E.O. Rosvold, M. Lindback**

**BACKGROUND.** Exposure to alcohol and other substances during pregnancy can influence the child for the rest of its life. The offspring of substance abusing mothers are exposed to various risks. A Special Child Welfare Clinic (SCWC) in Norway provides care for pregnant women with substance abuse problems and their children up to four years of age. Pregnancy is not an indication for opioid replacement therapy in Norway. We want to show the birth outcome of the users of SCWC and the results of a neuropsychological screening of children between 4 yrs 8 months and 11 yrs 6 months in relation to a comparison group.

**METHODS.** Retrospective cohort study including 59 of 60 children whose mothers have attended SCWC in pregnancy. Further a neuropsychological screening of 40 of the children born in the years 1994-2000. **RESULTS.** Birth weight and head circumference were significantly lower in the drug abusing group than in the comparison group. Psychiatric illness was associated with low birth weight. Women who continued moderate abuse during pregnancy, had higher frequency of premature births, birth weight under 2500 g and birth complications. The children of mothers who stopped their substance abuse early in pregnancy had less birth complications. Their children did more poorly on the tests. Almost all children of mothers who continued moderate abuse during pregnancy were raised in foster homes. This might indicate that if the foetus is influenced by moderate use of substances, it has been on such a level that it has been compensated for by a stimulating environment. **CONCLUSION:** It is of great importance to reduce the amount of substances used by pregnant women. If a substance abusing mother stops the abuse, support from the child welfare system is still necessary to secure the child a safe environment to grow up in (1;2).

**Vaccines & Other Large Molecules For Treatment Of Substance Related Disorders – NIDA**

**Vaccine and other large molecules for treatment of substance related disorders**

**Montoya, Ivan (USA)**

**Objective:** Vaccines and other large molecules are being...
investigated for the treatment of Substance-Related Disorders (SRD). The purpose of this symposium is to discuss the therapeutic mechanism of action of large molecule approaches and provide an update of their clinical development for the treatment of SRDs. Methods: Active immunization with vaccines or passive immunizations with antibodies (e.g., monoclonal and catalytic antibodies) appear safe and promising therapeutic approaches for SRDs. Antibodies can bind to drugs of abuse and prevent their rapid entry into the central nervous system. Vaccines have been shown to reduce the central nervous system effects and rewarding properties of the drugs of abuse on the brain and, thus, may help to prevent the development of addiction, facilitate abstinence initiation, and prevent drug use relapse. Results: Vaccines are being investigated for the treatment of cocaine, nicotine, heroin, and methamphetamine use disorders. Monoclonal and catalytic antibodies are being investigated for the treatment of intoxications with cocaine, methamphetamine, nicotine, and phencyclidine (PCP). Other large molecule approaches such as enzymes are also being investigated but are in an earlier phase of development. The presentations will include an introduction to the large-molecule therapeutic approaches, an update of the safety and efficacy of the cocaine and nicotine vaccines, and new directions of the large molecule approaches. In that order, the presenters will likely be Ivan Montoya, Tom Kosten, Dorothy Hatsukami, and Michael Owens. Conclusion: It is expected that at the end of the symposium the participants will have a better understanding of mechanisms of action of large molecules for the treatment of SRDs as well as their potential applications in clinical practice.

Monoclonal antibodies for treating methamphetamine overdose and addiction

Owens, Mike (USA)

Abstract: (+)-Methamphetamine (METH) abuse is a major worldwide medical epidemic, yet there are no specific medications for use in treating METH-induced overdose or addiction. To meet this challenge, a new generation of passive monoclonal antibody medications is at an advanced stage of preclinical development. While these high affinity antibodies are not expected to be magic bullets to immediately cure addiction, immunotherapy could provide the breakthrough medication for use in continuously blocking or attenuating METH-induced effects during a drug overdose, or as a long-acting (2-3 week) antagonist in a long-term comprehensive addiction recovery plan. A unique challenge for these anti-METH medications is the need to protect the brain and other vulnerable organ systems from the complex direct and indirect adverse effects of chronic METH use. In this presentation, comprehensive preclinical data from pharmacological and behavioral studies will be presented to show the efficacy of the antibodies in drug overdose and in the prevention of chronic relapse to METH self-administration.

If successful in humans, these vaccines could play an essential role in a recovery program from human METH addiction by providing long-lasting protection from the rewarding and reinforcing effect of METH (funded by the National Institute on Drug Abuse).

Immunotherapy for Nicotine Addiction

Pentel, Paul (USA)

Nicotine vaccines or immunotherapies have shown promise as a treatment strategy for tobacco addiction. Immunotherapies target the nicotine rather than altering central nervous system function, and so may have fewer side effects than other types of medications. Nicotine vaccines stimulate the immune system to produce nicotine-specific antibodies which bind nicotine in blood and alter its distribution and elimination. This presentation will review the effects of nicotine immunotherapies on nicotine pharmacokinetics and addiction-related behaviors in animals, and the results of Phase I and II clinical trials. Animal studies show that nicotine immunotherapies reduce or slow nicotine entry into brain and slow nicotine elimination, with resulting attenuation in physiological and behavioral responses to nicotine. Clinical studies show that smokers produce nicotine-specific antibodies after injection with the vaccine and those who produce the highest antibody levels have significantly higher abstinence rates compared to those smokers who receive placebo. Individuals who are vaccinated do not show increased smoking behavior prior to cessation or increased withdrawal symptoms. The challenges and potential advantages of vaccination as a component of a comprehensive tobacco addiction treatment program will be discussed.

Vaccines for the treatment of cocaine dependence

Tom Kosten (USA)

Objective: This presentation will present phase 2 studies of a human cocaine vaccine and animal studies of new cocaine vaccines with improved immunogenicity as an alternative pharmacotherapy for cocaine addiction.

Methods: 1. Human laboratory cocaine administration studies; 2. Randomized placebo controlled, clinical trials; 3. Rodent studies of new vaccine carriers with antibody levels presented.

Results: New innovations in technology have facilitated the development of drug-protein conjugate vaccines, which elicit antibodies of high affinity that are specifically capable of neutralizing the drug in the body and attenuating its pharmacological effects. 1. TA-CD vaccine in humans produces dose-dependent blockade of cocaine effects. 2. A randomized placebo controlled, clinical trial of TA-CD in outpatient cocaine addicts showed significant reductions in cocaine use among those 38% of vaccinated subjects who attained antibody levels
above 43 ug/ml, which is the calculated antibody level needed
to block 0.5 mg/ml of intravenous cocaine. 3. A new vaccine
carrier from Merck has increased peak antibody levels three fold
and raised antibodies to these levels in half the time required
with TA-CD in rodents.

Conclusions: Recent advances in biotechnology make vaccines
feasible as potential pharmacotherapies for drug addiction.
Unlike small molecules targeting the neural pathways and
receptors involved in drug addiction, these protein therapies
target the drug itself, providing alternative strategies for
medications development. A cocaine vaccine has shown
preliminary success.

**Workshop: Basic Skills: Intervention & Motivational Compliance**

**INTERVENTION** - A procedure to interrupt the
process of Addiction

**Munoz, Anatolio (Chile) & Gigena, Dario (Argentina)**

**Objective:** To educate health care providers regarding the
techniques of effective intervention to motivate an individual
affected by addiction-related problems to seek treatment.

**Method:** The concept of intervention dates back to 1956. It
was developed due to the need of interrupting the process of
addiction with love to enhance an individual’s motivation to
engage in treatment and recovery. Over the years, professionals
have developed effective techniques that have also become
popular as reality-TV shows in different countries showing this
process with different results. Dr. Munoz will share his experience
in doing hundreds of interventions in his long career as an
Addictionist. Dr. Gigena will assist in this interactive workshop
to demonstrate the principles behind this process. Audience
participation will be utilized to demonstrate the techniques that
make it more successful. Explanations will be provided of the
different roles family members may play in a dysfunctional family.
Precautions will be reviewed to minimize conflict and maximize
the effectiveness in achieving the desired result of breaking
through the denial characterized by minimization, justification
and rationalization. The inclusion of close family members, peers,
supervisors and relevant regulatory agencies will be discussed.

**Conclusion:** It is anticipated that this workshop will provide
the participants with a deeper understanding and confidence in
carrying out effective interventions in their practice.

**Motivational Compliance For Addictive Disorders**

**Kang, Shimi (Canada)**

It is evident that addictive disorders carry a high burden
of disease in terms of medical and psychiatric disability,
misdiagnosis, treatment delay, social instability and inefficient use of
scarce services. An evidence-based, comprehensive and integrated
approach is essential for treatment of this complex problem, with
issues of engagement and treatment compliance at the forefront.
One approach to managing resistance is by encouraging change
through motivational therapy (MT). The purpose of this lecture is
to provide clinicians with the evidence of MT and some practical
tools of MT to apply in their own practices. This MT lecture
integrates the most current evidence with clinical expertise.

**Concepts In Harm Reduction As Part Of Addiction Intervention & Treatment**

**Hajela, Raju (Canada)**

Addiction is a primary, chronic disease characterized by impaired
control over the use of substance(s) and/or behaviour(s) as
defined by the International Society of Addiction Medicine.
Although some view Addiction as a choice, the capacity to
make choices in one’s best interest is compromised due to the
impaired control over the use of substances and/or behaviours,
which is part of the definition of Addiction. Definitive Addiction
treatment that is usually abstinence-based requires a variety of
bio-psycho-social-spiritual interventions in a variety of settings
such as outpatient, short-term residential, long-term residential
and therapeutic communities to suit the needs of the individual
in context of the severity of their illness. These modalities are
often not readily available and/or individuals are not prepared
to pursue them. For those who are unwilling and/or unable to
avail definitive treatment, harm reduction strategies become
a form of outreach and engagement to encourage healthier
choices even in the context of active Addiction.

This workshop will address the above issues from the perspective
of definitions and policy statements of the Canadian Society of
Addiction Medicine and the International Society of Addiction
Medicine; together with politics and practice of harm reduction,
in Europe and North America, with a view to encouraging
policies that consistently reduce harm and encourage treatment
rather than polarizing harm reduction and treatment as
alternate strategies. Case studies of various functional programs
will be presented and discussed.

**From Harm Reduction/Abstinence Dilemma To Gradualism And Existentialism**

**Zullino, Daniele (Switzerland), Rita Manghi, Yasser Khazaal, Riaz Khan**

The field of addiction medicine and addiction policy making
has been agitated for the last decennia by a fervent and
sometimes fierce debate about the primacy of abstinence or
harm reduction as the most valuable objective. The dispute has
among others been polarized through the discussion about the
utility of opiate (especially heroin) substitution based treatments
on one side, and the assumption of abstinence as a prerequisite
for curative treatments of addiction on the other side. Both sides
have advanced forceful arguments.

One method to settle this argument has been to propose the
integration of one approach into the other, i.e. to integrate harm
reduction into abstinence-destined programs, or abstinence as a
long-term perspective into harm reduction programs. One of
the drawbacks of this method is the definition of the primacy of
the model: the approach which has to be integrated risks to be devalued in its importance, and finally in its concept.

One of the hassles of the harm reduction/abstinence dispute surely is due to the confusion between means and objectives. As an alternative to this way of proceeding, both approaches have recently been proposed to be integrated in a globalist vision of addiction treatment (Kellogg, 2003) in order to create a change-focused system that utilizes the best of both paradigms. This new concept was termed Gradualism. Building on Kellogg’s concept of Gradualism we propose a concept adding an empowerment aspect to the model. According to this concept, addiction treatments are not only intended to liberate from (negative liberty), but also, and more importantly, aimed to liberate for (positive liberty). The task of addictology is thus not only to remove addiction, but especially to empower existential choices.

Decade Lecture #6: Trends in Prescription Drug Misuse: Strategies for Addressing a Growing Global Public Health Problem

Lubran Robert & Chaudhry, Amina (USA)

Prescription drug misuse has increased substantially in the United States over the past two decades, and has been recognized as a major public health concern. Worldwide, it is also garnering attention as a growing problem. Commonly abused classes of prescription drugs include opioids and other analgesics, central nervous system depressants, and stimulants. By the end of this session, attendees will:

- Recognize the scope of the public health burden of prescription drug misuse in the United States
- Characterize specific trends in prescription drug misuse in the United States
- Be familiar with global issues and trends in prescription drug misuse
- Understand prescription drug misuse in certain special populations (the elderly, women, adolescents, university students)
- Discuss public health strategies for prevention of prescription drug misuse
- Describe treatment options in the various types of prescription drug misuse

This presentation will draw on the published, peer-reviewed literature as well as population-based surveys and surveillance studies, to characterize prescription drug use trends in the US and globally, and provide strategies for addressing this critical public health issue.

Gambling

Functional Magnetic Resonance Imaging of Pathological Gamblers performing the Iowa Gambling Task

Crockford, David (Canada), Yuri Power, Bradley Goodyear

Objective: Neuroimaging of subjects with pathological gambling (PG) to date have predominantly identified relative differences compared to controls in frontal and striatal brain regions, but no prior studies have evaluated PG subjects compared to controls using a gambling task. The Iowa Gambling Task (IGT) involves probabilistic learning with known differences between PG subjects and controls on task performance and previously identified activation patterns using functional imaging in healthy subjects. The purpose of the study was to compare PG subjects to controls via functional magnetic resonance imaging (fMRI) while performing the IGT.

Method: Twenty-one adult PG subjects (14 male, 7 female) compared to 21 controls (14 male, 7 female) matched for age, handedness, smoking status, and ethnicity were scanned using 3T fMRI while performing a computerized version of the IGT.

Results: PG subjects performed worse on the IGT compared to controls consistent with prior findings based on PG subjects persisting at choosing riskier selections (p<0.03). PG subjects compared to controls, particularly in men, demonstrated increased orbitofrontal cortex activation bilaterally and increased right caudate, hippocampus and amygdala activation with riskier selections. Conclusions: PG subjects compared to controls activate brain regions identified as part of the extended dopamine reward pathway during riskier decisions. PG subjects appear to preferentially gravitate to higher monetary rewards and risk despite consequences suggesting differences relate to PG subjects attributing increased importance to higher magnitude, short-term rewards or risk itself rather than relating to deficits in neurologic function preventing the perception of risk or behaviour planning to limit risk.

Men have better outcomes than women in Brief Motivational treatments for Pathological gamblers

Hodgins, David (Canada)

Objective: Gender differences in the efficacy of brief treatments for media recruited pathological gamblers were tested in a randomized clinical trial design (N=314).

Method: Two self-directed motivational interventions were compared to a six week waiting list control and a cognitive-behavioral workbook only control. The first approach, brief motivational treatment, involved a telephone motivational interview prior to receipt of a self-help workbook via the mail,
and the second approach, brief motivational booster treatment, involved a telephone motivational interview the workbook and booster telephone support. Booster telephone support was offered over a six month period. Follow-up assessments were conducted at 3, 6, 9, and 12 months.

Results: As hypothesized, brief and brief booster treatment participants gambled significantly less often over the 12 month follow-up than workbook only participants. However, the booster telephone calls did not offer any advantage over brief treatment without boosters. In addition, the workbook only group participants were just as likely to have significantly reduced their losses over the year. In all groups, males had better outcomes than females.

Conclusions: Brief treatments for gambling problems are effective and may be particularly effective for men.

Why are Adolescents Gambling? The role of Family, Religiosity and Behavior

Casey, David, PhD (Canada), Rob Williams, PhD, Annik Mossiere, BA, Nady el-Guebaly, MD, David Hodgins, PhD, Garry Smith, PhD, Don Schopflocher, PhD, & Rob Wood, PhD

The objective is to present findings from Time 1 of the longitudinal study entitled the Leisure, Lifestyle, Lifecycle Project (LLLP), which examined the gambling behavior of adolescents. Random Digit Dialing (RDD) was used to recruit adolescent and adult participants from both urban and rural locations in four different regions in the province of Alberta, Canada. A comprehensive number of instruments were used to help identify biopsychosocial variables that help predict variations between non-gamblers, responsible gamblers, and problem gamblers. Gambling behavior was measured using the Fisher DSM-IV-J-MR for adolescents (Fisher, 2000). This presentation will discuss a series of logistic regressions examining the relationship between the dependent variable, gambling behavior (non-gambler versus gambler), and the following predictor variables: family environment; religiosity; adolescent behavior; and demographic variables. Results showed that several independent variables are important predictors in distinguishing between non-gamblers and gamblers such as moral beliefs, activities with families, religiosity, anxiety, internalizing behavior, and family income. For example, adolescents with strong moral and religious beliefs are more likely to be non-gamblers. There are significant gender differences in the results, with the series of independent variables more clearly identifying the predictor variables that accurately distinguish between non-gamblers and gamblers for males. These results indicate that, for adolescents in this study, there appear to be key family level factors, religious factors, and behavioral factors that differentiate non-gamblers from gamblers. It will be important to examine if these relationships continue at the other three data collections in this longitudinal study.

Canadian Low Risk Gambling Limits: New Evidence and Limitations

Currie, Shawn (Canada)

Low-risk limits can reduce harm associated with behaviours such as drinking alcohol (e.g., maximum 2 drinks per day). Limits for Canadian gamblers were developed using data collected in the Canadian Community Health Survey (CCHS-1.2; Currie et al., 2006), and consist of: 1) gambling no more than two to three times per month, 2) spending no more than $501-1000CAD per year, and/or 3) spending no more than 1% of gross household income on gambling. Analysis of these limits supported the conclusion that as the intensity or frequency of gambling increases, so does the risk of gambling related harm (i.e., a dose-response relationship). However, additional validation of these limits is needed with other datasets before they can be disseminated to the public. The current study aimed to validate the low risk gambling limits using population data on gambling habits and associated problems from the individual gambling prevalence surveys conducted in Alberta, British Columbia, Ontario, Manitoba, and Newfoundland.

Results of this cross-validation work revealed a comparable dose-response relationship between gambling intensity and risk of harm found in the integrated dataset. Within the individual provincial datasets, each low-risk cut-off limit significantly predicted harm from gambling even after controlling for the demographic variables and the presence of the other cut-offs. Despite the smaller sample sizes, the results from the individual provincial datasets were more robust than the pooled dataset. The actual quantitative limits are comparable to early results derived from the CCHS-1.2 and are similar to findings from an American research group (Weinstock et al. 2007). These results provide additional evidence supporting the concept of low-risk gambling limits; however several methodological limitations exist with the current population data such that it would be premature to disseminate actual quantitative limits at this time.

Buprenorphine

Strategies to reduce diversion of maintenance medications

Alho, Hannu (Finland)

In this paper the Finnish experience with medications aiming to prevent diversion of maintenance drugs is described. In Finland, street buprenorphine is most widely abused opiate and IV drug, second widely are amphetamines. In order to curb this problem, many treatment centres have begun to transfer their buprenorphine patients onto the bup/NX combination tablet. If patients try to misuse this combination, the naloxone component may induce precipitated withdrawal signs – as such it may have deterrent effect. The retrospective data was gathered from 70 opiate-dependent patients who had undergone a switch from buprenorphine to bup/NX from five different treatment centres. Follow-up data were collected up to 4 months post-transfer. The analysis suggests that: transfer from buprenorphine to bup/NX does not increase withdrawal symptoms.
Dose adjustments are not necessary when patients are transferred from high dose buprenorphine (average 22 mg). Patients do not abuse bup/NX intravenously, but may still abuse buprenorphine. The majority of reported adverse events and discontinuations were related to anxiety surrounding drug transfer. The survey study indicated that the street price of Suboxone is one third of that of Subutex, and that 80% of the persons that have tried iv use of Suboxone reported it as a bad experience. Overall, findings from this study suggest that the bup/NX combination has a favourable safety profile and is well tolerated when administered to patients previously treated with buprenorphine alone.

Efficacy of opioid agonist therapy on psychopathological symptoms: Methadone versus Buprenorphine

Maremmani, Icro (Italy)

There is only few data supporting the use of opiates in mental disorders. In two previous studies (fixed dose, 6-month double blind trial and flexible dose, 9-month open trial) we evaluated the efficacy of buprenorphine and methadone on psychopathological symptoms according to a SCL-90 standard 9-factor structure. We found a good efficacy of buprenorphine and methadone, but no significant differences between drugs. To stress out these differences we re-evaluated these two studies according to the results of a new 5-factor solution. Only in the “flexible dose, 9-month open trial” it is possible to highlight some differences between buprenorphine and methadone. Patients in which sensitivity and psychoticism were predominant characteristics tend to respond better to methadone. Patients in which violence and suicidal thoughts were predominant characteristics showed better results when treated with buprenorphine. At the end of this study buprenorphine dosages were around 16 mg/daily and methadone dosages around 60-100mg/daily. The high rate of psychiatric symptoms among heroin addicts cannot be overlooked or under-evaluated because they can influence treatment outcome. Therapeutic opioids can be effective on selective psychopathological symptoms.

QTc Prolongation during opioid maintenance treatment: congenital long QT syndrome and cardiac management

Anchensen, Katinka (Norway), Viggo Hansteen, Michael Gossop, Thomas Clausen and Helge Waal

Background: The mortality of opioid maintenance treatment (OMT) patients, where corrected QT (QTc) prolongation can not be excluded as the cause of death, appears low: 0.06/100 patient years [1]. However, findings indicate that prevalence in the Norwegian population of heterozygous congenital long QT syndrome (LQTS) mutation carriers could be somewhere between 1/100 and 1/300 [2]. Co-occurrence of LQTS among methadone patients with QTc prolongation increases the cardiac risk and has previously never been described.

Objective: Describe the result of cardiac investigations, including testing for LQTS mutations, and outcome of professional cardiac management of OMT patients with QTc prolongation.

Method: QTc interval was measured among 200 patients in OMT. The patients found to have QTc > 500 msec were investigated in cardiac outpatients and tested for long QT syndrome mutations. Professional cardiac management was offered to these patients by a senior cardiologist.

Results: Eight methadone patients were found to have QTc interval > 500 msec. Two were identified as heterozygous carriers of LQTS mutations. The cardiac investigations revealed that QTc intervals fluctuated widely during 24 hours and exercise. Contrary to expert advice, the patients chose not to convert to buprenorphine or take cardiac protective measures.

Conclusion: Safe cardiac management of OMT patients with QTc prolongation is complicated and co-occurring LQTS might add an additional challenge. The fluctuations of the QTc interval indicates that one-off QTc measurements might not pick up all patients at risk.

Extended vs. short-term buprenorphine-naloxone for treatment of opioid addicted youth: A randomized trial

Woody, George (USA); Sabrina Poole, Geetha Subramaniam, Karen Dugosh, Michael Bogenschutz, Patrick Abbott, Ashwin Parkar, Mark Publicker, Karen McCain, Jennifer Sharpe Potter, Robert Forman, Victoria Vetter, Laura McNicholas, Jack Blaine, Kevin Lynch, Paul Fudala

Usual treatment for opioid addicted youth is detoxification and counseling, however few studies have been done to assess its outcome, though clinicians report that relapse is high. Extended medication-assisted therapy may be more helpful. To this end, we randomized 152 opioid addicted youth aged 15-21 to 12 weeks of buprenorphine-naloxone (BUP-Nx) or a 14-day taper (DETOX). BUP-Nx patients received to 24 mg/day for 9 weeks then tapered to week 12; DETOX patients received up to 14 mg/day then tapered to day 14. All were offered weekly individual and group counseling.

The number of patients under 18 was too small to analyze separately but overall, DETOX patients had higher proportions of opioid-positive urine at weeks 4 and 8, but not at week 12. By week 12, 21% (16/78) of DETOX patients remained in treatment vs. 70% (52/74) of BUP-Nx (p< .001). During weeks 1-12, BUP-Nx patients reported less opioid use (p< .001), less injecting (p = .01), and less non-study addiction treatment
Post-Traumatic Stress Disorder And Substance Abuse

Discussant: Hertzsprung, Meyen
Brady, Kathleen (USA), Back, Sudie, Haynes, Louise

Post-traumatic stress disorder (PTSD) and substance use disorders (SUDs) frequently co-occur, yet not enough is known about the optimal treatment approach. A number of psychotherapeutic approaches to the treatment of co-occurring PTSD and SUDs have been explored. A substantial number of studies indicate that exposure-based therapy is efficacious in the treatment of PTSD alone, but there has been hesitancy to utilize exposure-based therapy in individuals with co-occurring PTSD and substance use disorders because of the fear that the painful memories provoked by exposure will lead individuals to relapse. In this presentation, promising data from several studies exploring the use of exposure-based therapy in individuals with PTSD and a variety of substance use disorders will be presented. In addition, the use of other non-exposure based cognitive behavioral treatment for co-occurring PTSD and SUDs, such as Seeking Safety, will be reviewed. Finally, promising approaches to pharamcotherapeutic treatment of co-occurring PTSD and alcohol dependence will be explored. Promising future directions for the treatment of co-morbid PTSD and substance use disorders will be discussed.

NIAAA – Agenda For Alcohol Resarch In Developing Countries – Part I

Alcohol And Injury In The Emergency Department: Findings From Developed And Developing Countries
Cherpitel, Cheryl (USA)

A summary of findings from the Emergency Room Collaborative Alcohol Analysis Project (ERCAAP) and the WHO Collaborative Study on Alcohol and Injury, covering 45 ED sites in 17 countries, will be presented. Findings include those on the prevalence of alcohol involvement in ED caseloads, the risk of injury from drinking in the event, causal attribution of alcohol to injury, alcohol attributable fraction of injury and screening for alcohol problems in the ED.

HIV Risk Reduction In Russia: Innovative Inpatient Interventions
Samet, Jeffrey (USA)

Objective: To mitigate adverse consequences of alcohol use (e.g., unprotected sex) in the Russian HIV epidemic by incorporating risk reduction interventions in the addiction and HIV treatment settings. Methods: We adapted for use in Russian healthcare settings two HIV prevention interventions designated by the CDC as having “demonstrated evidence of effectiveness.” Each adapted intervention was tested in a randomized controlled trial (RCT): 1) PREVENT – sex risk reduction based on the “RESPECT” model adapted to narcology hospital settings and 2) HERMITAGE – risk reduction based on “Healthy Relationships” secondary prevention model adapted for the infectious disease hospital setting. Results: PREVENT intervention subjects reported higher median percentage of safe sex episodes (unadjusted median difference 12.7%; P = 0.01; adjusted median difference 23%; P = 0.07). Preliminary HERMITAGE baseline results reveal that sexually transmitted infections are common, occurring in 22% of sexually active HIV-infected Russian risky drinkers: chlamydia 12% (23/195); gonorrhea 4% (8/195); trichomonas 6% (12/195); syphilis 5% (10/195). Conclusions: It is possible to conduct collaborative Russian – US research, some involving complex study design. However, the impact of this work on addiction and HIV clinical care or on public health in Russia is uncertain. Next steps include translation of effective interventions into the Russian narcology or AIDS treatment settings and further research about the impact of alcohol use on HIV disease and its comorbidities.

Screening And Brief Intervention In Cape Town South Africa Public Primary Health Care: Is It Enough?
Mertens, Jennifer (USA), Catherine L. Ward, Alan J. Fisher, Graham F Bresick, Tina Valkanoff, Stacy A. Sterling, Constance Weisner

Objective: Screening and Brief Motivational Intervention (BMI) for alcohol problems in primary care clinics has strong empirical support in primarily middle-class European and North American populations. Although BMI methodology is being taught in medical schools in South Africa, few studies have examined the prevalence of alcohol and drug use problems, or feasibility and effectiveness of Brief Motivational Interventions for alcohol or drug use in primary care clinics in developing countries, particularly in Southern Africa.

Methods: We examine findings on prevalence of hazardous drinking and drug use from a cross-sectional study of patients in the public health primary care clinic populations in Cape Town, South Africa. We also present preliminary findings from a randomized controlled trial study of effectiveness of a single-session BMI for hazardous alcohol and drug use young among adults in the context of a public primary care clinic in Cape Town.

Results: There are exceedingly high levels of socioeconomic stressors in this medically indigent population. The prevalence of hazardous drinking and drug user in Cape Town public health clinics was 13% for alcohol and 3.4% for other drugs. Hazardous use was associated with HIV-risk behaviors and infectious disease. Preliminary findings from the randomized trial found few effects of BMI on alcohol and drug use.

(p< .001). High levels of opioid use occurred in both groups at followup. Four of 83 converted from hepatitis C negative to positive by week 12. We concluded that continuing BUP-Nx improved outcome and that detoxification, either short- or longer-term was not effective.
Conclusions: There is a need for alcohol and drug screening and services in this population. Because of the severity of their difficult socioeconomic context and their symptoms, they will likely require a longer or more intensive intervention than the single-session BMI delivered in this study.

Decade Lecture: An Update On The Biopsychosocial Management Of Stimulant Dependence

Rawson, Rick (USA)

During the past 20 years, there has been a substantial effort to develop and evaluate specific psychological and behavioral strategies to effectively treat psycho-stimulant dependence. While the majority of this effort has focused on cocaine dependence, the examination of treatment response and treatment outcome data from a number of studies has indicated that the treatment response to these interventions is comparable for methamphetamine and cocaine users. There is substantial controlled research evidence to support the efficacy of cognitive behavioral therapy, community reinforcement approach, contingency management, 12-step facilitation therapy and a structured drug counseling protocol. Based upon the comparability of treatment response for cocaine and MA users, it appears that these approaches should be considered applicable with all groups of stimulant users. Specific research evaluating behavioral and psychological treatments for MA dependence, has supported the efficacy of cognitive behavioral therapy, contingency management and the multi-component Matrix Model. Research evidence, evaluating the efficacy of these approaches will be presented.

NIAAA – Agenda For Alcohol Research In Developing Countries – Part II

Willenbring, Mark (USA)

- Contrast and compare needs of patients in developed vs developing countries and different settings and cultures
- Mechanisms for adapting treatment for existing care systems in developed and developing countries
- Discussion and planning regarding next steps

Naltrexone And Relapse Prevention: The Widening Scope Symposium

Discussant: Michael Krausz

Naltrexone and Relapse Prevention: the Widening Scope

Woody, George (USA); Thorarinn Tyrfigsson, MD, Valgerdur Runarsdottir, M.D, Ingunn Hansdottir, PhD Helen Pettinati, PhD; Kevin Lynch, PhD

This pilot study will test VIVITROL® (naltrexone for extended-release injectable suspension) in a 24-week trial for treating amphetamine dependence. In Iceland as well as in many other countries, amphetamine addiction is a fast growing problem while at the same time, there has been no effective medication for treating it. However, a Swedish group recently found positive results using oral naltrexone in a 3-month, placebo-controlled trial. The study proposed here will try to replicate their findings by testing VIVITROL in a similar population. VIVITROL may be a better test of efficacy than the 50 mg tablet as it is less susceptible to adherence problems.

Participants will be recruited from admissions to Vogur Hospital, which is where patients are assessed, detoxified, and stabilized during a 7-10 day inpatient phase before outpatient treatment. We will recruit 100 amphetamine-addicted patients and randomize them 1:1 using an urn schedule stratified according to male/female and injecting/not injecting. Patients will receive their first injection of medication shortly before entering outpatient treatment and all patients will receive repeat injections at weeks 4, 8, 12, 16 and 20. Brief weekly and more comprehensive monthly assessments will be done in outpatient weeks 1 through 24, and all patients will be asked to complete a mail-in assessment at month 12.

The primary exploratory objective will be proportion of amphetamine negative urines during weeks 1-24 of outpatient treatment. Secondary objectives will be time to relapse to amphetamine dependence, HIV risk behavior, treatment retention, and others.

Trends in the adoption and implementation of naltrexone in the US addiction treatment system (1995-2009)

Abraham, Amanda (USA), Paul M. Roman

The US addiction treatment system remains resistant to the use of pharmacotherapies for the treatment of alcohol use disorders (AUDs). The objective of this study is to examine the adoption and implementation of naltrexone for the treatment of AUDs. This study utilizes longitudinal data from the National Treatment Center Study, a series of national samples of substance abuse treatment programs in the United States. Data analyses highlight adoption, sustainability, discontinuation, and implementation of naltrexone from 1995 to the present. Organizational-level data show that program use of tablet naltrexone has declined over time. Tablet naltrexone is prescribed in approximately 30% of treatment programs nationwide and on average, tablet naltrexone is prescribed to less than 13% of alcohol dependent clients. Data on the early adoption of injectable naltrexone show that 16% of treatment programs are currently prescribing the medication and on average, injectable naltrexone is prescribed to 10% of alcohol-dependent clients. While prior research indicates patient non-compliance with tablet naltrexone is a barrier to adoption, this study finds that patient non-compliance
Sustained release Naltrexone, a promising alternative in treatment of opiate addiction

Waal, Helge (Norway), Nikolaj Kunoe, Philip Lobmaier, Asbjoerg Chrisophersen

Previous Norwegian research has established an Australian naltrexone implant with reliable and adequate levels of naltrexone for 5-6 months after double implant and acceptable levels of side effects. This implant was used in a pilot study demonstrating high patient satisfaction, no depressive or anhedonic symptoms or any other significant side effects. On this basis we have studied implants used as relapse prevention after abstinence oriented inpatient treatment in a randomized waiting list controlled study. Use for prison inmates to be released has been studied in a RCT comparison with methadone. The sample sizes are too small to permit definite conclusions, but the preliminary findings are that NXT implants significantly improve prognoses both with regard to relapse to heroin and to overdose mortality. Patient satisfaction remains high. Change to OMT is feasible for those wanting this treatment. Use of heroin in spite of implant protection and relapse at end of protection are presently investigated.

A Cochrane report that was initiated by the centre, calls for further research. The centre is now planning for a comprehensive study encompassing

1. Use in treatment of alcohol use disorders,
2. Use in a national cohort of opioid dependent inmates to be released,
3. Use as relapse prevention in a national cohort of patients from abstinence oriented programs and
4. The use of implants as support for OMT patients that want to terminate maintenance treatment.

Update on extended-release Naltrexone for alcohol dependence

Gastfriend, David (USA)

Adherence to oral naltrexone is poor; a US government study indicated that the majority of patients who fill a first prescription fail to complete a reasonable course of treatment, despite coverage for the cost of the medicine. This level of non-persistence is associated with significant utilization of intensive treatment services. Once-monthly intramuscular XR-NTX was developed in response to an NIH initiative, with the agent receiving US FDA approval in 2006. What is known about the adoption and evaluation of this medication following the US multi-site pivotal efficacy and safety trial?

Clinical programs have been developed in state government-funded projects in Florida, Missouri, Michigan and Maine in general public system patients, criminal justice offenders and homeless alcoholics. Three reported utilization analyses have reported on cost effectiveness for XR-NTX from US managed care systems and insurers, including Aetna Behavioral Health (vs. disulfiram, NTX-PO and acamprosate), Horizon Blue Cross Blue Shield of New Jersey (vs. no pharmacotherapy), and the Medstat Claims Database (vs. disulfiram, NTX-PO and acamprosate). A nationally representative survey by the NIDA-funded US National Treatment Center Study has examined adoption in the US, barriers to adoption and reported persistence with the extended-release preparation. Internationally, preliminary protocols are emerging for clinical use. Finally, a multi-site, double-blind RCT is underway in Germany and Austria in alcohol dependent patients leaving hospital detoxification.

Physician Health

Characteristics and outcomes of a Canadian Monitoring Program for substance dependent doctors

Kauffman, Michael (Canada), Joan Brewster

Objective: To describe the characteristics at enrolment and outcomes of 100 doctors consecutively admitted to a substance dependence monitoring program.

Method: A prospective descriptive study of the first 100 monitored substance dependent participants in recovery followed by a provincial Physician Health Program until completion of monitoring or until leaving the program. All participants were diagnosed as substance dependent according to DSM IV criteria and completed primary addiction treatment, usually in a 4-6 week residential program, before entering the comprehensive monitoring phase. The main outcome measure is relapse to the use of any substance of abuse.

Results: Ninety per cent of the doctors enrolled in the program were men, 66% were married or living with a partner, 44% had previous treatment for substance dependence, and 36% had had previous psychiatric treatment. Smokers were over-represented compared with the general population of US doctors that smoke (38% vs. 5%). During the monitoring period 71% of participants had no known relapse. An additional 14% went on to complete the program after some form of relapse. In total, 85% of the doctors successfully completed the program.

Conclusion: In this cohort of doctors enrolled in the Ontario Physician Health Program for substance dependence monitoring, most were men dependent upon alcohol or opioids. Eighty five per cent successfully completed the program, most never experiencing any relapse, mirroring success rates seen in other, similar, physician monitoring programs. The relatively small number of participants made it difficult to form definitive
conclusions about the relation between intake characteristics and relapse.

**Abstainers, episodic heavy drinkers ad hazardous drinkers among Norwegian and German hospital doctors – a study based on national samples**

**Rosta, Judith (Norway), Olaf G. Aasland**

**Aims:** To compare abstainers, episodic heavy drinkers and hazardous drinkers among the younger and older generation of hospital doctors from two different drinking cultures – the ‘holiday resort style’ of Norway and Germany’s ‘continental style’.

**Methods:** The study population consisted of a representative sample of 1,898 German and 601 Norwegian hospital doctors aged 27-65 years, selected from nation-wide postal surveys in 2000 in Norway and in 2006 in Germany. Alcohol consumption was measured using the first three questions of AUDIT, scores of 5 or more (ranking from 0 to 12) indicating hazardous drinking. Episodic heavy drinking was defined by the intake of 60g of ethanol, or more, on one occasion, at least once a week.

**Results:** In both countries, the majority of hospital doctors consumed alcoholic beverages. Hazardous and episodic heavy drinking were less prevalent among doctors aged 27 to 44 years. The number of abstainers in the age group of 27 to 44 years tended to be higher than in the older group. An analysis of significant drinking-culture differences, related to episodic heavy drinking, showed a higher prevalence among female Norwegian doctors in both age groups and among male Norwegian doctors in the older age group.

**Conclusions:** The younger generation of doctors in Norway and Germany (27-44 years vs. 45-65 years), showed healthier drinking habits (lower rates of episodic heavy drinking and hazardous drinking). Changes in professional life, and in the attitude towards alcohol consumption, may go some way towards explaining these findings.

**Physician Health in Alberta: Healthy Physicians, Healthy Patients**

**Hinton, Margaret & Coleman, Maureen (Canada)**

The Physician and Family Support Program (PFSP) has provided physician to physician services to Alberta physicians and their families for over a decade. Utilizing occupational health principles, the presentation will describe the historical development of the program and the strengths of the PFSP approach in health promotion, prevention, education, service and addressing the stigma of mental health and addiction in physicians. Our 2008 statistics in keeping with the Canadian Physician Health Network common indicators will be shared.

**Pharmacology Treatment Of Addiction – NIDA**

**Pharmacology Treatment of Addiction – NIDA**

**Elkashef, Ahmed (NIDA)**

Drug Addiction is a major public health problem worldwide, with marked economic and health burden to societies. Chronic use is associated with serious medical, behavioral and psychiatric problems. Psychosocial interventions represent the main treatment modalities in many countries; however the relapse rate is high. FDA approved medications are currently available for nicotine and opiate addiction; however none is approved for stimulants and/or cannabis addiction.

Data from clinical studies are showing promise in early proof of concept trials for bupropion modafinil, topiramate, naltrexone and methylpheeNIDAte for cocaine and methamphetamine addiction. Similarly, data for buspirone, nefazodone, and dronabinol are showing promise for cannabis dependence. These signals are highly encouraging and are being pursued in confirmatory trials.

Update on the status of bupr nervine in the US and data from the lofexidine trial for opiate withdrawal will be presented. An overview of the rimonabant efficacy trial and the recently completed selegiline for smoking cessation will be highlighted.

This presentation will highlight findings from pharmacological treatment trials for stimulant, cannabis, opiate and nicotine addiction; and will provide an overview of promising medications in development for the use for addiction treatment.

**Medications Development for Nicotine Dependence**

**Montoya, Ivan (NIDA)**

Tobacco smoking is the leading cause of preventable morbidity and mortality in the world. There are about 1.3 billion smokers worldwide and approximate 5 million of them die from smoking-related disease every year. Nicotine is a highly addictive substance and pharmacotherapies can help nicotine-dependent individuals achieve abstinence. New pharmacotherapies for assisting smokers to quit have been and continue to be developed. The currently available and developing pharmacotherapies will be discussed. Nicotine replacement therapies, bupropion (a dopamine re-uptake blocker), and varenicline (a nicotine partial agonist) have been approved by the United States Food and Drug Administration (FDA) for the treatment of nicotine dependence. Other pharmacological approaches for assisting smokers to quit are being investigated. They include new forms of nicotine replacement therapies with a more rapid onset, alpha 2 agonists (clonidine), norepinephrine reuptake blockers (nortryptiline), and...
Substance Abuse developed core competencies – both technical and behavioral – in 2007 and 2009, respectively. These competencies refer to those abilities, attitudes and behaviors that are necessary for the performance of a job or role. Technical competencies refer to those abilities and knowledge required when applying specific technical knowledge in a job function or role. Behavioral competencies refer to those abilities, attitudes and behaviors required to perform effectively in that role.

Technical competencies include knowledge of various medications used to treat mental health disorders, such as antidepressants, antipsychotics, mood stabilizers, and anticonvulsants. Behavioral competencies include the ability to work collaboratively with other healthcare providers, communicate effectively, and manage time and resources efficiently.
of difficult emotions” without engaging in harmful behaviors. Dialectical Behavioral Therapy developed a series of skills to help clients learn to cope with distress. These skills can be enormously beneficial to clients with a history of addiction, trauma or mood disorders. This workshop will present an approach to teaching simple and basic distress tolerance skills that can be taught in your office within a 5 to 15-minute time frame. These skills will include learning to use simple breathing techniques, distractions, self-soothing as well as other techniques that can be added to a client’s repertoire on an incremental basis on each visit.

Uni-dimensional Solutions For A Multi-dimensional Problem – Revisited in 2009
Hajela, Raju, Monsma, Jocelyn & Detheridge, Michael (Canada)

Substance-related problems interfere with the affected individual’s social relationships and ability to function well at home and work. As much as people attempt their own problem solving strategies, it is essential that they receive a proper assessment and appropriate treatment for not only their substance use disorder but also the behavioural aspects of Addiction such as gambling, food, sex and relationships. The treatment process needs to be viewed in the chronic disease framework, where the concepts of harm reduction are integrated into the more definitive abstinence-based recovery, in a comprehensive continuing care program, which includes mutual support meetings, individual and group psychotherapy, and medication management as part of ongoing treatment.

This workshop will review the basic definitions, assessment and treatment framework in a unique practiced-based model that addresses the disease of Addiction and other concurrent disorders – medical and/or psychiatric - in the context of optimizing biological, psychological, social and spiritual functioning in individuals and families, to sustain long-term remission and ongoing recovery.

Facilitators will also demonstrate a group process in vivo, which is eclectic in utilizing cognitive-behavioural, motivational-enhancement and twelve-step facilitation techniques, pointing out the crucial role of the providers in the treatment of Substance Dependence and Addiction more definitively.

Normalization And Stigmatization Of Cannabis And Tobacco Use In Young Canadian Adults
Marsh, David (Canada), Cameron Duff, Mark Asbridge, Serge Brochu, Marie-Marthe Cousineau, Andrew Hathaway, Patricia Erickson

Over recent decades, cannabis use has increased among Canadians over the age of 15 so that over half report lifetime use and 14% past-year use. At the same time, tobacco consumption has been declining from 50% of Canadian adults in 1964 to 19% in 2006.

This study reports the findings of in-person qualitative and quantitative surveys of 202 socially stable, regular users of tobacco and/or cannabis aged 20-50 in Halifax, Montreal, Toronto and Vancouver. The survey explored: demographic information, drug use (lifetime and past-year, age of initiation, recent quantity), alcohol consumption (including frequency of binges), ease and method of obtaining cannabis, setting of typical cannabis and tobacco consumption, adverse consequences of substance use and perception of public policies related to tobacco and cannabis.

The qualitative tool was designed to explore the perceptions of the user and those around them of tobacco and cannabis use from the perspectives of normalization and stigmatization as well as to further enquire into public policy perceptions.

The presentation will compare regular users of cannabis and tobacco for markers of social stability. The impact of early age of initiation to tobacco or cannabis use on later use of other drugs and patterns of drug use will be described including the increased prevalence of other drug use among those who smoke both cannabis and tobacco compared to users of cannabis or tobacco alone. Finally the perceptions and experiences of legal sanctions against cannabis and tobacco use will be explored with a view to informing public policy options and the impact of legal status on consumption.

The Implementation And Development Of A Traditional, Culturally Sensitive Holistic Model Of Primary Health Care In Two First Nations Communities On The West Coast Of Vancouver Island
Marsh, Teresa Naseba(Canada), Gloria Jean Frank; Jocelyn Dick;

It is a well-known fact that traditional western-based medical services do not often meet the needs of aboriginal people. In an attempt to bring forth changes in the delivery of care, the Nuu-Chah-Nulth Tribal Council and Health Canada Funded an initiative for two First Nation Communities:

AHOUAHT: The goal of this project is to support development of a traditional, culturally sensitive, holistic model of primary health care that integrates with existing provincial health
services focused on the prevention and treatment of depression and suicide.

TSESHAHT: The goal is to develop a traditional holistic model of primary health care delivery that links federal and provincial services for the community identified issues of obesity and diabetes.

In this presentation the authors will explore, introduce and discuss the conceptualization and implementation of Traditionally Culturally sensitive, Integrative treatment model and the impact of change and healing in the two communities.

The authors will further explore the steps taken to address healing from addiction and trauma on truly holistic levels: mental, emotional, spiritual and physical. Utilization of the wisdom and teachings of the Laika, healing Circles, the medicine wheel and Nuu-Chah-Nulth traditions. They will explore and discuss the term healing and cultural renewal, the courage, wisdom and hope of a nation that has suffered a devastating social condition from colonization.

Initial results of the implementation of the projects will be reported. Current results are available through interviews, self-reporting, story telling and poetry.

Closing Plenary: Methadone Maintenance In British Columbia 1996-2007

Marsh, David (Canada), Bohdan Nosyk

Objective: To describe and identify the determinants of the time to discontinuation of Methadone Maintenance Treatment (MMT) and re-entry into treatment among opioid-dependent individuals receiving MMT in British Columbia, 2001-2007.

Methods: Province-wide patient-level data on MMT prescriptions was extracted from the BC PharmaNet database for 11,031,480 dispensations of methadone to 18,160 patients in 34,725 treatment episodes. Patterns of care are described including geographic distribution and number of physicians and pharmacists providing care. Treatment retention and adherence with practice guidelines for dose prescribed, frequency of carry doses, titration and tapering were examined.

Results: Availability of treatment expanded across the province with the largest increases in the lower mainland. Patients’ initial episodes lasted a median 263 days with 14% remaining on continuous treatment at the end of follow-up. 49.4% received more than 60 mg per day. Higher dose, older age, Physician: patient ratio, repeated treatment entry and medical comorbidity predicted of longer treatment episodes, while missed doses led to poorer retention. Guideline adherence was greatest for starting dose and titration rate and lower for tapering rate and optimal dose. Carry adherence varied by region.

Conclusions: Treatment works – however system change is needed to ensure that patients and clients across Canada have access to the services and supports that they need. The National Treatment Strategy focuses on the need for intersectoral collaboration for the provision of an integrated continuum of services and supports. Medical professionals providing services to patients impacted by problematic substance use have an integral role to play in promoting access to evidence-based service, encouraging knowledge development and exchange, reducing stigma and discrimination, and measuring and monitoring system performance. The National Treatment Strategy Leadership Team hopes to work with CSAM members to leverage existing networks of knowledge exchange and promote the development of intersectoral partnerships toward a more comprehensive approach to problematic substance use in Canada.
Calgary

This Western Canada Financial Centre was the site for CSAM’s recently concluded Scientific Conference and Annual General Meeting (AGM). The change this year was our partnership with the International Society of Addiction Medicine (ISAM) in hosting an international conference. Many of the sessions were offered by researchers and clinicians from countries such as Switzerland, Norway, France, South Africa, India, Australia and Chile to name but a few. Of course, presentations from USA and Canada – our normal staples – were also prevalent. I think all in attendance found the conference professionally rewarding and stimulating. Next year’s ISAM conference will be held in Milan, Italy from October 4-7, 2010 and you may wish to keep the dates in mind.

But if you don’t want to travel that far for your addiction medicine CME update make plans for the 2010 CSAM Scientific Conference. This meeting will convene much closer – my home province of Prince Edward Island. The Delta Prince Edward is a fabulous five star hotel situated on the Charlottetown waterfront, and offers reasonable rates. The dates are October 21-23. It would be super to top the 200 number for attendees but more on this meeting in future Bulletins.

The CSAM AGM was held at the conclusion of the Calgary conference and drew about 25 members. Many delegates were fleeing for departing flights that Saturday afternoon, leaving but a corporal’s guard to do the Society business.

Highlights of the AGM included a discussion on CSAM’s initiative to have Addiction Medicine recognized by both the CFPC and Royal College of Canada as an area of focused practice. This work is being led by Ontario Board member, Dr. Sharon Cirone. Please contract her if you would like to be involved in this very important endeavor – especially if you are an FRCP member.

The CSAM financial report for 2009 looked very bleak in September. However, there were two developments that provided a significant upswing to our balance sheet. First, we have regained charitable status in the eyes of Revenue Canada (after much paperwork). This will return to us the GST monies remitted for the past two years, and could total close to $20,000 overall.

Secondly was the ISAM/CSAM Conference itself. CSAM had put up $10,000 as our share of the seed money for Conference planning, with hopes of the conference showing a profit and our investment being returned plus a 50% share of any further profit. Well, Dr. el-Guebaly and his team did a great job. After the final count, Nady emailed me to inform me that CSAM would have its $10,000 returned, plus another $20,000. This infusion has righted the badly listing CSAM treasury ship, and now we can move on with proper planning for 2010 activities.

The end of 2010 is near, so it is soon time to renew memberships for 2010. The society needs bigger numbers, both physicians and others who dedicate all or part of their work time caring for those suffering from the illness of addiction.

Let’s make 2010 a very special year. Marry Christmas everybody.

Don Ling, M.D.
News from Across Canada

News from Alberta

For those of you who attended the ISAM/CSAM scientific conference in Calgary in September, I hoped you all enjoyed our western hospitality. The conference was a success with over 200 participants from over 30 countries represented. For those who missed this years conference, there is always next year and do mark in your calendar the ISAM conference will be in Milan Italy Oct 4 to 7, 2010. Please check the ISAM website at www.isamweb.org for details. Also the CSAM conference will be in Charlottetown, PEI, October 19-23, 2010 and please also check www.csam.org for details.

The Alberta section of addiction is now in the 5th year and we have grown to over 20 members. We are no longer the smallest section in the AMA and our current president is Dr. Will White. I am encouraging any Alberta registered physician who has an interest in addiction medicine to volunteer for this position and if you have a candidate in mind please forward to Marilyn Dorozio at Marilyn.Dorozio@albertahealthservices.ca.

The Alberta section of addiction is now in the 5th year and we have grown to over 20 members. We are no longer the smallest section in the AMA and our current president is Dr. Will White. I am encouraging any Alberta registered physician who has an interest in addiction medicine to join our section. We do not have any fees and even if you belong to another section, you can specify addiction medicine as well. We need your support to increase our membership and to make our voices heard in our area of medicine.

More seriously, Alberta is going through cutbacks and Addiction and mental health is not immune to it. Alberta Health Services has continued to announce cutback in funding and bed closure putting stress in our already stretched resources. We can only hope that the recession will end soon to put an end to these cutbacks.

Thanks

Ronald Lim
Alberta Board Representative

News from Saskatchewan

Contracts. Over the years methadone patients have demonstrated the full range of human behaviour from model citizens to totally unsavoury, in our clinics, pharmacies, and the community at large. Most of us have agreements or “contracts” for them to sign, usually including drug use but primarily about social behaviour. Since the contracts are far from proper legal documents and are imposed rather than mutual, agreements would seem a better term. The stereotyped reputation for bad behaviour is one of the reasons it has been difficult to recruit pharmacies to dispense methadone, at least in Saskatchewan.

Some of our pharmacies developed somewhat draconian contracts, with no reference to care or service for example, which had negative impacts on patients and on other pharmacies and therefore on our programmes.

This was challenged about a year ago and the Sask College of Pharmacists agreed to address the issue and develop an agreement which all pharmacies could adopt. So far silence. Has this issue arisen in other provinces, and if so how was it handled and with what outcome ..? Does a pharmacy agreement need to be any different from a physician’s, and if so what should our agreements contain ..?

Training Saskatchewan has its share of opioid dependents – IVDU or oral, mostly prescription medications (many obtained from the street), and got into MMT in the early seventies, largely out of it later that decade, and back into it 1997 when the current programmes began with just 5 patients. This rapidly became 50, then 500, and now about 1800, about right for a province with 1M population and little tourism; but likely many more out there judging by the ongoing demand for access. However there are precious few physicians with methadone exemptions, and some rumours that some of the existing prescribers may soon be collecting pensions, so it is necessary to get some new young doctors into the field. How have other provinces tackled the issue of recruitment and training of physicians (and pharmacists for that matter) ..?

Methadone deaths. Saskatchewan has discovered death by drugs; particularly involving methadone of course (no buprenorphine here yet). In January our provincial annual Methadone Education Day features the Coroner’s office; how an anatomic pathologist determines cause of death in these largely metabolic cases; a discussion of carries (the presumed source of all diverted methadone); case management or counselling; and the pharmacology of methadone. Should be an interesting meeting, open to all interested parties, no fee.

In general death by methadone, in patients on prescription methadone, have become rare, no doubt reflecting better prescribing among other reasons; but deaths including diverted methadone are part of the negative image this therapy continues to contend with. There have been numerous prior studies eg Australia in the late 90s, in Sk about 5 years ago, and not forgetting the Ontario Methadone Task Force 2007. Methadone can vastly improve and prolong the lives of opioid dependents, and society benefits greatly in many ways from well run programmes. One would hope the session in the New Year will be productive, and help put sound perspective into the issue.

With respect, from the prairies.

Dr. Brian J. Fern.
News from Ontario

The province of Ontario has been witness to some notable changes of late in terms of identifying physicians engaged in the practice of addiction medicine through the use of a special billing code. While still somewhat limited in its scope, it represents a significant step in preventing other physician billings (those in Family Health Teams, etc) for being negated (not being paid). This will allow patients to now freely access addiction services for an Addictionologist without fear of being terminated from an existing family practice by reason of the family doctor not being able to be remunerated for services rendered. Hopefully, the following years will see an expansion of these unique billing codes in order to represent the full menu of fee for service activity.

The Ontario Medical Association recently participated in a campaign aimed at recruiting membership for CSAM. This was done via an e-mail blast to all physicians in the province who have identified addiction medicine as an interest on their OMA membership application. The notice identified key reasons why a physician might want to join CSAM. Hopefully, this effort will demonstrate some fruitful results.

The Ontario College of Family Physicians has entered into their second year of implementing the Mentoring for Managing Addictions and Pain (MMAP) program. This effort is modeled after a similar and successful program utilizing mentor psychiatrists who helped guide various family physician mentees throughout the province. Using this framework, physicians specializing in addiction medicine and pain medicine have been linked with family physicians throughout the province to help offer guidance in clinical practice. While still in its infancy, the program should help bridge the wide gap in services that so often negatively impacts on patient care.

Dr. Jeff Daiter

News from Quebec

The Quebec College of Physicians has published its guidelines for the prescription of Buprenorphine. Physicians are required to have either past experience with methadone (more than 10 patients) and the online course at suboxonecme.ca or for those lacking prior methadone experience, a one day course provided by the University of Montreal and payed for by the Institute of Public Health is required.

Le Collège des Médecins du Québec a publié ces lignes directrices pour l’utilisation de la buprenorphine dans le traitement de la dépendance aux opioïdes. Le CMQ exige soit une expérience antérieure avec la méthadone (plus que 10 patients) et la formation en ligne suboxonecme.ca ou pour le nouveaux prescripteurs une journée de développement professionnel continu agréé par l’Université de Montréal est exigé.

Regards
C Mackay

Membership Committee Update

Membership Statistics:

As of Nov 10, 2009, CSAM has 276 members. Membership breakdown is as follows:

- Associate members: 87
- Honorary members: 10
- PHD members: 6
- Retired members: 4
- Student members: 5
- MD members: 164

Membership by province and territory is as follows:

- Alberta: 30
- BC: 33
- Ontario: 159
- Manitoba: 7
- New Brunswick: 2
- Newfoundland: 2
- Nova Scotia: 6
- Prince Edward Island: 2
- Quebec: 10
- Saskatchewan: 19
- Yukon: 1
- International: 5
## CSAM MEMBERSHIP FORM

### Membership Type
- ☐ Regular Member – MD
- ☐ Regular Member – PhD Scientists
- ☐ Medical Student/Intern/Resident
- ☐ Retirees – MD or PhD
- ☐ Associate Member

### Applicant Information

- ☐ Dr.
- ☐ Ms.
- ☐ Mrs.
- ☐ Miss
- ☐ Mr.

**Name:** 
(First Name) (Middle Initial) (Last Name)

**Work Address** ☐ Preferred Mailing Address

**Address:**
City: Province: Postal Code:

**Work Phone:** Fax:

**Home Address** ☐ Preferred Mailing Address

**Address:**
City: Province: Postal Code:

**Home Phone:**

**Email Contact***

**Email address:**

### Education History

**Undergraduate Degree(s)/University/Year Graduated:**

**Graduate Degree(s)/University/Year Graduated:**

**Area of Specialty:**

**Current Employment:**

**Area of Employment:**
- ☐ Private Practice
- ☐ Treatment Centre
- ☐ Educational Facility
- ☐ Other (please specify):

**Appointment(s) – Hospital/University/College Including Department:**

**Addiction Medicine Affiliations**

- American Society of Addiction Medicine (ASAM):
  - ☐ Member
  - ☐ Fellow
  - ☐ Certificant
  - Year of Certification/recertification:
  - Year of Fellowship:

### Percentage of time in research and clinical practice devoted to:

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### International Society of Addiction Medicine (ISAM):

- ☐ Member
- ☐ Certificant
- Year of Certification/recertification:

### Are you interested in Canadian Certification in Addiction Medicine? (Member – MD only)

- ☐ Yes
- ☐ No
## CSAM MEMBERSHIP FORM

### Topics of Special Interest in the Field of Medicine

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### Positions in the Society You Would Be Willing To Consider in the Future

- Board Member (Please note: Associate members are not eligible for board positions)
- Committee Membership
- Standards
- Website
- Opioid Agonist
- Education
- Membership
- Conference
- Referee and Curriculum Vitae

Please include a recent copy of your Curriculum Vitae.

All new members require a current CSAM member to act as a referee. A supporting letter from a current CSAM member must accompany all applications for Associate membership.

Referee's Name:

Do you agree to have your name and office contact information included in a directory to be distributed to CSAM members only?

- Yes
- No

Signature:

---

### Payment Information

**Annual Fees:**

- Regular Member – M.D.: $200.00
- Student/Intern/Resident: $5.00
- Regular Member – PhD: $200.00
- Retirees MD or PhD: $25.00
- Associate Member: $50.00

**Multi-year membership**

CSAM is pleased to offer members the opportunity to sign up for three years of membership or five years of membership. The rate for a three year membership is $549; the rate for a five year membership is $900.

- Three-year membership: $549.00
- Five-year membership: $900.00

Optional: International Society of Addiction Medicine (ISAM) Dues – ($90 USD, which equals $110.96 CDN, effective November 25, 2008)

*NOTE: ISAM Membership not available to Associate Members*

- ISAM Membership: $110.96

**TOTAL PAYMENT:** $

- Cheque, Bank Draft or Money Order Payable to: The Canadian Society of Addiction Medicine
- VISA/MC/AMEX (circle one) #

Name on Card: __________________________

Expiry Date: __________________________

Signature: __________________________

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We thank you for supporting the Canadian Society of Addiction Medicine.
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