Training of psychiatry, addiction and mental health before and after COVID-19 outbreak: Experience from Thailand

Presenter: Dr. Rasmon Kalayasiri
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Since the start of COVID-19 pandemic in March 2020, training of psychiatry, addiction, and mental health has been impacted considerably. We illustrated the change of academic and clinical psychiatric residency training procedure at Chulalongkorn University in Bangkok, Thailand, a developing country situated in South East Asia which is categorized in the low and middle income category of countries. The training setting has set up a task force responsible to set various strategies in response to the COVID-19 measure of social and physical distancing to maintain standard of care for psychiatric patients and educational experience for psychiatric residents and mental health students. The strategies include online education, service team separation and avoidance of contact between teams, reduction of non-urgent clinical activities, and the use of telemedicine for psychiatric patients. Despite exposure to the difficulties of training during the pandemic, all senior residents were qualified and licensed at the national examination. Residents reported that pandemic did affect the academic activities and services and also the quality of living and satisfaction. Academic issues, including the inconvenience of studying online, were the most concerned problems among psychiatric residents at the time of pandemic.

Learning Objectives: By the end of this presentations, participants will be able to:
1. Recognize the commonalities and diversities in the Addiction treatment scenarios in the South and Southeast Asian countries.
2. Formulate a set of recommendation for dealing with the challenges in the context of ongoing COVID-19 pandemic.
Managing people with substance use disorders in Sri Lanka during and after the COVID pandemic: challenges and solutions

Presenter: Dr. Aruni Hapangama
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Substance use disorders (SUDs) have been a major public health concern for about the last three decades in Sri Lanka and appears to be more of a problem during the current COVID-19 pandemic. However, Sri Lanka does not have sufficient infrastructure or resources to manage this ever-increasing problem, and this has been further complicated by the redeployment of medical staff from mental health settings to manage COVID related physical complications.

The currently available services for SUDs are provided by the government hospitals, almost through the psychiatry settings and to a limited amount by the private hospitals and certain non-governmental organizations. However, in most instances, there has not been any integration of any of these services in Sri Lanka and more so currently. Telemedicine which is available only in a limited number of private hospitals in major cities in Sri Lanka should be made available at an affordable cost to the masses. Social workers and occupational therapists who work in mental health settings should be trained to assess and offer basic psychological therapies to people with SUDs. The general practitioners should be empowered to screen and treat uncomplicated SUDs. A psychiatrist with a special interest in addiction could distantly supervise and support their work. Consultation-liaison psychiatric and addiction services in all hospitals should be further strengthened. Sri Lanka should strive for a more person-centred care approach in managing SUDs as well as to develop an integrated addiction care model that covers early detection and brief interventions in primary care to more specialized hospital services as well as towards promotion of preventive activities.

Learning Objectives: By the end of this presentation, participants will be able to:
1. Discuss the commonalities and diversities in the Addiction treatment scenarios in the South and Southeast Asian countries.
2. Prepare a set of recommendation for dealing with the challenges in the context of ongoing COVID19 pandemic.
Methadone Maintenance Therapy in Myanmar

Presenter: Dr. Nando Myo Aung Waa
Program Manager, Drug Dependence Treatment and Research Unit, Ministry of Health, Myanmar
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The use of psychoactive substances has significant implications for the health and wellbeing of individuals and communities in Myanmar. Heroin is the most commonly injected drug. People who inject drugs are the group most affected by HIV and Hepatitis C. The size of the adult People who inject drugs population is estimated at 93,000 in 2017 (Method: Triangulation of multiplier, SS-PSE, wisdom of the crowd, key informant and NGO best guess). More than one in three People who inject drugs (34.9%) was infected by HIV and the burden of viral hepatitis C among PWID is also considerable, overall 56% (ranging from 27% to 84.5%). Reducing HIV and hepatitis transmission among people who use or inject drugs, as well as addressing other health and social harms associated with drug use, can only be achieved by scaling up combined and complementary evidence-based drug treatment programmes such as Methadone Maintenance Therapy. This priority has been acknowledged by the Ministry of Health, endorsed this approach more than a decade ago.

The Methadone Maintenance Therapy programme started in 2006 under the responsibility of the Drug Dependency Treatment and Research Unit. Between 2010 and 2019, there was a more than sixteen-fold increase in the number of MMT patients (from 1,121 patients enrolled in 10 MMT centres to 18,963 in 71 MMT centres). The impact of COVID 19 is not only on the HIV prevention but also for drug treatment services. Ensuring the continuation of Methadone Maintenance Therapy is the significant challenge amid the COVID 19 pandemic.

Learning Objectives: At the end of this presentation participants will be able to:
1. List the commonalities and diversities in the Addiction treatment scenarios in the South and Southeast Asian countries.
2. Prepare a set of recommendation for dealing with the challenges in the context of ongoing COVID19 pandemic.
Substance Use Disorders in Bangladesh: the concern and continuous combat to control

Presenter: Dr. Helal Uddin Ahmed
Associate Professor, Child, Adolescent and Family Psychiatry, National Institute of Mental Health
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Existing data consistently reports that the burden of substance use disorder is increasing in Bangladesh. The commonly used substances in Bangladesh are opium derivatives (Heroin, Pethidine), cannabis (Marijuana, Ganja, Bhang), stimulants (Yaba), sleeping pills, cough syrup (Phensidyl, Dexpotent). The national survey on substance use disorders revealed that 3.3% adults were using different types of substance. Among the users, most commonly used were: cannabis (42.7%), alcohol (27.5%) amphetamine (Yaba), opioids and sleeping pills. More than 80% of the substance users are under 30 years of age with male predominance. However, the number of female substance users is also increasing in recent years. Various factor including the rapid urbanization, economic development, peer pressure, and social learning play important role in increasing the prevalence of substance use. Though information related to treatment facilities is available to more than 85% people, very few of them seek help.

Different ministries of government, non-government organizations, social and community organizations are working to reduce the burden of substance use disorder with the continuous support of different international organizations. The government has enacted the “Narcotics Act”, “Mental Health Act” and “Rehabilitation Counseling Act” to reduce the burden by reducing availability of substances, ensuring treatment and rehabilitation. Moreover, several National committees are formed to coordinate the ongoing efforts including drafting the mental health policy. About 150 private treatment facilities for substance use disorders have been approved to increase the accessibility and availability of the care. Besides increasing awareness and increasing the treatment facilities with appropriate training of healthcare workers, we need to also engage parents and teacher to minimize the risk of substance use. The COVID19 pandemic presents a fresh set of challenges to SUD treatment in Bangladesh. All the collaborative efforts will be continuously required to reduce the burden of SUDs in Bangladesh.

Learning Objectives: At the end of this presentation Participants will be able to:
1. List the commonalities and diversities in the Addiction treatment scenarios in the South and Southeast Asian countries.
2. Formulate a set of recommendation for dealing with the challenges in the context of ongoing COVID19 pandemic.
India: What will the addiction treatment scenario look like in the post-pandemic world?

Presenter: Prof. Atul Ambekar
Professor, National Drug Dependence Treatment Centre, India
Email: altu.ambekar@gmail.com

Even before the COVID19 pandemic, there was a serious treatment gap in India in terms of millions of people who need help and the available health care resources. Besides the government health care sector, a large number of service providers exist in India in the private-sector and among the non-profit, Non-Governmental Organization (NGOs). Despite availability of a variety of avenues for provision of treatment services for addictive disorders, the treatment-gap has been estimated to be as much as 80-90%. With the advent of COVID19 pandemic and the measures to deal with the pandemic (such as 'lockdown'), newer challenges came to the fore. Reduced mobility as a result of the lockdown meant that availability of legal substances like alcohol as well as the illicit drugs was severely curtailed. Simultaneously, the access to health care was limited. To deal with these challenges certain reforms in the systems and policies governing addiction treatment were urgently required. Measures needed to be taken which ensured easier access to medications (such as more liberal regimens of dispensing). Similarly increased use of information technology for clinical service delivery as well as for capacity building of health care providers appears to be a promising way to deal with the future challenges. Considering that we are still far away from controlling the pandemic, innovative approaches will be required for dealing with the twin challenges of COVID19 and addictions.

Learning Objectives: By the end of this presentation participants will be able to:

1. Recognize the commonalities and diversities in the Addiction treatment scenarios in the South and Southeast Asian countries.
2. Formulate a set of recommendation for dealing with the challenges in the context of ongoing COVID19 pandemic.
Symposium Overview:

Practice of Addiction Psychiatry in South and Southeast Asia: Challenges, opportunities and solutions in a post-pandemic world

Submitted by: Prof. Atul Ambekar
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Presenters
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Countries in South and Southeast Asia have unique challenges with respect to addiction treatment such as substantial number of people requiring services, proportionately lower amount of resources and a dynamic scenario of pattern of substance use. The unprecedented COVID19 pandemic has adversely affected almost all the areas of human life including provision of health care services. In the context of addiction-related health-care, the pandemic has added yet another challenge in the form of need to protect the already vulnerable population of people who use drugs and the health care providers as well as ensuring the continuity of care and treatment. Through this international symposium, national-level experts in addiction treatment from the South and Southeast Asian countries - Bangladesh, India, Myanmar, Nepal, Sri Lanka and Thailand - will describe the challenges in organizing and delivering addiction-related interventions and services in their respective countries in the context of ongoing COVID19 pandemic. Each presenter will raise issues for discussion and propose a set of recommendation moving forward.

Learning Objectives: By the end of this presentation participants will be able to
1. Recognize the commonalities and diversities in the Addiction treatment scenarios in the South and Southeast Asian countries.
2. Formulate a set of recommendation for dealing with the challenges in the context of ongoing COVID19 pandemic.
A multisectoral, collaborative approach in developing tailored training is effective in enhancing care of Perinatal women with substance use.

Presenter: Dr. Annabel Mead  
Vancouver Costal Health, Canada  
Email: Annabel.mead@vch.ca

For the past year, the BC Provincial Perinatal Substance Use Project has been delivering education and training on perinatal substance use to diverse audiences in British Columbia, Canada. Many training programs have been developed in collaboration with other partners e.g. Centre for Excellence for Women's Health (research and knowledge exchange centre) and the BC Ministry for Child and Family Health (with a focus on child welfare / child apprehensions). There is always a strong cultural and indigenous lens to our work, and all have been done via virtual presentations. Examples of these training sessions will be presented, highlighting the collaborative process, the strengths of interdisciplinary approach to teaching, and the key components of successful knowledge translation.

Learning Objectives: By the end of this presentation participants will be able to:
1. Identify key components of Perinatal Substance Use care that is foundational for interdisciplinary teams.
2. Explore effective virtual educational formats for delivering core knowledge to interdisciplinary teams.
First Report of Successful HCV Microelimination among Romanian Patients in Methadone maintenance

Presenter: Dr. Adrian Abagiu
Medical Coordinator, National Institute for Infectious Diseases, Bucharest, Romania
Email: adyaba@gmail.com

Background: It is well known that injecting drug users (IDUs) are at high risk for blood borne diseases, thus also a group that we can successfully treat, lowering the HCV burden and risk in general population. As the Romanian National Health Insurance House Program reimburse HCV DAA treatment only to ensured persons, it was difficult for IDUs to get treated. But due to a new law, persons included in National Health Programs, become automatically health insured, we were able to put on DAA treatment our patients included in the National Methadone Substitution Treatment.

Methods: In October 2019 we began the screening phase for patients who were on methadone treatment and got detectable viral load. As previous research showed about 25% prevalence of 3 VHC subtype among IDUs we applied for a grant provided by Neola Gilead, so we were able to genotype our patients with HCV, as the National Treatment Protocol was covering only subtype 1 and 4 infected patients (97% of the Romanian VHC cohort). The activity was almost closed from May to November 2020 due to the Covid 19 Pandemic and resumed till 30 June 2021 when the National Protocol ended.

Results: We have screened more than 600 patients, 210 with positive antibodies against VHC, from them 123 were genotyped. 7 were with genotype 3, 27 were undetectable and only 89 eligible with genotype 1 and 4. From those 50 patients received the specific DAA treatment with 100% SVR.

Conclusion: The study shows that even with some difficulties from Covid 19 restrictions, this is a treatable population with good adherence and willingness to get cured, thus this intervention is cost efficient and reduces the HCV burden in the society.

Acknowledgement: This intervention was possible through a Gilead Grant.

Learning Objectives: By the end of this presentation participants will be able to:
1. Treat drug users in OMT for HCV is a successful and cost-efficient intervention
2. Consider this intervention even during Covid 19 Pandemic
Individualized Addiction Treatment: The Impact of Social Factors on Effective Management

Presenter: Ms. Kathryn Renard
Medical Student, California University of Science and Medicine, USA
Email: renardk@calmedu.org

Author:
Dr. David Seigler
Medical Director, Arrowhead Regional Medical Center, Dept of Psychiatry
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Health disparities are common in addiction treatment. According to the National Survey on Drug Use and Health, the number one reason cited for people unsuccessfully seeking addiction treatment was an inability to afford treatment or insufficient insurance. Many studies have investigated health disparities regarding access to drug rehabilitation, but few have examined the impact of social factors on effective management. Individuals with high socioeconomic status are more likely to have resources and social support that serve as protective factors from severe substance use disorder. Drug rehabilitation must be tailored to an individual’s socioeconomic as well as cultural perspective to be most effective. Higher socioeconomic status is associated with greater retention in addiction treatment. Low socioeconomic status drug users are less likely to modify their behavior to prevent drug use, focusing on more immediate risks like unemployment or poverty. This demonstrates the importance of resources and social support in addiction treatment. Children of alcoholics in more affluent families are more likely to suffer from depression and anxiety-related substance use. For example, a patient with untreated depression may accept their alcohol use disorder through the self-medication hypothesis. However, an unemployed patient from a family introduced to methamphetamine as a child which became normalized in their development are less likely to benefit from introspection into the reason for their drug addiction. The reason for their substance use is clear, but motivational factors including employment and desire to start a family may become more important. There are many approaches to addiction treatment including the dual diagnosis model, twelve step model, equine therapy, involvement of chores, contingency management, CBT model, and the social model. This literature review investigates how social factors impact addiction treatment outcomes and proposes strategies to ensure efficacious substance use disorder management.

Learning Objectives: By the end of this presentation participants will be able to:
1. Discuss current strategies and therapeutic techniques commonly used in drug rehabilitation
2. Identify how various social factors might influence the effectiveness of current treatment strategies
Global Perspectives on Prescription Opioid Misuse

Presenter: Prof. Arnt Schellekens  
Professor in Psychiatry and Addiction, Radboud University Medical Centre, Nederlands  
Email: arnt.schellekens@radboudumc.nl

Misuse of prescription opioids has gained attention worldwide mainly due to the catastrophic opioid-epidemic in the United States. However, regional trends in epidemiology show large regional differences in prescription opioid-related harm. Of specific interest is the strong link between psychiatric conditions, chronic pain and prescription opioid misuse, since patients with psychiatric conditions might be more vulnerable to develop chronic pain, as well as prescription opioid misuse. Finally, these patients might have more difficulty with overcoming opioid misuse, once this has developed.

In a series of studies, we have 1. studied epidemiological trends in opioid use and opioid-related harm over the past decade, using national databases, 2. investigated the intimate link between psychiatric disorders, chronic pain and prescription opioid misuse using literature review and longitudinal national claims data, and 3. studied effectiveness of buprenorphine in the treatment of patients with severe prescription opioid use disorder.

In this presentation results of these series of studies will be presented, showing:
1. huge regional variation in prescription opioid use and opioid-related harm
2. psychiatric conditions predicting long term high dose opioid use
3. beneficial effects of buprenorphine rotation on pain and psychiatric wellbeing in patients with chronic pain and severe prescription opioid use disorder.

Learning Objectives: By the end of this presentation participants will be able to:
1. Identify the current epidemiology on prescription opioid (mis)use
2. Define the complex relationship between psychiatric disorders, chronic pain and prescription opioid misuse
3. Consider updated treatment possibilities for patients with chronic pain and prescription opioid misuse
The Effectiveness of a Web-Based Self-Help Program to Reduce Alcohol Use Among Adults With Drinking Patterns Considered Harmful, Hazardous, or Suggestive of Dependence in Four Low- and Middle-Income Countries: Randomized Controlled Trial

Presenter: Prof. Michael Schaub
Scientific Director, Swiss Research Institute for Public Health and Addictions, Zurich, Switzerland
Email: Michael.schaub@isgf.uzh.ch

Background: Given the scarcity of alcohol prevention and use disorder treatments in many low- and middle-income countries (LMICs), the World Health Organization has launched an eHealth portal that includes the web-based self-help program "Alcohol e-Health."

Objective: We aimed to test the effectiveness of the Alcohol e-Health program in a randomized controlled trial.

Methods: This was a two-arm, individually randomized, and controlled trial across four LMICs comparing the self-help program and a psychoeducation and internet access as usual waiting list. Participants were broadly recruited from community samples in Belarus, Brazil, India, and Mexico from January 2016 through January 2019. The primary outcome measure was change in the Alcohol Use Disorders Identification Test (AUDIT) score with a time frame of 6 months between baseline and follow-up. Secondary outcomes included self-reported numbers of standard drinks over the previous week and cessation of harmful or hazardous drinking (AUDIT score <8).

Results: For this study, we recruited 1400 predominantly male (n=982, 70.1%) at least harmful or hazardous alcohol drinkers. The mean age was 37.6 years (SD 10.5). The participants were recruited from Brazil (n=587), Mexico (n=509), India (n=212), and Belarus (n=92). Overall, complete case analysis identified higher AUDIT changes in the intervention group (B=-4.18, 95% CI -5.42 to -2.93, P<.001, d=0.56) that were mirrored by changes in weekly standard drinks (B=-9.34, 95% CI -15.90 to -2.77, P=.005, d=0.28) and cessation rates for harmful or hazardous drinking (χ²1=14.56, N=561, P<.001). The supplementary intention-to-treat analyses largely confirmed these initial results.

Conclusions: The expansion of the Alcohol e-Health program to other LMICs with underdeveloped alcohol prevention and treatment systems for alcohol use disorders should be considered after successful replication of the present results.

Learning Objectives: By the end of this presentation participants will be able to:

1. Describe the approach, effectiveness and problems encountered in the first implementation of an internet intervention to reduce alcohol use disorders in low- to middle-income countries
Effects of a minimal-guided on-line intervention for alcohol misuse in Estonia: a randomized controlled trial

Presenter: Prof. Michael Schaub
Scientific Director, Swiss Research Institute for Public Health and Addictions, Zurich, Switzerland
Email: Michael.schaub@isgf.uzh.ch

Objective: Estonia has one of the highest alcohol-attributable mortality rates within the European Union. The aim of this study was to estimate the efficacy of an online self-help intervention to reduce problem drinking at the population level.

Methods: Online open randomized controlled trial with an 8-week intervention and an active control group (intervention n=303, control n=286). Assessments took place at baseline and at 6 months follow-up. Online and offline channels were used for population-based recruitment within a nationwide prevention campaign in Estonia. Inclusion criteria were age ≥18, heavy drinking (Alcohol Use Disorders Identification [AUDIT] test score ≥ 8), literacy in Estonian, and at least weekly access to the internet.

Results: N=589 participants were randomized (50% male, 1% other; mean age 37.86 years; 45% with higher level of education). The intervention consisted of ten modules based on principles of cognitive-behavioral therapy and motivational interviewing. The active control group received access to a website with a self-test including personalized normative feedback and information for standard alcohol treatment. The primary outcome was AUDIT scores at six months follow-up adjusted for baseline scores. Intention-to-treat analyses were applied. Missing data were addressed by using baseline observation carried forward (BOCF) and multiple imputation by chained equations (MI). N=175 completed follow-up in the intervention group and n=209 in the control group. AUDIT score at follow-up was significantly smaller in the intervention (BOCF mean=13.91 [standard deviation (SD)=7.61], MI mean=11.03 [SD=6.55]) than control group (BOCF mean=15.30 [SD=7.31]; MI mean=14.30 [SD=7.21]) with a group difference of -1.38 (95% confidence interval (CI) -2.58, -0.18), P=.02 for BOCF and -3.26 (95% CI -2.01, -4.51), P<.001 for MI.

Conclusions: A randomized controlled trial has found that an online self-help intervention with minimal guidance was effective at reducing problem drinking in Estonia.

Learning Objectives: By the end of this presentation participants will be able to:
Effectively design an integrative adherence-based internet and mobile intervention to reduce co-occurring alcohol use disorder and depression.
“Take Care of You” – Efficacy of integrated, minimal-guidance, internet-based self-help for reducing co-occurring alcohol misuse and depression symptoms in adults: Results of a three-arm randomized controlled trial

Presenter: Prof. Michael Schaub
Scientific Director, Swiss Research Institute for Public Health and Addictions, Zurich, Switzerland
Email: Michael.schaub@isgf.uzh.ch

Background: Depression and harmful alcohol use are two of the top five leading causes of years of life lost to disability in high-income countries. Integrated treatment targeting both at the same time is often considered more complicated and difficult and, therefore, more expensive. Consequently, integrated internet-based interventions could be a valuable addition to traditional care.

Methods: A three-arm randomized controlled trial was conducted comparing the effectiveness of (1) an integrated, minimal-guidance, adherence-focused self-help intervention designed to reduce both alcohol use and depression symptoms (AFGE-AD); (2) a similar intervention designed to reduce alcohol use only (AFGE-AO), and (3) internet access as usual (IAU) as a control condition, in at least moderately depressed alcohol misusers from February 2016-March 2020. We recruited 689 alcohol misusers (51.6 % males, mean age = 42.8 years) with at least moderate depression symptoms not otherwise in treatment from the general population. Six months after baseline, 288 subjects (41.8 %) were reachable for the final assessment.

Results: All interventions yielded reduced alcohol use after six months (AFGE-AD: -16.6; AFGE-AO: -19.8; IAU: -13.2). Those who undertook active-interventions reported significantly fewer standard drinks than controls (AFGE-AD: p = .048, d=0.10; AFGE-AO: p = .004, d=0.20). The two active-intervention groups also reported significantly less severe depression symptoms than controls (AFGE-AD: p = .006, d=0.41; AFGE-AO: p = .008, d=0.43). Testing revealed noninferiority between the two interventions.

Conclusions: This study documented sustained effectiveness of the first integrated, fully internet-based self-help intervention developed for the reduction of both alcohol use and depression symptoms in at least moderately depressed adult alcohol misusers recruited from the general population.

Learning Objectives: By the end of this presentation participants will be able to:
Effectively design an integrative adherence-based internet and mobile intervention to reduce co-occurring alcohol use disorder and depression.
CANreduce 2.0 Adherence-Focused Guidance for Internet Self-Help Among Cannabis Users: Three-Arm Randomized Controlled Trial

Presenter: Prof. Michael Schaub
Scientific Director, Swiss Research Institute for Public Health and Addictions, Zurich, Switzerland
Email: Michael.schaub@isgf.uzh.ch

Background: Despite increasing demand for treatment among cannabis users in many countries, most users are not in treatment. Internet-based self-help offers an alternative for those hesitant to seek face-to-face therapy, though low effectiveness and adherence issues often arise.

Objective: Through adherence-focused guidance enhancement, we aimed to increase adherence to and the effectiveness of internet-based self-help among cannabis users.

Methods: From July 2016 to May 2019, cannabis users (n=775; male: 406/575, 70.6%, female: 169/575, 29.4%; age: mean 28.3 years) not in treatment were recruited from the general population and were randomly assigned to (1) an adherence-focused guidance enhancement internet-based self-help intervention with social presence, (2) a similar intervention with an impersonal service team, and (3) access to internet as usual. Controls who were placed on a waiting list for the full intervention after 3 months underwent an assessment and had access to internet as usual. The primary outcome measurement was cannabis-use days over the preceding 30 days. Secondary outcomes included cannabis-dependence severity, changes in common mental disorder symptoms, and intervention adherence. Differences between the study arms in primary and secondary continuous outcome variables at baseline, posttreatment, and follow-up were tested using pooled linear models.

Results: All groups exhibited reduced cannabis-use days after 3 months (social presence: -8.2 days; service team: -9.8 days; internet as usual: -4.2 days). The participants in the service team group (P=.01, d=.60) reported significantly fewer cannabis-use days than those in the internet as usual group; the reduction of cannabis use in the social presence group was not significant (P=.07, d=.40). There was no significant difference between the 2 intervention groups regarding cannabis-use reduction. The service team group also exhibited superior improvements in cannabis-use disorder, cannabis-dependence severity, and general anxiety symptoms after 3 months to those in the internet as usual group.

Conclusions: The adherence-focused guidance enhancement internet-based self-help intervention with an impersonal service team significantly reduced cannabis use, cannabis-use disorder, dependence severity, and general anxiety symptoms.

Learning Objectives: By the end of this presentation participants will be able to:

1. Describe how an effective Internet and mobile-based intervention is designed
2. List what advantages adherence-focused guidance involves and how this can be used for blended addiction treatment in cannabis use disorders.
Outcome and resource utilisation following introduction of injectable prolonged-release buprenorphine (iPRB) in Scottish Prisons.

Presenter: Dr. Craig Sayers
Clinical Lead Prison Healthcare, NHS Forth Valley, Scotland
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Objective: As part of Covid-19 contingency planning for opioid dependence treatment (ODT), the Scottish Government provided funds to make injectable prolonged release buprenorphine (iPRB) widely available in prisons in Scotland in order to reduce the need for daily administration and ensure continuity of treatment for patients in custody. This service evaluation will provide critical insights into patient experiences and staff resource utilisation following initiation of iPRB initiation in this setting.

Methods: Routinely collected clinical and demographic data were extracted from electronic records and patient reported outcomes including satisfaction and experiences of treatment were evaluated via questionnaires. Retention in treatment, including continuity of care post-liberation, is also being evaluated. Data collated at various time-points up to 6-months post-initiation of treatment, will be presented: opioid withdrawal, craving and satisfaction with treatment.

Results: Patient characteristics, patient-reported outcomes and resource utilisation following introduction of iPRB for ODT in three prisons in Forth Valley, Scotland between May 2020 and August 2021 will be described. To date, 104 people have been treated with iPRB (72.3% male, 68% switched from methadone, 8.7% switched from sublingual buprenorphine, 23.3% new treatment initiations). To date, mean (SD) treatment satisfaction measured by the Treatment Satisfaction Questionnaire for Medication Global Satisfaction scores at 4, 12 and 24 weeks are 81.5 (17.9), 85.3 (17.8) and 87.5 (13.7).

Conclusions: These preliminary data indicate that high levels of satisfaction with treatment can be achieved with iPRB in custodial settings. These findings are consistent with prior studies evaluating treatment satisfaction in community settings (1,2).

Supported by a Joint Working project between NHS Forth Valley Health Board and Camurus Ltd.

Learning Objectives: By the end of this presentation participants will be able to:
1) Describe opioid dependence treatment in custodial settings
2) Discuss injectable prolonged release buprenorphine
3) Review patient-reported outcomes
Disconnect to Connect: Smartphone overuse, process addictions and challenges in providing care

Presenter: Dr. Mitika Kanabar  
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Email: drmitika@gmail.com

Smartphone overuse is an ongoing issue, especially in a post pandemic era. While most smartphone overuse is not pathological, most adults do feel they would like help in decreasing the amount of time spent on devices. It gets more complicated when schooling for children and young adults has switched to online for over a year. Process addictions such as online gaming and gambling are also increasing. We will discuss some quick tips for those with non-pathological overuse of devices. We will look at current evidence of options for treatment for patients suffering from process addictions. In a fee for service model, most process addictions are as such unpaid and we will discuss challenges with finding and providing care for the same. We will briefly touch upon advocacy for safer technology.

Learning Objectives: By the end of this presentation participants will be able to:  
1. Formulate a brief overview of treatment recommendations for process addictions  
2. Discuss challenges to providing and access care for process addictions
A Lifestyle Medicine approach to managing chronic medical issues in Recovery

Presenter: Dr. Mitika Kanabar
Associate Professor, Kaiser Permanente, USA
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Chronic medical conditions such as hypertension, diabetes mellitus, hypercholesterolemia are emerging to be issues that contribute to a vast amount of healthcare spending especially in the United States. When patients are in recovery from a substance use disorder, other issues are seldom looked at within the purview of addiction care. However, many patients fail to seek care outside of addiction medicine for their chronic conditions. We will discuss a comprehensive lifestyle approach to be used in early and sustained recovery, with decreasing morbidity from problems associated with diabetes mellitus. We will discuss clinical scenarios and current evidence for the same. Lifestyle Medicine is a branch that focuses on 6 domains of care: healthy eating, exercise, sleep, stress management, managing relationships, and avoiding substance use. We will also look at use of nutraceuticals in recovery. We will discuss philosophy and examine evidence for using modalities such as yoga and acupressure in addition to medication management.

Learning Objectives: By the end of this presentation participants will be able to:
1) Discuss how to guide patients to decrease morbidity from chronic conditions in early recovery and discuss clinical cases
2) Discuss the role of adjunctive therapies such as yoga and acupressure and examine evidence
Poor Engagement in Substance Use Treatment and HIV services among Young People who inject Drugs in India

Presenter: Dr. Lakshmi Ganapathi
Physician, Division of Infectious Diseases, Boston Children’s Hospital, USA
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Objective: India is facing an alarming rise in injection of opioids. Among India’s ~850,000 people who inject drugs (PWID), over half are youth (YPWID: 18-29 years) who have the highest HIV incidence. We established Integrated Care Centers (ICCs) across 8 Indian cities, which provide single-window free HIV services and daily buprenorphine. We evaluated engagement of YPWID in substance use treatment and HIV testing at ICCs to inform interventions.

Methods: We retrospectively analyzed 1-year follow-up data for YPWD initiating buprenorphine between 1 January – 31 December 2018 across 8 ICCs. We used descriptive statistics to: (i) describe HIV testing and buprenorphine receipt, including receipt frequency, treatment interruptions, and treatment drop-out, and (ii) analyze differences in buprenorphine uptake between historical opioid epidemic regions (i.e., Northeast cities (NEC)) and emerging opioid epidemic regions (i.e., North/Central cities (NCC)). We used a multivariable logistic regression model to determine predictors of treatment drop-out within 6 months of initiation.

Results: 786 YPWID initiated buprenorphine (82% NCC vs. 18% NEC). 33% of YPWID in NCC, and 25% in NEC experienced >= 1 treatment interruption. About a third (34%) of YPWID in NCC vs. 57% in NEC dropped out within 6 months (p<0.0001). Over a 6-month period, 48% of YPWID in NCC vs. 62% in NEC received buprenorphine <= 2 times/week on average (p=0.0014). In multivariable models, being unemployed, HIV uninfected, and living in NEC were significant predictors of treatment drop-out by 6 months. Regular HIV testing was significantly lower in YPWID who received buprenorphine <= 2 times/week (7% vs. 23%, p <0.0001).

Conclusions: Despite co-located services, YPWD at ICCs have low buprenorphine receipt, retention and HIV testing uptake. Youth-responsive treatment models adapted to regional contexts are urgently needed to ameliorate these gaps.

Learning Objectives: by the end of this presentation participants will be able to:

1. Discuss why Young people who inject drugs in India experience significant substance use treatment and HIV testing gaps even in service delivery models that have co-located services in a single venue, suggesting that these models of care are not sufficient to address the vulnerabilities and needs of this population
2. Describe the disparities experienced by young people to engage optimally in substance use treatment are shaped by regional contexts of drug use, and new youth-responsive models that are adapted to these contexts are needed to ameliorate these gaps
Factors and Conditions leading to Synthetic Cannabinoid Use: A qualitative study

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Objective: This study aims to find out the factors and conditions affecting the initiation and continuation of synthetic cannabinoid use.

Method: This is a qualitative observational study. The sample consists of 31 hospitalized patients who were under treatment for addiction (mostly poly-substance use) and provided informed consent for the interviews. Sociodemographic data were collected using a structured questionnaire. Other data were obtained through face-to-face interview using a semi-structured form. The interview data were captured either by voice recording during the interview or in cases when the participant refused to permit voice recording the data has been written down during and immediately after the interview. The collected data were processed using thematic analysis.

Results: Of the 31 participants (current or former synthetic cannabinoid users) 27 were male. Of the 27 male participants 15 described their neighbourhoods as a place where the use and sale of illicit substances are perceived as normal. Among those 15 participants, 6 started using an illicit substance at age 13 or younger. Several participants (n=9) stated that they first experienced the use of synthetic cannabinoids in the years between 2007-2009, well before 2010 in which formal discovery of the problem occurred in Turkey. Twenty-six participants started illicit substance use with cannabis, four with synthetic cannabinoids. The bucket use of synthetic cannabinoids among the participants was also widespread and seem inherited from their cannabis culture. Several participants stated that they started using synthetic cannabinoids due to a cannabis availability problem, suggesting the manipulation of the drug market for promoting cannabinoids and ensuring their widespread use.

Conclusion: Social environment particularly some neighbourhoods where substance use and trade are widespread, male gender, friends who use substances, poor family protection and some substance related features may be the most important factors contributing to synthetic cannabinoid use.

Learning Objectives: By the end of this presentation participants will be able to:

1. Review the most important factors and conditions leading to cannabinoid use.
Telemedicine in Irish Addiction Treatment Services during the Covid-19 Pandemic – innovation by accident

Presenter: Dr. Garrett McGovern
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The emergence of COVID-19 in March 2020 resulted in unprecedented challenges to healthcare systems throughout the world. Irish opiate addiction treatment services provides opioid agonist treatment for approximately 11,000 patients with addiction and other health related issues. When the pandemic struck and given the unique nature of the problems facing treatment services, planning around treatment delivery necessitated innovation to meet this new threat. Initially, a very cautious approach was adopted which limited face-to-face consultations as much as possible, particularly with patients with underlying conditions that placed them at a greater risk of more severe COVID-19 symptoms. Telemedicine has played a significant role in ensuring continuity of care to this vulnerable cohort. Certain regulatory restrictions have been eased to accommodate this new way of working. Examples include greater use of video and phone consultations, a change in the law to allow prescriptions to be e-mailed (via healthmail), a considerable reduction in urine toxicology screening, a greater awareness of benzodiazepine dependence and its management and the wider availability of take-home Naloxone. This presentation assesses patient satisfaction using the Telemedicine Satisfaction Questionnaire (TSQ) among a group of 20-30 patients as well as providing an account of how Irish drug treatment services (general practice and central treatment services) have adapted to COVID-19.

Learning Objectives: By the end of this presentation participants will be able to:
1. Review traditional barriers to addiction treatment have been removed during the COVID-19 pandemic highlighting innovative new thinking during a crisis
2. Evaluate Telemedicine as an efficient way of delivering addiction treatment and can be just as effective as face-to-face consultations
Spectrum of Mephentermine abuse: from harmful use to dependence and induced psychosis

Presenter: Dr. Sidharth Arya
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Objective: Mephentermine is a sympathomimetic amine, used as vasopressor in clinical settings and for veterinary purposes. It is structurally similar to amphetamines and theoretically possess addictive properties. However, apart from isolated case reports of mephentermine addiction, less is known about the its psychological impact on humans.

Methods: We collected data from 14 individuals who presented to drug deaddiction clinic for mephentermine addiction from 2016-2020 and report the findings using descriptive statistics.

Results: All individuals were young male (mean age – 23.7 years), unmarried with 6 of them being professional sports players. All individuals used IV route for administration. Enhancing exercise performance was the most common reason for initiation with starting dose ranging from 15-60mg and average dose being 90 mg – 600mg. Two individuals presented with harmful use while eight met the dependence criteria, with five of them exhibiting drug induced psychotic symptoms. All except one had co-morbid substance use with tobacco being the most common.

Conclusion: Our case series highlight that mephentermine has strong addiction potential with severe psychological consequences.

Learning Objectives: by the end of this presentation participants will be able to:
1. Recognise the spectrum of psychological problems related with mephentermine use
2. Identify the mephentermine, like other stimulants can cause dependence
Physicians in Twelve Step-Based Recovery

Presenter: Dr. Marc Galanter
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The ISAM Spirituality and Twelve Step Interest Group promotes both clinical training and research on issues related to the aspects of addiction recovery in its title. It also focuses on different patterns of spirituality that take place in a variety of national settings, as spirituality can be quite different across many cultures. This current session illustrates two particular issues: how the recovery process can operate for physicians monitored for SUDs, and how Twelve Step-based spirituality is reflected in many such physicians. One specific example of this is found in the Twelve Step fellowships of Alcoholics Anonymous and Narcotics Anonymous. This presentation includes video segments of an interview of the physician in Twelve Step recovery that he undertook recording for medical education purposes. It vividly portrays his experiences within the Twelve Step process, an explanation with recourse to studies on physician recovery, and related discussion by the presenters. It also focuses on the nature of recovery among many physicians monitored by state-based agencies in the US.

Learning Objectives: by the end of this presentation participants will be able to:
1. Demonstrate knowledge on the Twelve Step experience
2. Organize a committee on physician health
Overview: The Addiction Specialist fit for the future: What education programmes need to look like

Symposium organizer: Susanna Galea-Singer
Consultant Psychiatrist
Email: susanna.galea-singer@warwick.ac.uk

The symposium will take a futuristic view to the treatment of addictions and will discuss what skills, knowledge and attitudes addiction specialists need to be equipped with in the near future. The symposium will discuss what addiction educational curricula should look like to develop addiction specialists fit for the future.

Learning Objectives: By the end of this session participants will be able to:
1. Discuss the future of addiction treatment;
2. Plan for educational curricula
Overview: Quality Assurance in International standards for addictions education

Organizer: Dr. Susanna Galea-Singer
Consultant Psychiatrist
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This session will discuss the quality assurance for international standards for addictions education. A number of international bodies responsible for addictions education will be bring together a global perspective to the theme.

Learning Objectives: by the end of this session participants will be able to:
1. Discuss International addictions education standards
2. Describe Quality assurance processes
The cascade of care for opioid use disorder: a multi clinic retrospective study in Ontario, Canada

Presenter: Farah Tahsin
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Background: The cascade of care framework is considered as an effective measurement tool to identify gaps along the Opioid-agnostic treatment (OAT) system and measure individual’s attrition rate from the OAT system.

Objective: We aim to describe the cascade of care for opioid use disorder (OUD) and identify individual characteristics associated with care engagement for Person with OUD (PW OUD) in Ontario, Canada.


Study participants: All PW OUD who has received OAT from one or more of the 70 clinics.

Measurements: Five stages of the treatment cascade will be operationalized to identify the PW OUD engagement pattern: percent of PW OUD initiating treatment each year, percent of PW OUD who were retained in OAT each year, percent of PW OUD who were retained in treatment within 3 month, 12 months, and 24 months.

Preliminary findings: A total of 24,888 individuals received treatment from one of the 70 clinics. We will plot the temporal trend in care engagement from 2013 to 2021 to describe how the care engagement has changed over time in Ontario. We further plan to analyze the data to identify the individual level characteristics such as age, sex, geographical location, comorbidity, disease severity associated with individuals’ engagement pattern, using multinominal regression model. Additionally, we will conduct a sub-group analysis to determine the treatment engagement pattern based on individual’s geographical location to better understand the impact of rural/urban location on OAT engagement pattern.

Conclusion: Application of cascade of care framework to examine the OAT retention pattern will allow us to identify the gap between current OAT-usage status among PW OUD and recommended OAT protocol. The findings of this study will inform key stakeholders about the priority population for whom a more responsive and tailored OAT system is needed to meet their unmet needs.

Learning Objectives: After completing the presentation, audience will be able to:
1. Describe the current trend and frequency in receiving and retaining in Opioid treatment system in Ontario Canada
2. Describe who is at most risk of poor engagement with the Opioid treatment system based on their demographic information
Maladaptive behaviour and stress of Italian HCPs during the first wave of pandemic

Presenter: Dr. Paolo Grandinetti
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The COVID-19 pandemic impacted the mental health of Italian healthcare professionals (HCPs). However, little is known about stress, anxiety, insomnia and maladaptive coping behaviours of Italian HCPs during the first wave of the pandemic. This study reports on a cross-sectional, descriptive and correlational study based on a survey of 1955 Italian HCPs conducted between April and June 2020. It reports on measures of stress, anxiety, insomnia and changes in ‘maladaptive coping behaviours before and during the Italian lockdown. HCPs reported increases in cigarette smoking, time spent online and video playing. HCPs reported an overall decrease of alcohol consumption, but increases were reported in those reporting drinking more than once a week. Higher perceived stress was correlated with starting smoking during the pandemic, playing video games and playing video games for longer than one hour. Higher anxiety was correlated with starting smoking during the pandemic and playing video games. Higher insomnia was correlated with being online for three or more hours and playing video games. Online behaviours may be a coping behaviour of HCPs affected by the pandemic. However, this is an underexplored area for the wellbeing of HCPs. These deficits need to be addressed going forward.

Learning Objectives: by the end of this presentation participants will be able to:
1) Describe how covid-related stress can impact the behaviors of HCPs and can lead to addiction problems
2) Discuss how the stress and addictions of HCPs should be more explored and HCPs should be more psychologically supported
Tele-addiction services in resource poor settings: An experience from India during the early stages of the COVID-19 pandemic: Wave 2

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Objective:
1) To describe the sample limitations during second wave of tele-consultations (01/05/2020 - 30/06/2020)
2) To analyse transitions between two tele-consultations w.r.t abstinence rates, psychological distress and withdrawal symptoms

Methods: In wave 2 of the tele-consultations, the patients who were supposed to follow up in May 2020 were contacted between 01.05.2020 to 30.06.2020 through the same cloud telephony platform services ‘Exotel’. CAMSOFT patient-related records, as well as Exotel Call logs and recordings, were used as data sources. Data collected were analysed using R-programming to analyse transitions between two tele-consultations w.r.t abstinence rates, psychological distress and withdrawal symptoms.

Results: Of the 1482 unique calls that were identified 191 were excluded before the start of the first wave for reasons described before. Among the 1291 calls that were to be made, we could only include 1061 contacts as 182 calls were not attempted, 37 calls were unsuccessful, and 11 conversations were uninformative. Hence we have data loss of 18%. Among the ones included in the analysis, 61% were abstinent vs 90% compared to the first wave. 18% were not abstinent. Following up patients from wave 1 more than 50% of them continued to remain abstinent across this period and 12% of those who were abstinent during the first wave now relapsed. We saw an increase in all intensities of psychological problems i.e mild, moderate and severe in the second wave as compared to the first wave. A smaller percentage of patients reported having no psychological problems (40% vs approx 80% in the first wave). Higher percentage of patients reported experiencing withdrawal symptoms in the second wave.
*Alcohol was prohibited during the lockdown only till 04/05/2020. For most part of the second wave of consultations alcohol was legally sold.

Conclusions: Following up patients from the first wave of consultations certainly improved the outcomes of abstinence i.e more than 50% of them continued to remain abstinent.
Availability of alcohol decreases the rates of abstinence, increases the probability of experiencing withdrawal or psychological problems, some of which were addressed through teleconsultation process.

Learning Objectives: by the end of this presentation participants will be able to:
1. Discuss the feasibility of delivering tele-consultation services for patients with substance use disorders.
2. Explore the barriers and inherent challenges with tele-consultation services in the absence of in-person consultations.
**Objective:**
To describe outcomes of the Tele-addiction Services during the pandemic
To analyze/explore the factors influencing outcomes of teleconsultation

**Methods:**
A team of 3 SRs, and 1 consultant reviewed call logs for all patients who were contacted during waves 1 and 2. We reviewed the clinical information for completeness from the available EHR records. We coded the outcomes of the teleconsultation in four levels:

- **Satisfactory:** The outcome was similar to what can be expected from an OPD visit.
- **Unsatisfactory:** The clinical care could have been better if OPD was working as usual.
- **Undetermined:** No repeat interaction has occurred after the first teleconsultation, and the outcome cannot be ascertained.
- **Not applicable:** Various reasons that made the teleconsultation irrelevant or unrequired.

An inter-rater reliability exercise was performed by a blinded expert from Addiction Services. Hypothesis-driven factors were explored. A principled selection scheme is used. Missing data were imputed with Multiple Imputations Through Chained Equations (MICE). Logistic regression of imputed data sets is done and estimates are pooled.

**Results:**
We found 85% inter-rater reliability while coding the outcomes. 46% of the clients had a satisfactory outcome. Significant factors influencing outcomes were: socio-economic status, presence of withdrawal symptoms during Wave 1, medication compliance if the patient received medication prescription, language match with the doctor.

**Conclusions:**
Overall, there were favourable outcomes noted to be present for a majority of patients. However, the system did not work as well for people who needed help: those with high distress, with withdrawal symptoms, and those out of treatment. Patients from a lower socio-economic background who constitute the majority of our clientele did not benefit as well as those from an upper socio-economic background.

**Learning Objectives:** by the end of this presentation participants will be able to:

1. Identify the outcomes of the tele-addiction services during the pandemic
2. Describe the factors influencing outcomes of teleconsultation
Objective: Compulsive sexual behavior disorder (CSBD) has been included in the ICD-11 within the category of impulse control disorders. Problematic pornography use (PPU) may be subsumed under CSBD, since pornography use may be covered by the broader term "sexual behaviors", which is used in the diagnostic guidelines of CSBD. Consequently, PPU might be considered a subtype of CSBD characterized by the specific problem to control the use of pornography without problems relating to other sexual behaviors. Some authors, however, argue that PPU shares some features with disorders due to addictive behaviors, such as gaming disorder (Brand et al., 2020). The presentation aims at summarizing current empirical and theoretical work on CSBD and PPU and reflecting on potential commonalities and differences between CSBD and PPU.

Methods: Narrative review of the literature on CSBD and PPU with a focus on psychological and neurobiological mechanisms.

Results: Neuroscientific data suggest commonalities between brain mechanisms involved in CSBD and those involved in addictive behaviors (Brand et al., 2019), such as those relating to ventral striatal activities as correlates of cue-reactivity and craving (Stark et al., 2018). Data also suggest that men with general hypersexual behaviors also frequently and excessively use pornography, while individuals using pornography problematically do not necessarily engage in other hypersexual behaviors. Environmental features relating to pornography may accelerate the development of an addictive use.

Conclusions: PPU may be considered a specified subtype of CSBD. Both CSBD and PPU show parallels with disorders due to addictive behaviors. Specific features of online-pornography use (e.g., anonymity, affordability, accessibility; Cooper, 1998) may be comparable to those involved in online-gaming. Both diagnostic approaches and treatment of CSBD and PPU should consider mechanisms involved in the development and maintenance of addictive behaviors and features specifically related to problematic use of pornography.

Learning Objectives: by the end of this presentation the participants will be able to:

1. Discuss recent debates about classification and theories of CSBD and PPU
2. Discuss the current literature on psychological and neurobiological correlates of CSBD and PPU.
Overview: Tele-addiction services in resource-poor settings: An experience from India during the early stages of the COVID-19 pandemic

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Objectives:
1. To describe the processes involved in setting up a cloud-telephony based tele-addiction service during the early stages of the COVID-19 Pandemic.
2. To describe the sociodemographic and clinical profile of patients seen, interventions provided, and clinical outcomes of tele-addiction service.
3. To determine the role of various factors on clinical outcomes of the tele-addiction service.
4. To comment upon barriers in providing tele-addiction services and possible solutions towards the same.

Methods:
The list of proactively contacted patients as part of the cloud-telephony-based tele-addiction service was populated from the Electronic Health Records (EHR) system, CAMSOFT, available at the Centre for Addiction Medicine (CAM) NIMHANS. The patients were contacted in two waves. CAMSOFT records, call logs and recordings were used as data sources. Collected data were analysed using the R. A team reviewed call logs and clinical information for completeness. The outcomes of the teleconsultation were coded in four levels. Inter-rater reliability was assessed, and hypothesis-driven factors contributing to outcomes were explored. Logistic regression was done, and estimates were pooled. Anonymous feedback was collected from doctors about the process and outcomes of teleconsultation.

Findings:
1291 patients were successfully contacted in the first wave of services, and 1061 in the second wave. Psychiatric and medical comorbidities contributed to 30% and 10%, respectively. A majority remained abstinent, compliant to medications and reported no psychological problems. Around 70% were advised the same treatment, rest advised new treatments or tapered stop of medications. Costs based on money spent were calculated, along with average costs incurred by patients to avail medications during the lockdown. There was 85% inter-rater reliability, 46% of clients had satisfactory outcomes. Factors influencing the outcome were analysed. Doctors believed lack of rapport and effective communication as reasons for poor outcomes and felt the need for well-equipped back-office staff.

Conclusions:
Setting up a cloud telephony based tele-addiction service in a short duration in the context of the COVID-19 Pandemic was a feasible exercise. Although the outcomes were favourable overall, the system did not work as well for people from a lower socio-economic background, with high psychological distress, with ongoing withdrawal symptoms, and those who were out of treatment.

Learning Objectives: by the end of this presentation participants will be able to:
1. Describe the process of setting up tele-addiction Services in resource-poor settings.
2. Discuss the feasibility of delivering tele-addiction services and the outcome for patients with substance use disorders.
Excessive Online Stock Trading as a form of Disordered Gambling – a Case Series

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Objectives: To describe the socio-demographic and clinical profile and phenomenology of patients presenting to a clinic with complaints of excessive stock trading

Methods: The present study reviewed treatment records of patients who sought treatment at the Centre for Addiction Medicine at NIMHANS, Bengaluru between July 2019 and February 2020 with complaints pertaining to excessive online stock trading.

Results: The individuals were all male, between 26 to 63 years in age and had been involved with online trading for between 2 to 16 years. They had all presented in the context of significant financial losses. Four of them, had a substance use comorbidity (Alcohol Use Disorder in 2, Tobacco Use Disorder in 4, Gambling Disorder in 1) and all had psychiatric comorbidities (Attention Deficit Hyperactivity Disorder in 2 and Major Depressive Disorder in 2). All of them fulfilled criteria for Gambling Disorder and cognitive distortions such as gambler’s fallacy, near miss and selective memory of wins were also observed.

Conclusions: Based on these preliminary findings, we conclude that excessive online stock trading can in certain individuals manifest with features of gambling disorder. It illustrates the intersection of individual vulnerability and risky behaviours in the emergence of behavioural addictions and has potential implications with regard to regulation.

Learning Objectives: by the end of this presentation participants will be able to:  
1. Describe the phenomenology of patients presenting with excessive stock trading and its overlap with disordered gambling  
2. Discuss common co-morbidities in patients presenting with excessive stock trading
What is the problem we are trying to solve? Developing a functional typology to guide digital health intervention choice

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 Digital Health Interventions (DHI) are defined as health-related services delivered electronically through formal (statutory) or informal (commercial or third sector) care. Alternatively, the term DHI describes “tools and services that use information and communication technologies (ICTs) to improve prevention, diagnosis, treatment, monitoring and management of health and lifestyle” and can range from electronic health records used by service providers to mobile health apps used by consumers.

 The development of DHIs is a dynamic process borne of the interaction between a health service, frontline service providers and the end-user, and as a result varies substantially over time. Indeed, whereas we were previously working towards categorising different aspects of telehealth we now use the relatively new term digital health interventions, reflecting among other things the ubiquitous nature of smart phone ownership, the abundance of contextual and personal information and telemetry available to collect and the processing power and machine learning technology to make sense of this data mountain.

 This functional taxonomy aims to provide a pragmatic approach to understanding what a DHI can do to improve upon the treatment, delivery and organization of addiction services, in keeping with the resources, infrastructure and legal framework of individual member states. In developing the taxonomy, we first identified influences on DHI adoption in addiction services including:
   - Supply versus demand in terms of addiction services
   - Budgetary constraints and opportunity costs
   - Protecting service-users and service-providers from the risk of viral transmission during pandemics
   - Addressing inequalities in terms of access and the digital divide
   - Variability in terms of cultural acceptability and infrastructure in different countries
   - Rapid technological development which outpaces regulatory frameworks
   - Risk aversion in modern health services

 Learning Objectives: by the end of this presentation participants will be able to:
   1. Identify the benefits and limitations of digital health interventions (DHI).
   2. Describe how to select the best DHI option in keeping with the service needs
Applying the NOMAD constructs in comparing TMAT implementation across the international Context: preliminary findings

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There has been an explosion of Telehealth mediated Medication Assisted Treatment (TMAT) within addiction services in the last 18 months in response to the inevitable restrictions on in-person contact due to the pandemic. Quite understandably, this has not been matched with theoretically grounded evaluation of implementation. Yet we know that integrating telehealth into clinical patterns of work is extremely challenging. The Normalization Process Theory Measure (NoMAD) is one of the first instruments for measuring implementation from a Normalisation Process Theory (NPT) perspective and has been used in evaluations of telehealth previously though not specifically in TMAT. We use the NoMAD questionnaire in a novel way, applying the constructs of coherence, cognitive participation, collective action, and reflexive monitoring to frame our collective experiences of implementing TMAT in different settings including New Zealand, India, USA and Scotland. Coherence concerns the sense-making work individuals need to do to operationalize new practices, cognitive participation reflects the relational work that people do to create a community of practice, collective action is the operational work people carry out in the implementation of the intervention and reflexive monitoring is how people assess and understand the implications and usefulness of the intervention to the practitioners workflow. This presentation provides early insights from this work so far.

Learning Objectives: By the end of this presentation participants will be able to:
1. Identify the underpinning psychological constructs which influence the embedding of TMAT within services.
2. Examine own services to evaluate barriers and facilitators to successful TMAT implementation.
Profile of substance use, psychopathology and quality of life amid SARS-CoV-2 pandemic in the population of homeless drug users living in a transitional guesthouse

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Objective: The pertinent research aimed to describe the profile and course - in terms of quality of life, psychopathology and substance use - of the homeless and/or people living in precarious housing and use drugs (PWUD), during the period of the new SARS-CoV-2 coronavirus pandemic in the Athens metropolitan area.

Methods: Participants were recruited from the only transitional guesthouse of the country which was established as part of an innovative action aiming to protect this population during the pandemic of the new SARS-CoV-2 coronavirus. Data were collected (June 2020-January 2021) through (i) psychometric self-report instruments (the Symptom Checklist -90R, the World Health Organization Quality of Life - BREF (WHO-QOL-BREF) and (ii) structured interview (socio-demographic data collection interview and an interview on substance use and social functioning (Hellenic Treatment Outcomes Profile-HTOP).

Results: 33 PWUD who received services from the transitional guesthouse took part in the study. All of them were attending opioid substitution programs. Scores in all subscales of the WHOQOL-BREF scale are lower than the cut-off points suggested by the literature (Hawthorne, Herrman, & Murphy, 2006). In terms of psychopathology, the participants reported high levels of depression, anxiety and obsessive-compulsive behavior. However, only the values of depression were found to have a T score> 60 and therefore to be indicative of clinical psychopathology (Derogatis, 1983). Participants were found to have higher rates of benzodiazepine, heroin and cannabis use. About one in two participants reported alcohol use while almost all participants reported that they were active smokers.

Conclusions: Homeless PWUD presented low levels of quality of life and high levels of depression and polydrug use. This finding merits noting especially in times of a pandemic, where the need for coordinated, tailored and multifaceted interventions to protect vulnerable groups is considered more than necessary.

Learning Objectives: by the end of this presentation participants will be able to:
1. Identify the effects of the SARS-COV-2 pandemic on vulnerable populations, such as homeless persons who use drugs.
2. Examine the need for structured tailored and holistic interventions for homeless persons who use drugs.
Overview: Considerations regarding Sex Addiction, compulsive Sexual Behavior Disorder and Problematic Pornography Use

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How excessive or interfering patterns of sexual behaviors may be considered has been debated. Nonetheless, such behaviors are prevalent and associated with significant distress in a sizable portion of the general population. In this symposium, current considerations regarding compulsive sexual behaviors will be presented. Drs. Matthias Brand (Germany) and Marc N. Potenza (USA) will present on diagnostic and theoretical conceptualizations of compulsive sexual behavior disorder and problematic pornography use within the context of the 11th revision of the International Classification of Diseases (ICD-11). Drs. Karol Lewczuk (Poland), Shane Kraus (USA) and colleagues will present on the prevalence and correlates of withdrawal and tolerance as related to compulsive sexual behavior disorder and problematic pornography use in a nationally representative sample in Poland. Drs. Stephanie Antons (Germany), Marc N. Potenza (USA), and Matthias Brand (Germany) will present on psychopathology, craving, moral disapproval and other common and distinct predictors of unspecified compulsive sexual behaviors and problematic pornography use. Dr. Lijun Chen (China) and colleagues will present on the validation of the Problematic Pornography Consumption Scale in samples from China and Hungary. Dr. Beáta Bőthe (Canada) and colleagues will present pre-registration information from an international sex survey involving over 40 countries. Together, this symposium will cover compulsive sexual behavior disorder and problematic pornography use from multiple theoretical and practical perspectives and provide participants with up-to-date information that may be used to guide clinical and research efforts.

Learning Objectives: by the end of this presentation participants will be able to:
1) Examine the current state-of-art of classification and conceptualization of compulsive sexual behaviors, and
2) Review current empirical research on compulsive sexual behaviors
**Tele-addiction services in resource poor settings: An experience from India during the early stages of the COVID-19 pandemic: perceptions of Service Providers**

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**Objectives:**  
To describe the perceptions of service providers delivering tele-addiction services  
To provide recommendations for setting up tele-addiction services in resource-poor settings

**Methods:**  
An anonymous feedback was sought from the doctors who were involved in the delivery of tele-addiction services after Wave 1 of the telephonic follow-up. This feedback took the form of a survey and included open-ended and closed-ended questions. Descriptive statistics were used to tabulate the responses that were obtained

**Results:**  
A total of 24 doctors completed the anonymous feedback form. The self-rated feedback of outcomes of calls was low, with doctors themselves rating that only between 42 - 48 % of calls that they placed had a satisfactory outcome. The specific barriers towards satisfactory outcomes as perceived by doctors were due to problems arising out of a lack of rapport with patients and difficulties with communication which was attributable to language barriers which seemed to be exacerbated due to the telephonic medium. In addition to the above, doctors were generally uncomfortable to directly receive incoming calls from patients calling the service, reflecting the requirement for trained backend staff who could screen calls and re-route them if necessary.

**Conclusions:**  
The perceptions of service providers, in this case, the doctors, is a vital component and must inform the setting up of tele-addiction services. These can significantly influence popularity and uptake, satisfaction with services and outcomes.

**Learning Objectives:** by the end of this presentation participants will be able to:  
1. Review perceptions of service providers delivering tele-addiction services  
2. Provide recommendations for setting up tele-addiction services in resource-poor settings
The 21st century revolution in digital/information technologies (IT) and neuroscience substantially contribute to the spread of new diagnostic approaches in Mental Health. Digital Psychiatry (i.e. the use of information/communications technology in support to mental health) is providing a complementary clinical tool to clinicians, especially to the youngest generations of mental health professionals. ‘Digital phenotyping’, based on sensors (i.e., activity, location), voice and speech (i.e., sentiment, prosody) and human-computer interactions, rapidly disseminated in the field of digital psychiatry. Digital phenotyping, by actively and passively collecting real-time smartphone-based data (e.g., GPS tracking, social patterns, typing patterns, etc.) may potentially provide early signals of relapse, recovery or the transition from an at-risk situation to the need for care. In Addiction Psychiatry, digital phenotyping may inform baseline and follow-up clinical assessment, monitoring changes in terms of risk of substance and/or alcohol use, craving, withdrawal symptomatology and potentially deliver on-demand interventions in a smart and cost-effective manner. Digital phenotyping not only runs remotely but is also able to address historic challenges in detecting problematic substance and/or alcohol use behaviours.

Learning Objectives: by the end of this presentation participants will be able to:

1. Identify the potentialities of digital tools in addiction clinical practice
2. Discuss what digital phenotyping is
3. Describe how digital phenotyping may be applicable in the field of addiction psychiatry
4. Examine how digital phenotyping works as diagnostic and monitoring tool as well as to deliver treatment(s) and interventions in the context of addiction psychiatry
Dexamphetamine Substitution Therapy for severe stimulant use disorder: Case series

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Case Series: Highlights the use of high dose oral Dexamphetamine in management of Severe Stimulant Use disorder, in a specialist Stimulant Treatment Program, using a Harm minimization approach. Clinical outcome and treatment framework will be discussed.

Learning Objectives: by the end of this presentation participants will be able to:
1: Describe the role of Stimulants such as Dexamphetamines in minimizing harm in severe Stimulant use disorder.
2: Discuss the treatment framework this can done in clinically safe manner.
Tele-addiction services in resource poor settings: An experience from India during the early stages of the COVID-19 pandemic: Process overview

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Objective:
To describe the process and barriers in setting up cloud-telephony based Tele-Addiction services during the COVID-19 related lockdown.
To describe the sociodemographic and clinical profile of patients.

Methods:
The patients' list to be contacted was obtained from Electronic Health Records (EHR) stored in a bespoke software – CAMSOFT. Exotel was used as the cloud telephony platform. During our telepsychiatry service delivery, patients had been contacted in two waves. In the first wave of cloud-telephony service, all patients having outpatient (OPD)/Inpatient (IP) contact with Centre for Addiction Medicine (CAM), NIMHANS during February and March 2020 were contacted over a voice call between 26.03.2020 and 30.04.2020. In wave 2 of the service, the patients who were supposed to follow up in May 2020 were contacted between 01.05.2020 to 30.06.2020. CAMSOFT patient-related records, as well as Exotel Call logs and recordings, were used as data sources. Data collected were analyzed using the R programme for patient sociodemographic and clinical profiles.

Results:
We have included all unique phone calls (n= 1482). 191 calls were excluded due to various reasons. 1291 patients were successfully contacted in the first wave of services. A total of 238 hours of conversations occurred. Whereas 1061 patients were successfully followed up telephonically in the second wave. The mean age was 39 years. A majority (95%) were male, hailing from Karnataka (82%), belonging to below poverty line (62%). More than 40% of our patients had one additional diagnosis over primary substance use. Psychiatric disorder and medical disorder contribute 30% and 10%, respectively.

Learning Objectives: By the end of this presentation participants will be able to:
1. Describe the process of setting up Tele-Addiction Services in resource-poor settings.
2. Identify the barriers in delivering the Tele-Addiction Services in resource-poor settings.
Developing TMAT best practice guidance in the Scottish context: the DigitAS-TMAT project

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1. The DigitAS-TMAT programme was approved by the Scottish Government as an exemplar programme for an innovative digital treatment programme for Addiction Services in Scotland. The programme consists of four phases:
1. Identifying good practice, reviewing the literature, building a community of practice
2. Developing good practice guidance
3. Piloting the guidance, evaluating & disseminating knowledge
4. Support the establishment of a national single point of contact for Telehealth mediated Medication Assisted Treatment (TMAT)
From Phase 1 and 2, we have the following outputs:
1. A review of the literature around TMAT to identify implementation factors in successful adoption.
2. We established the first international network of professionals working with TMAT. DigitAS and Scottish professionals orchestrated the development of an international network of professionals to collaborate on the topic of TMAT. The network also included renowned organizations such as the International Society of Addiction Medicine (ISAM) and the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA). Professionals, through their expertise, set the scene for the rest of the project
3. We developed an innovative evaluation framework, applying the Normalisation Process Theory to evaluate TMAT implementation. We present more detail on this in a later presentation.
4. We conducted a stakeholder round table to provide input into the ‘Good Practice Guidance’. Stakeholder feedback was positive and supportive of continuation to phase 3 of the programme.
We present the above outputs of phase 1 and 2 and discuss our plans for phase 3 and 4 over the next two years.

Learning Objectives: by the end of this presentation participants will be able to:
1. Describe the process the DigitAS team developed from initiation to implementation of best practice guidance on TMAT implementation
2. Discuss next steps in piloting and evaluating TMAT
Effect of economic growth and inequalities of income on alcohol use across 186 countries spanning over 6 decades – an ecological study

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Objectives:
1. To empirically identify clusters of countries based on the demographic cycle, religion, economic growth trajectory, and their relationships with the per capita alcohol consumption
2. To measure the effect of economic growth on three fractions of alcoholic drinks
3. To measure the effect of crude (GINI index) and fine (thresholds, inequality within brackets, ratio of top and bottom fractions) measure of income inequality on per capita alcohol consumption

Method:
We obtained per capita alcohol consumption data from the WHO Global Health Observatory and demographic, economic, and inequality-related data from the World inequality database. We first built a finite mixture Bayesian model using the following features - per capita alcohol consumption, disaggregated population structure, religious affiliation, net national income in purchasing power parity. A representative country from each cluster is briefly explained as a case study. Following this, we analyzed the effect of economic growth as well as significant economic shocks on per capita alcohol consumptions. Finally, we identify significant indicators of income inequality and report their effect on alcohol consumption. All the analysis was done in a Bayesian framework and a sensitivity/robustness check was done. The three presenters aim to give a comprehensive and historical overview of the relationship between economics and alcohol use. We link these findings to the prevalent models of “status anxiety” and social capital.

Results:
Detailed results have been discussed in Individual presentations

Learning Objectives: by the end of this presentation participants will be able to:
1. Describe the relation between demographic variables, economic factors, and per capita alcohol consumption
2. Discuss the effect of economic growth on the effect of consumption of fractions of alcohol consumption per capita
3. Identify the effect of types of income inequality and per capita alcohol consumption across the world.
Overview: The Digitalisation of Addiction Services (2): Telemedicine mediated Medication Assisted Treatment (TMAT)

Organizer: Dr. Joseph Tay Wee Teck

The ongoing COVID-19 pandemic has led many addiction services to reassess their relationship with technology. It has been said that addiction services tend to lag behind other sectors in terms of technology adoption. Nevertheless, within the first year of the pandemic, 27 papers were published around Telehealth mediated Medication Assisted Treatment (TMAT) as opposed to 24 papers published between 2012-2019. Can we therefore claim that necessity is the mother of technology adoption as much for addiction services as for other areas of medicine? In this symposium, we delve more deeply into the most prominent example of technology adoption in addiction services, that of TMAT. The exponential rise in the number of publications around TMAT over the pandemic is striking, yet it is also clear that its use is not consistent across nations and health systems. Is this simply a matter of deficiencies in existing infrastructure or digital health preparedness in each country? We present a proposal for best practice in the implementation of TMAT, the experiences of TMAT delivery in North America, Australia, India and the UK and finally an application of Normalisation Process Theory to evaluate implementation facilitators and barriers across an international context.

1. Developing TMAT best practice guidance in the Scottish context: the DigitAS Project (Giedre Zlatkute)
2. Telehealth in addiction medicine in Australia: impact of the digital divide (Shalini Arunogiri)
3. TMAT: An Indian Experience (Abhishek Ghosh)
4. Community based TMAT for delivery of Methadone Maintenance Treatment (MMT) during Covid-19 pandemic: An Indian experience (Roshan Bhad)
5. Telemedicine Versus Face to Face Consultations for Opioid Dependence Treatment (Soraya Mayet)
6. Telemedicine in Irish Addiction Treatment Services during the COVID-19 pandemic - innovation by accident (Garret McGovern)
7. Applying the NOMAD constructs in comparing TMAT implementation across an international context: preliminary findings (Heidi Dritschel)

Learning Objectives: by the end of this presentation participants will be able to:

1. Describe the steps involved in planning and implementing TMAT.
2. Discuss the barriers and facilitators in implementation of TMAT.
Overview: The Digitalisation of Addiction Services (1): A functional taxonomy for Digital Health Interventions

organizer: Dr. Joseph Tay Wee Teck

Technology-supported programs are complex interventions which rely on dynamic multilevel interactions between individuals, structures, constructs and attributes. Conventional research designs such as randomised controlled trials of effectiveness will not tell us what we need to know when seeking digital health technology solutions to addiction service provision problems. With this in mind, we take a pragmatic, implementation science approach to the digital redesign of addiction services.

We present a multidimensional matrix taxonomy which looks at the perspectives of the service-user, the service-provider & society at large and focusses on the following questions:
- What is the problem we are trying to solve?
- What are our resources, strengths and consequent opportunity costs by investing in DHI?
- What are the risks and risk management approaches?
- What is the design, technical quality & evidence base for the DHI?

We then demonstrate the application of this taxonomy and how its use can help direct resources in the most effective way for the benefit of our patients.

Presentations in this symposium include:
1. What is the problem we are trying to solve? Developing a functional typology to guide digital health intervention choice. (Joe Tay)
2. Digital Addiction Psychiatry and the way forward: Digital Phenotyping to enhance Addiction Treatment (Laura Orsolini)
4. Developing DrinkCoach (Dylan Kerr)
5. Digitalizing aspects of drug use disorder treatment service provision Experience from Indonesia and Tanzania (Anja Busse)

Learning Objectives: by the end of this session participants will be able to:
1. Discuss the adoption of digital solutions for addiction services provision is more about people then about technology.
2. Formulate an approach towards choosing the most appropriate digital health intervention for service needs.
Tele-addiction services in resource poor settings: An experience from India during the early stages of COVID-19 Pandemic: Wave 1

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Objective
To describe details of findings and interventions conducted by the team, along with cost of medications and systems used for cloud-telephony during the COVID-19 lockdown.

Methods
In the first wave of cloud-telephony service, all patients having outpatient (OP)/ Inpatient (IP) contact with Centre for Addiction Medicine (CAM), NIMHANS during February and March 2020 were contacted over voice call between 26.03.2020 and 30.04.2020. CAMSOFT records, Exotel Call logs and recordings were used as data sources. Data collected were analysed using R-programming for patient profiles and types of service delivered.

Results
A total of 1492 unique phone calls were made, of which 1291 patients were successfully contacted in the first wave of services. Around 7.5% continued drinking, 90% remained abstinent, of which 15% were in early remission, 25% in sustained remission, with the rest abstaining due to unavailability of alcohol. Around 20% had stopped medications, 10% were partly compliant, 70% fully compliant. 50% had medications available for the next 7 days. Withdrawal symptoms were reported by around 10%, psychological problems by 20%. Around 70% were advised to continue the same treatment, 10% advised new treatments, 5% advised to taper and stop medications, no medical intervention was advised to around 10%, with data being unavailable for the rest. However, prescriptions were not generated for half the patients advised to continue the same treatment. Referrals to other medical services were provided for <5% patients. Since no additional personnel was recruited, costs based on money spent on rental (1000 INR/month) and average call charges (3.7 INR/ successful conversation) were calculated. Most patients belonged to lower socioeconomic status, who, if not for lockdown and subsequent closure of OPD services, would be eligible to avail free medications. The average costs incurred by patients during this time were also assessed.

Learning Objectives: by the end of this presentation participants will be able to:
1. Discuss the impact of lockdown on patients with alcohol dependence syndrome
2. Explore feasible interventions which can be conducted over cloud-telephony services in resource-poor settings
Using a Massive Open Online Course on Interprofessional SUD treatment to reach Global learners

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Introduction: Unhealthy substance use and SUDs contribute substantially to the global burden of disease. Adequate diagnosis and treatment of SUDs relies upon a well-trained workforce in evidence-based treatments. The massive open online course (MOOC) entitled, Addiction Treatment: Clinical Skills for Healthcare Providers, was designed specifically for U.S. health profession students but made available for free to a global audience. Here, we describe learner demographics, student characteristics, and changes in knowledge and interest among a group of international learners.

Methods:  
Course content was determined by an interprofessional team of seven faculty with SUD expertise from four Yale Health Professions Schools. Video scripts were drafted from agreed-upon objectives and peer reviewed. The course consists of 6 modules each with 3-5 short lessons, in-video quiz questions, a clinical case vignette, interprofessional panel discussions, an interactive map activity, and a module quiz. The course launched publicly in December 2019.

A pre and post-course survey was provided but not required to access nor to complete the course. A 10-item measure of self-efficacy in addressing substance use was included, with the total score ranging from 10-50 (higher scores corresponding to greater self-efficacy).

Results: Between course launch through July 2021, 30,758 individuals enrolled in the course and 6396 completed the course. Over 10,000 engaged in the course (completed 1 or more modules). 4925 learners completed the pre-course survey and 1500 the post-course survey. Over half of learners (65%) accessing the course were from outside the U.S. The majority (77%) were women with 50% identifying as non-white or other. Self-efficacy in addressing substance use increased substantially from 30.7 to 39.7, p < .001. 93% reported an interest in treating SUD as part of their career.

Conclusions: A massive open, online course can be an important tool for the global need to address SUD.

Learning Objectives: by the end of this presentation participants will be able to:  
1. Discuss the reach of massive open online courses for global learners  
2. Examine demographics of online learners globally, motivations for taking the course, and effectiveness of the course to positively change self-efficacy in providing SUD treatment.
Long-term visual outcomes of children born to opioid-dependent methadone-maintained mothers suggest a foetal opioid syndrome

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Abnormal neonatal VEPs, independently associated with methadone exposure, and abnormal visual findings at 6 months were previously reported in a cohort of children born to opioid-dependent, methadone-maintained mothers. We now describe long-term follow-up visual findings in the same cohort at 8–10 years of age. Children attended for comprehensive visual assessment; when that could not be facilitated, their case notes were reviewed. Prenatal drug exposure was established from maternal history and urine analysis and infant urine and meconium. Near and distance acuity, stereovision, binocular fusion, strabismus, eye movements and VEPs were assessed by researchers masked to prenatal exposure. A 'fail' was predetermined as any of 1) acuity worse than 0.2 logMAR; 2) presence of strabismus; 3) presence of nystagmus; 4) poor stereovision.

152 children (102 exposed, 50 comparison) were eligible for inclusion. Long-term data were available for 133 (89 opioid-exposed (OE) and 44 comparison) children. Of the 133 children, 33 (22 OE, 11 comparison) attended for assessment and 100 (67 OE and 33 comparison) had case notes reviewed. Fifty of the 89 (56%) OE children failed the visual criteria vs 8 of the 44 (18%) comparison children. The 50 OE children who failed had some combination of strabismus (47/50), poor distance acuity (30/50), nystagmus (17/50), poor stereovision (14/50) and/or poor near vision (3/50). The eight comparison children who failed had some combination of strabismus (6/8), poor distance acuity (6/8) and/or poor near vision (3/8). Of the subset of 33 children who attended for comprehensive visual assessment, 13/22 OE children failed vs 2/11 comparison children. All 13 OE children who failed had strabismus, plus some combination of poor distance acuity (9/13), nystagmus (5/13), poor binocular vision (4/13) and/or poor near acuity (3/13). Nystagmus was always horizontal, manifest-latent with strabismus; eye movement recordings confirmed the waveform as in keeping with fusion maldevelopment nystagmus syndrome. The two comparison children who failed both had poor acuity; one also had strabismus. Monocular and binocular 1200 pattern-onset VEPs were present in all 30 (20 OE, 10 comparison) children completing testing; while CI, CII and CIII tended to be smaller and slower in OE children, the difference was not significant. Prenatal drug exposures for children who failed and who passed visual assessment were very similar.

Long-term visual abnormalities were found in more than half of this cohort of OE children at age 8–10 years; the abnormalities indicate failure of binocular vision development. We postulate an opioid teratogenic effect causing loss of binocular connections within the striate cortex. Children affected by this fetal opioid syndrome are likely to be additionally challenged by socio-economic factors and other prenatal drug exposure.

Learning Objectives: by the end of this presentation participants will be able to:
A Retrospective Cohort Study Evaluating the Impact of Amphetamine-type Stimulant Use Among Individuals with Opioid Use Disorder in Ontario, Canada

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Background: Amphetamine-type stimulant (ATS) use among those with opioid use disorder (OUD) is linked to early death due to overdose or suicide. Opioid agonist treatment (OAT) is the gold standard for the treatment of OUD with positive treatment outcomes (reduced substance use, improved mental and physical health, improved social function, and reduced mortality) correlated with retention in treatment. The objective of this study was to evaluate trends of co-use of ATS and opioids and the impact of co-use patterns on retention in OAT across geographical areas in Ontario, Canada.

Method: A retrospective cohort study was conducted on 34,000 adults receiving OAT from approximately 70 clinics between January 1, 2014, and December 31, 2020, in Ontario. A Fractional logistic regression model was used to evaluate differences in amphetamine-type stimulant use based on urine immunoassay drug screening results. A Cox Proportional Hazard Ratio model was used to calculate the impact of ATS use on retention in OAT and adjusted for patient characteristics, drug use, clinical factors, and geographical differences.

Results: There were significant differences in stimulant positive urine drug screening results over the period studied. Stimulant positives were significantly decreased from 2014 to 2015 and significantly increased from 2016 to 2020. The preliminary outcome confirmed that stimulant use has a negative impact on treatment retention in OAT. Compared to those with no ATS use, the hazard ratio of the number of days retained in OAT treatment for those with ATS use was 1.19 (95% confidence interval=1.07-1.17; p<0.001). 54% of the patients with ATS use were likely to leave OAT treatment within the first year. Differences by gender and geography will be presented.

Conclusion: There was a significant increase in stimulant use among those with Opioid Use Disorder from 2015 to 2020 which negatively impacted OAT retention in Ontario.

Learning Objectives: by the end of this presentation participants will be able to:
1. Evaluate trends of co-use of ATS and opioids
2. Discuss the impact of co-use patterns on retention in OAT across geographical areas in Ontario, Canada
Clinical Profile of Adolescent Opioid Users in Out-Patient Clinic of Tertiary Level Drug Dependence Treatment Centre

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Background: Adolescent opioid users have their own risk and vulnerabilities making them more prone for substance use related complications. However there are inadequate studies from India related to pattern and severity of substance use among adolescent opioid users. Understanding the pattern and severity of substance use and associated psychiatric co-morbidities has potential clinical implications to address these timely.

Aims and Objectives: To study the pattern and severity of substance use and associated psychiatric co morbidities among outpatient adolescent opioid users.

Materials and methods: 30 adolescent (15-19 years) patients of with primary opioid use were assessed for pattern and severity of substance use and associated comorbidities based on various tools namely Semi-structured Interview Schedule, WHO ASSIST, OTI (Opiate treatment index), ADAD(Adolescent drug abuse diagnosis), GAF(General Assessment and functioning scale) and MINIKID.

Results:
Age of dependence for different substances among adolescent opioid users was found to be 11.5 years, 12 years, 14 years, and 15 years for tobacco, cannabis, opioid and pharmaceuticals respectively. Majority of adolescents showed WHO ASSIST scores under high risk category for opioid use, moderate risk category for cannabis use and tobacco use and lower risk for alcohol use and sedatives use. Similar findings were seen in OTI severity scores with high poly drug use and crime scores. The median duration of progression from start of any substance use to opioid use was found to be 3 years. ADAD scores were high in drug use problem, followed by school problems, social and familial problems. 50% adolescents were found to have a psychiatric disorder which included conduct disorder, ADHD (Attention deficit hyperactivity syndrome) and MDD (Major depressive disorder). Mean GAF score was found to be 60 out of 100.

Conclusion: The study provides insights about this vulnerable population and demands more strenuous measures to curb various substance use related complications in adolescent opioid users.

Learning Objectives: by the end of this presentation participants will be able to:
1. Discuss the pattern and severity of substance use and associated psychiatric co morbidities among outpatient adolescent opioid users.
Objectives:
The effect of prenatal opioid exposure on neurological development and the influence of type of guardianship were investigated in a longitudinal 3-year study of 69 new-borns.

Study Design:
The children were monitored for milestone development for the first 3 years of life. These were characterised according to childhood guardianship. Developmental milestones using the Ruth-Griffiths Scale were compared to standardised general population quotients.

Results:
Most Substance Misusing Mothers (SSM) were heroin dependent and prescribed methadone. The mean prescribed methadone dose was $46.22 \pm 28.51$ mg/day. Doses in the third trimester were significantly higher than they were in the first trimester ($P = 0.005$). There were 69 cases that consented to be part of the study. The mean birth weight and mean head circumference were significantly smaller than that for the general Maltese population ($P < 0.001$); Male/Female ratio was 1: 0.97; 14.5% were preterm. At birth, 70% were placed with their biological mother, 26% were fostered and 4% institutionalized. The infants recuperated their weight and height in the first year of life. Using the Ruth-Griffiths Scales at 8/18/30 months, the children scored significantly lower than their counterparts born to non-opioid abusing mothers in performance ($P < 0.001$), hearing-language ($P < 0.001$), and eye-hand coordination scales ($P < 0.001$). There were no significant differences when guardianship and gender were compared.

Conclusion: Opioid use in pregnancy may have contributed to the child's neurological, physiological and psycho-social development when considering hearing and language, performance and eye and hand coordination skills regardless of parenting skills and environment.

Learning Objectives: by the end of this presentation participants will be able to:
Cost-effectiveness of take-home buprenorphine-naloxone among people with prescription use disorders: Economic evaluation along side the OPTIMA trial

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Background: The cost-effectiveness of take-home buprenorphine/naloxone (BNX) vs. methadone for people with prescription opioid (PO) use disorders has not been formally assessed, which represents a major knowledge gap, as weekly dispensation of BNX reduces OAT treatment delivery costs and may improve treatment retention.

Methods: We will conduct a cost-effectiveness analysis (CEA) alongside the OPTIMA trial using a semi-Markov cohort model. Base health states will include treatment (BNX, methadone) with and without co-opioid use, relapse, abstinence, and overdose. We will distinguish the first month of BNX, methadone, and relapse to account for higher overdose risk during this period. The model will capture fatal and non-fatal overdoses and will be calibrated to match provincial data in each of the trial settings. We will account for differences in the durations of subsequent episodes of treatment, abstinence and relapse. We will stratify health states according to injection/non-injection drug use, as well as HIV/HCV-co-infection. Health state-specific probability of overdose will be calculated accounting for fentanyl use and access to naloxone.

We will derive costs for treatment, criminal activity and health resource use from utilization data collected in trial case-report forms using unit costs from the literature. Health-state-specific quality-adjusted life years (QALYs) will be estimated using the most responsive of three measures of health-related quality of life (3- and 5-level versions of the Euroqol EQ-5D, and the Health Utilities Index) . Other model parameters will be informed via comprehensive evidence synthesis on the course of PO use disorders following treatment initiation. Incremental cost-effectiveness ratios (incremental costs/incremental QALYs) will be calculated and used to evaluate the cost-effectiveness of BNX vs. methadone over different time horizons (1-year, 5-year, 10-year and cohort lifetime). Analysis will be executed according to specifications of the Canadian Agency for Drugs and Technologies in Health and adhere to international best practices standards.

Learning Objectives: by the end of this presentation participants will be able to:

1. Consider an awareness that help seeking and help giving behaviour is complicated by negative feelings and thoughts about the consultation which may help them to intervene on these feelings
2. Identify the relevance of giving these negative feelings which complicate help seeking and help giving behaviour a position in the training program in medical schools
Barriers in help seeking behaviour in medical doctors

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Background:
Seeking help with medical problems is not easy for doctors and it is not always easy to receive a doctor as a patient in the doctor's office. In this article we will explore why it is so difficult for a doctor to ask for help or give help to another doctor. The answers on this question of doctors attending a psychotherapy course were overwhelmingly negative. We therefore decide to explore the thoughts, feelings and behaviour that doctors imagine they would experience before and during seeking help as a doctor-being-patient and before and during helping another doctor-being-patient.

Methods:
In preparation for a psychotherapy training 97 doctors in different countries and age groups were asked to fill in a questionnaire about their thoughts, feelings and behaviour before and during two imaginary situations: “you are visiting a doctor as a patient” and “another doctor is visiting you as a patient”. The analysis was done using a mixed design. First, rich cases were selected and used for qualitative analysis. Then the remaining questionnaires were coded and the answers were used for quantitative analysis in order to determine differences between cultures, gender and age groups.

Results
The imaginary situation elicited a variety of, mostly negative, thoughts, feelings and behaviour, most commonly: anxiety, fear, insecurity and nervousness. Behaviour was mostly influenced by thoughts and different thoughts would elicit similar feelings. The negative thoughts and feelings before the appointment did not always lead to a delay in seeking help. It mostly led to more preparation before a consultation. During the appointment respondents reported more positive thoughts than before.

Conclusions
Help-seeking and help-giving behavior of medical doctors are complicated by negative feelings and thoughts about the consultation. In order to avoid delay in asking for help from a doctor and giving help to a doctor less professionally, this theme should be given more attention in the training as a doctor.

Learning Objectives: by the end of this presentation participants will be able to:
1. Discuss how help seeking and help giving behaviour is complicated by negative feelings and thoughts about the consultation which may help them to intervene on these feelings
2. Identify the relevance of addressing these negative feelings which complicate help seeking and help giving behaviour a position in the training program in medical schools
Tapentadol Addiction – a 2-year prevalence study from South India

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Tapentadol is a novel centrally acting analgesic drug which acts both as μ-opioid receptor (MOR) agonist and noradrenaline reuptake inhibitor (NRI). It is available in India since 2011 even as over the counter medication. During this COVID pandemic due to frequent lock-downs, we have seen an increase in the abuse of this drug, due to restricted availability of alcohol, tramadol, dextropropoxyphene and also because the drug is cheap and easily available. Hence it is of prime need to study about this new addiction seen especially among the younger population and bring it to the focus of concerned authorities for implementing control measures on the sale of this medication.

AIM:  
To study the prevalence of Tapentadol addiction among the treatment seeking population at our tertiary care institution in Chennai, Tamil Nadu, India.

OBJECTIVES:  
*To study the prevalence of Tapentadol addiction among the treatment seeking population at our tertiary care hospital.  
*To analyze their socio-demographic profile, mode of introduction to the drug, patterns of drug use, HCV status and the presence of other substance use and psychiatric comorbidity.

METHOD:  
This is a cross-sectional observational study. The prevalence of Tapentadol addiction and the socio-demographic profile, mode of introduction to this drug, patterns of use, HCV status and the presence of other substance use and psychiatric comorbidity is studied from the medical case records of our department in a tertiary care hospital setting over a period of 2 years. The treatment administered and their current health status will also be discussed.

RESULTS AND CONCLUSION: These shall be discussed at the time of presentation.

Learning Objectives: by the end of this presentation participants will be able to:  
1. Identify Tapentadol Dependence  
2. Treat the same and educate medical other medical colleagues about this
Impacts of fentanyl use on retention in treatment among individuals with prescription-type opioid use disorder: findings from a Canadian pragmatic trial

Presenter: Dr. Eugenia Socias
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Objectives: Despite fentanyl being increasingly responsible for the overdose epidemic in Canada and the United States and the well-known mortality benefits of retention in medications for opioid use disorder (MOUD), there is limited data on the association between fentanyl use, type of MOUD and treatment outcomes. The objectives of this analysis were to estimate the impact of fentanyl use on retention among individuals with prescription-type opioid use disorder (POUD) initiating MOUD, and whether responses to type of MOUD differed by fentanyl use status.

Methods: Data were drawn from OPTIMA, a multisite randomized pragmatic clinical trial comparing buprenorphine/naloxone flexible model to supervised methadone for 24 weeks among individuals with POUD conducted in Canada between 2017-2020. Cox regression was used to estimate the effect of fentanyl use at baseline (assessed through urine drug test) on discontinuation from the assigned MOUD among participants initiating treatment, as well as to estimate the effect of type of MOUD on treatment attrition, stratified by fentanyl use status.

Results: Of the 193 participants (70.9% of randomized individuals) who initiated MOUD, the median age was 38, 65.8% were male and 28% self-identified as black, indigenous or other people of color (BIPOC). Fentanyl-exposed individuals (n=85, 44%) were more likely to self-identify as BIPOC, and to show markers of marginalization. Fentanyl use was not associated with treatment attrition (aHR = 1.21, 95% CI 0.65 – 2.24). When stratified by fentanyl use, buprenorphine/naloxone was associated with higher risk of treatment attrition among fentanyl users (aHR = 2.27, 95% CI 1.31– 3.93), but not among non-users (aHR ranging from 0.49 to 3.00; all non-significant).

Conclusions: While we did not find evidence that baseline fentanyl use negatively impact retention among individuals with POUD initiating MOUD in Canada, the relative effectiveness of buprenorphine/naloxone and methadone differed by fentanyl use status. This suggests the need to take fentanyl use into account when deciding on the optimal MOUD for this population.

Learning goals:
- Identify key differences between fentanyl users and non-users among individuals with POUD in Canada
- Describe the impact of fentanyl use on retention in treatment, and potential differential impacts on buprenorphine and methadone
- Provide an example of why identifying fentanyl exposure is important to assist in the selection of treatment for people with POUD
OPTIMA: Comparing Flexible Buprenorphine/Naloxone with methadone to Reduce Opioid Use in People with Prescription-Type Opioid Use Disorder: A Randomized Controlled trial

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Background: Exposure to prescription-type opioids has resulted in major harm in North America, requiring more flexible approaches to opioid agonist therapy (OAT). Although methadone has long been the standard of care for the treatment of opioid use disorder in Canada, the superior safety profile of buprenorphine/naloxone (BUP/NX) supports its use as a first-line therapy for opioid use disorder. OPTIMA is the first national clinical trial conducted by the Canadian Research Initiative in Substance Misuse, testing whether a BUP/NX flexible model of care with early take-home doses was non-inferior to a standard closely supervised methadone dosing regimen under realistic treatment conditions among prescription-type opioid users with opioid use disorder (POUD). We compared BUP/NX with methadone in regards to opioid use, retention, safety and other key clinical outcomes.

Study Design: Multicenter pragmatic open-label two-arm non-inferiority randomized controlled trial conducted between October 2, 2017 and July 29, 2020 in seven (7) Canadian hospitals and community-based clinics.

Interventions: 24-week treatment with oral BUP/NX or methadone. Main outcomes: Opioid use, retention, quality of life and safety. Additional models will be used to assess whether exposure to Fentanyl is associated with outcomes. A cost-effectiveness analysis will also be conducted.

Results: Data on the comparison between BUP/NX and methadone on the primary (opioid use) and other key outcomes (retention, safety, quality of life) will be presented, as well as results from models looking at the effect of Fentanyl on outcomes and the cost-effectiveness analysis.

Conclusion: This symposium will provide critical data on the use of two different models of care for POUD in real-world clinical settings in Canada.

Learning Objectives: by the end of this session participants will be able to:
1. Appraise the current state of evidence on the use of OAT for prescription-type opioid users with opioid use disorder (POUD)
2. Synthesize the OPTIMA trial’s methods and key findings
3. Contrast the cost-effectiveness of two different models of care for POUD
4. Summarize critical gaps in knowledge pertaining to best practices to address the needs of individuals with POUD
Opioid agonist therapy uptake and retention at a low-barrier OAT/primary care clinic in Vancouver’s Downtown Eastside: the dual public health emergency experience

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Established in 2017, Connections is a unique community opioid agonist therapy (OAT) clinic located in Vancouver’s Downtown Eastside. Its mandate is to provide OAT and primary care for patients currently unconnected to care, with a goal time from intake to OAT access of 120 minutes or less. Services are tailored to reduce barriers for marginalized populations with a goal of improved experience and retention in care. The clinic consists of an interdisciplinary health-care team who provide on-site pharmacy services, wound care, phlebotomy, as well as financial and housing assistance. Peer support workers with lived experience provide in-clinic support and outreach services. Modelled as a drop-in type centre, food, computer, and telephone access are also provided to clinic patients.

Designed as a first step to engage otherwise unattached clients, Connections aims to provide a bridge to permanent community health centres. In particular, HIV positive and pregnant patients are urgently supported to connect with community partners. Many patients use Connections to transition into both detoxification and treatment options.

Connections also offers EMS drop off for post-overdose monitoring and support, as well as bridging OAT services for those who temporarily cannot access their regular provider or are recently arrived to the community.

In 2020, Connections began navigating new COVID-19 pandemic restrictions while attempting to maintain high quality clinical services. Adaptations included the prescribing of pharmaceutical alternatives for withdrawal management and risk mitigation, aiming to reduce the patient’s risk of exposure to COVID-19 and the toxic street drug supply. While we worked hard to maintain access and high quality OAT/primary care, we recognize that some patients may have been dissatisfied, further marginalized, and negatively affected.

Learning Objectives: by the end of this presentation participants will be able to:
1. Discuss specific clinic practices that are effective at maintaining OAT retention and uptake.
2. Identify the importance of primary care (including infectious disease screening) in conjunction with OAT access for marginalized populations.
3. Reflect on the successes and failures of strategies implemented to maintain high quality care in the context of dual public health pandemics.
The United States' view of addiction has long been Janus-faced, conflicted regarding both addiction's origins and its solution. No wonder, as the initial step in addiction is generally volitional, the first dose or the first drink. Even colleagues in medicine are inclined to view those with this illness class with hostility, at best with ambivalence, but unreliably with sympathy.

The association between the illness of addiction and antisocial behavior carries a high likelihood of entry into the criminal justice apparatus. In this country, that comorbid population is in the millions. However, unfortunately, in the conflict over accountability versus treatment, there is a missed opportunity, one of having someone’s undivided attention in the cooperative management of an illness. Overlooked is an unequaled level of observation and control. For centuries the nihilism associated with addiction’s outcome has resulted in, at best, isolation away from their fellow man; or neglect, abuse, and exploitation. That nihilism has been only partially dissipated by the availability of medications, which attenuate withdrawal from the substances and improve the prospect of remission, as access to those medications has been thwarted. The obstacles to diagnosis and treatment are not limited to those incarcerated. They are seen in civil settings, e.g., in personal injury, custody and divorce cases, and in quasi-judicial settings such as hospital privileging and state licensing hearings. Of particular interest to this audience, this last ties to the efficacy of treatment and the safe return of health professionals to service.

In this presentation, four expert addiction colleagues will describe the current state of the law as it applies to treatment options for those with substance use disorders and identify where we can recapture those opportunities. One panelist will construct a strawman, our token person with addiction (PWA), to serve as a case basis for discussion.

Learning Objectives: by the end of this session participants will be able to:
1. Contrast American addiction management in penal settings with those commonly employed internationally.
2. Recognize and be able to apply to their own settings the current practices and successful management of those under criminal confinement.
3. Examine 3 “choke points” (impediments) in the management of the offender in his or her transit through representative correctional settings
4. Describe at least one example of impending legislative reform
5. Have the opportunity to query the panelists as to their most effective methods for engaging community collaborators in this shared mission.
Using eye tracking to investigate visual perception in drug-exposed children

Presenter: Dr. Carolien Konijnenberg
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Objective. When investigating the effects of prenatal drug exposure, studies commonly use global tests of development, such as the Bayley Scales of Infant and Toddler Development (BSID) or Wechsler Intelligence Scale for Children (WISC). While these global measures can be useful, they may not always be sensitive enough to detect the subtle cognitive changes that may result from prenatal exposure to opioids such as methadone or buprenorphine. Consequently, there is a need for more studies investigating specific developmental functions known to be particularly vulnerable to the effects of early insults including visual processing, processing speed, executive functions and memory.

Methods. In this prospective longitudinal study, a cohort of children was followed-up since birth and throughout the first 10 years of life. In addition to measuring general development, children were tested using other, more sensitive measures including eye tracking, EEG, and neurodevelopmental tests sensitive to memory and executive dysfunction.

Results. Children prenatally exposed to methadone or buprenorphine and cigarette smoking were found to track objects more slowly compared to non-exposed children, p = .02, which predicted children’s performance on a visuomotor task, R² = 0.37. The OMT group made fewer proactive goal-directed eye compared to the control group, F(1,28) = 7.53, p = .01, η² = 0.21. At the 10 year follow up, children in the OMT group had an atypical ERP response related to perceptual and attention allocation processes. The OMT group was also found to score significantly lower on tests of verbal and nonverbal memory tasks, even after controlling for general IQ.

Conclusion. Findings suggest that children born to women in OMT may have specific difficulties relating to visual processing, attention, and memory. It is suggested that future studies should include sensitive measures of cognitive function in addition to tests of global development when studying the effects of prenatal drug exposure.

Learning Objectives: By the end of this presentation participants will be able to:
Role of technology for addiction medicine training in the post-COVID-19 world

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The Covid-19 pandemic has exposed limitations to traditional training in addiction medicine. Although there was significant disruption to live teaching, such as on the wards and outpatient setting, it has also been viewed as a catalyst for change. Virtual training programs, clinical rounds and assessment training for addiction medicine have rapidly expanded peri- and post-pandemic. In low-income countries, lack of trained addiction medicine faculty and standardized addiction curriculum within institutions, fewer limitations ensued. Lack of clinical caseload in the developed world is no longer a limitation as the application of telemedicine ensured case consultation, discussion possible. The application of technology to improve training and remote learning made it more accessible and convenient, not only in lower resource settings, but in hard-to-reach populations. This presentation will demonstrate how extensive use of technology can lead to a scaling up and standardization of addiction medicine training programs, thus improving patient care and reducing disease burden.

Learning Objectives: by the end of this session participants will be able to:

1. Discuss the application of telemedicine for improving addiction medicine training
Ophthalmic Outcomes in Children exposed to Opioid Maintenance Treatment in Utero

Presenter: Ms. Zeynab Hemmati  
Medical Student, University of Manchester, England  
Email: zeynabhem@gmail.com

Opioid use disorder is a significant global issue, and as the rates of opioid use in women of child bearing age and pregnant women increase, it is crucial that the adverse neonatal outcomes of prenatal exposure are investigated. Whilst the general health, cognitive, and neurodevelopmental outcomes have been studied in this population, prospective, controlled, longitudinal research into the ophthalmic outcomes of in utero opioid exposure is lacking. The research that has been done provides reasons to believe that there is an association between prenatal exposure and future risk of abnormalities in visual functioning. This systematic review collated and qualitatively analysed the studies that have measured eye abnormalities in infants or children exposed to opioid maintenance therapy in utero and compared them to non-opioid exposed controls. After considering the clinical findings, the limitations of the studies, and the confounding factors, a causal relationship between in utero opioid exposure and future eye abnormalities could not be confirmed. The implications of the findings and their clinical relevance, in addition to identified gaps for future research are discussed in this review.

Learning Objectives: By the end of this presentation participants ill be able to:

- Discuss the relationship between prenatal opioid exposure and ophthalmic consequences on the newborn.
- Describe the need for further investigation of this relationship and prediction of outcomes
Are short term alcohol biomarkers sensitive in detecting alcohol use in heavy drinkers?

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Objective: Ethyl glucuronide (EtG) and fatty acid ethyl esters (FAEEs) are direct metabolite of alcohol formed in trace amounts in the body after alcohol consumption. Compared with breath ethanol, they remain in the body for a prolonged time. This study compared the performance of breath ethanol, EtG and FAEEs in heavy drinkers.

Method: Using cross-sectional study design, one hundred and twenty-two individuals with alcohol dependence syndrome (diagnosed as per International Classification of Diseases, Version-10) with last alcohol consumption within 24 hours were recruited after their consent. The subjective information included: socio-demographic details, alcohol use details in last 24 hours. Breathalyser was done on spot. Blood and urine were collected to examine the presence of urinary EtG and serum FAEEs in all the participants by gas chromatography–mass spectrometry. Result: Breath test was positive for 90% of the participants. All participants showed raised levels of urinary EtG (>100ng/ml) and FAEEs (>72 nmol/L). The obtained values were correlated with alcohol consumed (grams). Mean age of the participants was 37.7 (7.6) years. All participants used alcohol daily, locally brewed liquor being the preferred beverage (56%). Among them, 66% of the individuals were heavy episodic drinkers. Mean quantity of alcohol consumed within 24 hours was 103.13 (47.21) grams per person. A good receiver operating curve (ROC) was obtained for both EtG (98% at 95% CI: 0.95,1.0) and FAEEs (92% at 95% CI: 0.94,1.0) to distinguish heavy drinkers from non-heavy drinkers. A sensitivity of 95% and a specificity of 90% was obtained for EtG. Similarly, a sensitivity of 92% and a specificity of 90% was obtained for FAEEs. Conclusion: Urinary EtG and serum FAEEs showed optimum diagnostic performance in detecting alcohol intake in heavy drinkers in the previous 24 hours.

Learning Objectives: By the end of this presentation participants will be able to:

1. Identify the role of newer biomarkers in monitoring individuals with alcohol dependence syndrome.
2. Describe the significance of direct biomarkers in detecting heavy drinkers.
Smoking heroin versus injecting heroin: unexpected impact on treatment outcomes

Presenter: Dr. Nirvana Morgan  
Clinical Researcher, NECPAM  
Email: nirvana.morgan0@gmail.com

Background: In several countries, especially in Africa, the dominant method of heroin intake is smoking a joint of cannabis laced with heroin. There is no data exploring the impact of smoking heroin with cannabis on treatment outcomes.

Aim: To compare treatment outcomes between people who inject heroin and people who smoke heroin with cannabis.

Methodology: Three hundred heroin users were assessed on admission to inpatient rehabilitation and after treatment. We compared drug use, psychopathology, criminality, social functioning and general health between heroin injectors and heroin-cannabis smokers at treatment entry, and at 3 and 9 months after rehabilitation.

Results: The sample comprised 211 (70.3%) heroin-cannabis smokers and 89 (29.7%) heroin injectors. Eighty-four percent were followed up at 3 months and 75% at 9 months. At 9 months, heroin-cannabis smokers had a higher proportion of those who relapsed to heroin use compared with intravenous (IV) users (p = 0.036). The median number of heroin use episodes per day was lower for IV users than heroin-cannabis smokers at both follow-up points (p = 0.013 and 0.0019). A higher proportion of IV users was HIV positive (p = 0.002). There were no significant differences in psychopathology, general health, criminality and social functioning between IV users and heroin-cannabis smokers at all three time points.

Conclusions: Heroin users who do not inject drugs but use other routes of administration may have increased risk for relapse to heroin use after inpatient rehabilitation and should therefore have equal access to harm reduction treatment services. Advocating a transition from injecting to smoking heroin in an African context may pose unique challenges.

Learning Objectives: by the end of this presentation participants will be able to:

- Discuss the method of heroin consumption namely, smoking heroin in combination with cannabis.
- Describe the treatment outcomes of heroin-cannabis smokers and compare them to heroin injectors in South Africa.
Fresh perspectives in Addiction Medicine: original research by NECPAM members

Organized by: Dr. Nirvana Morgan

Presenters:

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Prof. Arnt Schellekens  Email: arnt.schellekens@radboudumc.nl

This symposium, hosted by the global Network of Early Career Professionals working in the area of Addiction Medicine (NECPAM) will present results of latest research conducted by members of NECPAM. The symposium draws together inspiring original research conducted by early career professionals. The objectives are to share new scientific insights into harm reduction strategies among special population groups and share new epidemiological data regarding the impact of the COVID-19 pandemic in high-risk population groups.

Dr Nirvana Morgan conducted the first prospective study of heroin users in Johannesburg, South Africa. This study provides surprising insights into smoking heroin with cannabis, a prevalent yet previously unstudied method of heroin consumption. The presentation will explore whether heroin smokers have the same need for opioid substitution as heroin injectors.

While the world is slowly accepting opioid substitution therapy as effective treatment for opioid use disorders, the big question of maintenance treatment for stimulant use disorder is still unanswered. Dr Tarun Yadav from Australia will share results of a unique case serious of Dexamphetamine Substitution therapy for severe stimulant use disorder.

During the time of COVID-19 state-imposed lock-down, Dr Paolo Grandinetti timeously conducted a survey exploring stress and maladaptive coping strategies of Italian health care professionals during the first wave of the pandemic. This study focuses on changes in alcohol and tobacco use as well as internet use and online gambling during the period of lock-down in Italy.

During the COVID-19 pandemic, another ongoing public health issue raised concerns: the ongoing prescription opioid epidemic. Outside of the United States there are less data available on the prescription opioid situation. Such information is key for preventing further escalation of prescription opioid use. Dr Arnt Schellekens will share recent epidemiological data on prescription opioid use in Europe and the Netherlands, as well as data on buprenorphine substitution treatment in patients with chronic non cancer pain and prescription opioid use disorder.

Learning Objectives: By the end of this session participants will be able to:

- Make informed decisions about substitution therapies in special population groups.
- Describe the impact of the COVID 19 pandemic on licit substance use, internet use and online gambling among Italian health care professionals.
Artificial intelligence and application of machine learning in treatment of addictive disorders

Presenter: Dr. Venkata Lakshmi Narashmi
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Artificial intelligence (AI) is technology patterned after the brain’s neural networks and uses multiple layers of information including algorithms, pattern matching, rules, deep learning and cognitive computing to learn how to understand data. AI enabled tools are being used in the various fields of medicine, and have potential to be used in addiction medicine. Predicting risk of relapse, monitoring the treatment, clinical assessment using ecological momentary assessments and digital phenotyping. Ecological momentary assessments use smartphone-based evaluation of symptoms from day to day in the patients’ usual environment, free from recall biases. The use of virtual reality in the treatment of SUDs involving exposure to the stimulus that induces craving, either via situational cues (social environment) or via the implementation of alcohol-based cues, allow patients’ coping skills to be tested in real time. These can be a game changer for addiction medicine treatment. The presentation gives an overview of recently published literature on web-based interventions, machine learning, computerized adaptive testing, wearable devices and digital phenotyping, ecological momentary assessment, biofeedback, and virtual reality in the treatment of addiction medicine using AI technology.

Learning Objectives: by the end of this presentation participants will be able to:

1. Describe the Role of AI technology for the treatment of addictive disorders
Advances in addiction neuroscience: Clinical implications and opportunities for research

Presenter: Ms. Parnian Rafei  
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Neuroscience has produced significant advances in understanding the fundamental process of addiction. However, the utilization in day to day clinical practice is limited. Assessments of substance use disorders by cognitive assessment and neuroimaging, and treatment using interventions of cognitive training/remediation and neuromodulation are the key focus areas of recent development in the field. While incorporating cognitive assessment into clinical settings requires the identification of constructs that predict meaningful clinical outcomes. Other requirements are the development of measures that are easily-administered, reliable, and ecologically-valid. Translation of neuroimaging techniques requires the development of diagnostic and prognostic biomarkers and testing the cost-effectiveness of these biomarkers in individualized prediction algorithms for relapse prevention and treatment selection. Integration of cognitive assessments with neuroimaging can provide multilevel targets including neural, cognitive, and behavioural outcomes for neuroscience-informed interventions. The presentation covers the need to study emerging areas of neuroscience research as a part of addiction medicine training curriculum and the role of the mentorship programme for early-career addiction medicine professionals. It will also cover recent advances in developing novel neuroscience-based pharmacological treatments for substance use disorders.

Learning Objectives: by the end of this presentation participants will be able to:

1. Discuss recent advances in neurosciences
2. Identify research opportunities for early career addiction medicine professionals.
Nosology of substance use disorders: ICD-11 and beyond

Presenter: Dr. Jiang Long
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The 11th revision of the International Classification of Diseases (ICD-11) released by WHO has revived the debate regarding nosological issues in substance use and addictive disorders, which remain unanswered despite successive editions of DSM and ICD classification systems in the past. Although the major changes in the current edition are based on epidemiological data and neurobiological basis of the substance use disorders, connection between behavioural function and psychological/biological basis is yet to be established for most conditions. Proposed alcohol and addiction research domain criteria (AARDoC) which defines biologically informed framework for understanding mental disorders, Hierarchical Taxonomy of Psychopathology (HiTOP) taxonomy which is based on dimensional assessments of psychopathology may revolutionize nosology and precision medicine in addiction medicine. The presentation covers the current status and future directions of nosology of substance use disorders.

Learning Objectives: by the end of this presentation participants will be able to:

1. Discuss future directions of nosology of addictive disorders
Future of Addiction Medicine: perspectives from early career addiction medicine professionals

Overview
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Presenters:
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Addiction medicine is a relatively developing field of medicine with many young, enthusiastic professionals opting for a career in this field. There has been rapid evolution in different domains of clinical care, training and research in the field seen in recent times. The present symposium will cover recent developments in the domains of clinical care, research & training of addiction medicine from the perspective of early-career professionals.

Learning Objectives: by the end of this presentation participants will be able to:

- Discuss new developments in the field of addiction medicine perspective from early-career addiction medicine professionals
Telemedicine Versus Face to Face Consultations for Opioid Dependence Treatment

Presenter: Dr. Soraya Mayett
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Objective
Opioid dependence is high risk. Medication assisted treatment with methadone or buprenorphine combined with psychosocial interventions improves outcomes and reduces deaths. Nonattendance at addiction specialist prescriber appointments worsens outcomes as medication cannot be safely monitored or optimised. Telemedicine has been shown to improve attendance with limited evidence in addictions. This trial aimed to assess feasibility for a larger trial assessing attendance, travel, clinical outcomes and satisfaction.

Methods
Adults with opioid dependence prescribed methadone or buprenorphine attending addictions outreach clinics within a United Kingdom large semi-rural community addiction service were recruited to the feasibility randomised controlled trial of Telemedicine versus Face-to-Face addiction prescriber consultations. Patients were offered two appointments in group. Follow-up research interviews conducted with patients and staff. Analysis undertaken by SPSS (26).

Results
Fifty-nine opioid dependent patients randomised to Telemedicine (n=29) and Face-to-Face (n=30) consultations. Attendance 76.7% for Face-to-Face vs 72.4% for Telemedicine (first consultation). Attendance at second consultation lower overall as eighteen of 118 consultations not conducted (COVID-19). One-way travel reduced with Telemedicine by 6.3km (first consultation) and 8km (second consultation). Clinical outcomes including substance use (urine tests and self-report) remained stable between the groups. At follow up we had high patient retention in both arms and patient (n=58) and staff (n=19) participants reported similar levels of satisfaction for Telemedicine versus Face-to-Face.

Conclusions
Patients and staff found Telemedicine satisfactory, with similar attendance rates, clinical outcomes and reduced travel. This is important given COVID-19 changes where telemedicine has been started and will be important to reduce transmission. Our study shows a large scale RCT is feasible. Limitations include COVID19 impact, severity of dependence higher and lack of diversity of recruited population.

Learning Objectives: by the end of this presentation participants will be able to:

Examine if Telemedicine versus Face-to-Face consultations reduced travel, was acceptable to patients and staff and affected clinical outcomes.
Ireland’s first Medically supervised injecting Centre - NIMBY or lack of political will?

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Dublin City has a longstanding urban heroin injecting problem, the sequelae of which are a major contributor to the country's high incidence of drug related deaths. Following a media campaign by the then Minister for Drug Strategy, Aodhán Ó Riordain (Labour Party) and Ana Liffey (a non-profit harm reduction service established in 1982) the issue of street injecting and its harms was highlighted. This campaign culminated in the passing of legislation in 2017 to pave the way for Ireland's first medically supervised injecting centre (MSIC) to be opened. There are approximately a hundred Medically supervised injecting centres worldwide in countries such as Germany, Denmark, Australia, Canada, Switzerland, Luxembourg and Spain and research has shown that MSIC can reach highly marginalised target populations resulting in significant and immediate improvements in hygiene and safer injecting drug use and other wider health and public order benefits.

Despite the legislation being passed over four and a half years ago and the location of the centre chosen after a tendering process the MSIC has not opened. This presentation examines the barriers that have impeded the implementation of this service as well as the wider evidence base behind supervised injecting centres internationally.

Learning Objectives: by the end of this presentation participants will be able to:

- Describe the barriers encountered in implementing an urban harm reduction service such as a medically supervised injecting centre
- Outline research evidence for medically supervised injecting centres internationally
Aim: To describe the technologies available in Scotland and internationally for the timely detection of drug overdoses and alert to first responders, and for increasing their capacity to quickly respond to a drug overdose.

Methods: A systematic search of the scientific literature and a search grey literature was conducted. Devices were classified according to country, vital signs they measure, mechanism of response, current status of operation and others.

Results: We have identified and selected a total of 22 detection devices. We identified 15 devices that are specifically designed to respond to drug overdoses or are being or were recently adapted for this purpose. 7 devices and 3 “types of generic devices” that are available from a large number of companies.

Phone applications were classified into two groups 1) information apps which provide information about overdose avoidance (10 apps) and 2) responder or peer support apps which helps recovery from overdose situation (5 apps).

Some detection and responder support devices have potential for implementation in the Scottish context. For detection devices, three main types of devices could be implemented in parallel: fixed room-based, mobile wearable, and supervised consumption lines/apps. Many of the applications have potential for adaptation and implementation into the Scottish context.

Learning Objectives: by the end of this presentation participant will be able to:

- Discuss what technologies exist to alert and respond to drug overdoses
- Describe the characteristics and mechanisms to detect and alert of drug overdoses and to provide a timely response
Behavioral problems and health benefits of daily life habits: focusing on physical exercises during COVID-19 pandemic

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Objective: The aim of the presentation is to introduce: (1) a functional MRI (fMRI) study that suggests possible cognitive benefits of physical exercises in motivation network (MN) system and (2) a questionnaire survey about the relationship between excessive exercise and supplement use as an enhancement in differential sports discipline.

Methods: Study (1) is an fMRI study during resting state and during attentional paradigm, focusing on the neural network connectivity of MN in 14 martial art Kendo players and 11 non-kendo players. In Study (2), we investigate the difference of tendency of excessive exercise assessed by Exercise Addiction Inventory (EAI) and the usage of image and performance-enhancing drug (IPED) across 12 disciplines, as an international online questionnaire survey among 8 countries through the large sample (N= 2,295).

Results: In Study (1), lower functional connectivity (FC) of MN was found in Kendo players during resting state, whereas a higher FC of MN was observed during the task, indicating resting versus attentionally driven contrast of motivation function. In Study (2), those who were involved in practicing Weight Lifting and CrossFit were found to be more at risk of excessive exercise and more inclined to use a wide range of IPED. Conversely, a discipline with low EAI, Walking, was significantly associated with a lower rate of IPED use. These results indicate that excessive exercise is associated with the risk of cross-addiction with substance intake, particularly in disciplines that demand high-intensity functional training.

Conclusions: Although habitual exercises would be cognitive-mental health benefits, it would depend on the intensity/level of the training. Too much training would potentially lead to addictive behavioral problems and related substance overuse as an excessive enhancement. These results might allow for the discovery of tailor-made ways to address the adequate and risky level of exercises in each sport discipline.

Learning Objectives: by the end of this presentation participants will be able to:

- Discuss possible neurocognitive and mental health benefits of physical exercises
- Describe the risk of exercises as addictive behaviour and related overuse of supplements as an excessive as a cross-addiction manner
DrinkCoach – a digital alcohol identification and brief advice intervention

Presenter: Mr. Dylan Kerr  
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Alcohol misuse causes significant health harms, including early mortality, increased healthcare and wider governmental costs. Identification and Brief Advice (IBA) interventions can reduce alcohol consumption, prevent alcohol use disorder progression, and is cheaper to deliver digitally than in-person. However, there is a lack of high-quality evidence for delivering IBA interventions, at scale, via publicly available websites.

Objective
This presentation will explain how DrinkCoach was developed as an IBA intervention delivering website and present original research using descriptive data captured over a six-year period from over 800,000 user sessions. DrinkCoach delivers IBA interventions tailored to users’ Alcohol Use Disorders Identification Test (AUDIT) scores.

Method
Researchers employed descriptive statistics, double-tailed Z tests and X2 tests for relationships between variables.

Results
In 2018, approximately 60,000 IBA interventions were completed, with 86% of these recording AUDIT scores greater than 7, indicating risky drinking. Significant positive relationships were identified between the AUDIT score and users’ demographics such as gender and age-range, the time of day the interventions were delivered, and the follow-up options selected. The website attracted a disproportionately higher proportion of risky drinkers completing IBA interventions compared with prevalence estimates or identified through in-person IBA approaches in the United Kingdom.

Conclusion
Results indicates that IBA websites may support help-seeking behaviour for risky drinkers by providing anonymity and low interaction costs. Also DrinkCoach has demonstrated a significant cost-benefit at scale when compared to in-person IBA interventions, particularly where local authorities commissioned it. This cost-benefit should inform alcohol health funding decisions and warrant further, higher-quality research into outcomes from IBA websites.

Learning Objectives: by the end of this presentation participants will be able to:

- Discuss the journey developing a digital alcohol intervention from concept
- Recognize the impact such an intervention can have on a population as compared to in-person approaches
Implications of COVID-19 and lockdown on Internet Addiction among Adolescents: Data from a developing country

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Objective: Limited social interaction due to lockdown during the COVID-19 pandemic which required adolescents to spend most of their time at home leads to increased internet use duration, loneliness, and risk of mental health problems. This study aimed to assess the prevalence of Internet Addiction (IA) among adolescents and analyze the influence of psychosocial factors toward the heightened risk of IA during the pandemic.

Methods: A total of 2,932 adolescents (mean age, 17.38 ± 2.24 years old; female, 78.7%), originating from 33 of 34 provinces in Indonesia had completed an online survey of a sociodemographic questionnaire, Internet Addiction Diagnostic Questionnaire (KDAI), Strengths and Difficulties Questionnaire (SDQ), and Pittsburgh Sleep Quality Index (PSQI).

Results: The prevalence of IA among Indonesian adolescents during the COVID-19 pandemic was 19.3%. Increased internet use duration, internalization, externalization, low prosocial behavior, and sleep disturbances were found as risk factors of IA, either directly or as mediating variables. Physical distancing, large-scale social restriction, and health status were not correlated to IA.

Conclusions: The prevalence of Internet Addiction among Indonesian adolescents is higher than the adult during the COVID-19 pandemic. Several psychological measures were indicated to increase the risk of IA, while physical distancing did not elevate the risk. Therefore, remote schooling can be implemented in Indonesia with proper parental supervision to prevent excess Internet use for entertainment purposes.

Learning Objectives: By the end of this presentation participants will be able to:

- Describe Internet Addiction (IA) prevalence among adolescents due to lockdown during the COVID-19 pandemic
- Discuss the influence of psychosocial factors towards the increased risk of IA during the COVID-19 pandemic.
The implementation of online psychotherapy during pandemic: DBT skill training for behavioural addiction

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Objective: The aim of the presentation is to introduce dialectical behavioral therapy (DBT), an adaptation from cognitive behavioral therapy (CBT), which is a behavioral therapy that emphasizes mindfulness practice and acceptance-based interventions. DBT can be considered a non-pharmacological treatment option for internet addiction (IA) patients.

Methods: This was a quasi-experimental trial design without matching. The subjects were divided into two groups, the group receiving DBT skill group training intervention and the control group receiving individual psychotherapy of CBT. Each group consists of 7 participants. All participants were then required to complete several questionnaires such as sociodemographic questionnaire, Internet Addiction Test (IAT), Rosenberg Self-Esteem Scale (RSES), Temperament and Character Inventory (TCI), University of Rhode Island Change Assessment (URICA), and Mini International Neuropsychiatric Interview for International Classification of Disease-10 (MINI ICD-10). The intervention group would undergo eight therapy sessions with one week interval, while the control group would undergo four sessions with two weeks interval. An analysis of the results was carried out using the intention to treat analysis method, which was focused on the difference of IAT mean before and after treatment in each group (intervention or control) using an unpaired T-test.

Results: There was a significant reduction of IAT scores and durations of Internet use post-intervention compared to pre-intervention in the experimental and control group. URICA score for the experimental group increased significantly from 7.69±1.72 (pre-intervention) to 9.48±1.05 (post-intervention). There was also a significant increase in URICA score in the control group during post-intervention. However, there was no significant difference comparing the IAT score reduction, durations of internet use, and URICA score between experimental and control.

Conclusions: Online DBT skill group training is as effective as brief CBT in treating patients with internet addiction with improved IAT score, URICA score, and internet use duration during the pandemic situation.

Learning Objectives: by the end of this presentation participants will be able to:
- Describe the definition, structure, and the components contained in DBT
- Discuss The effectiveness of DBT as a non-pharmacological therapy modality in the field of behavioral addiction, especially internet addiction.
Community-based Tele Medication Assisted Treatment (TMAT) for delivery of Methadone Maintenance Treatment (MMT) during COVID-19 pandemic: an Indian experience

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Opioid use disorders are one of the most serious global health problems and are recognized as a public health problem in India. Opioid Agonist Treatment (OAT) is the most effective evidence-based strategy for the management of opioid use disorders. The mobile methadone dispensing model is used in the community for the delivery of OAT. The ongoing COVID-19 pandemic not only provided major impetus but also pushed the use of digital technology as an essential/must-have requirement for community-based treatment of Opioid use disorder. The symposium would share the experience of the NDDTC team in developing and running innovative community-based tele medication-assisted treatment (TMAT) services using Clinical Workflow Automation based digital platform and teleconsultation through Skype & Zoom using basic computer tablet augmented with microphone/headphone. A total of 200 patients availed the methadone maintenance treatment (MMT) services at the time of submission. A qualitative study is underway to get perspective from patients regarding feasibility, utility and effectiveness. The various operational challenges faced and lessons learned would also be discussed while bracing the impact of ongoing COVID-19 pandemic on delivery services. Digital technology not only needs to be adapted but also needs to be refined in order to provide good quality drug treatment services in the post-pandemic world.

Learning Objectives: by the end of this presentation participants will be able to:

- Discuss the application of principles of telemedicine for delivery methadone maintenance treatment in the community
- Identify lessons learned in utilizing digital technology for streamlining community based opioid agonist treatment
Telehealth in addiction medicine in Australia: impact of the digital divide

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Despite the rapid uptake of telemedicine during the coronavirus disease 2019 (COVID-19) pandemic, it is important to identify barriers that hinder the delivery of telehealth modes of care among specific populations. The aim of this study is to share reflections on the challenges of implementing telemedicine in a tertiary specialist statewide addiction medical clinic in Melbourne, Australia.

The study reviewed the uptake of telemedicine over the period March 2020- Feb 2021. Over this period, a range of pandemic-related restrictions were imposed in Melbourne (1), alongside policy changes that enhanced access and continuity to medication-assisted opioid pharmacotherapy treatment (MAT).

We found that uptake of videoconferencing was low, comprising 21% (n = 47) of appointments conducted during lockdown versus 57% (n = 128) via telephone. Difficulties in connecting to the videoconferencing platform, poor audiovisual quality and time spent troubleshooting contributed to the low uptake of videoconferencing.

We found several barriers to telemedicine in our patient cohort. Many patients did not own a computer, had poor digital literacy, could not afford internet access, or did not have privacy for consultations. People accessing specialist addiction treatment are often from sociodemographic groups that are digitally excluded, such as the unemployed and people with low income or with disabilities. Although telemedicine has been a convenient mode of health care delivery for many Australians during the COVID-19 pandemic (2), our experience has been that not all patients benefit from it. Access, affordability, and digital ability issues need to be managed for telemedicine to be a viable option (3).

Learning Objectives: by the end of this presentation participants will be able to:

- Appreciate the impact of digital disadvantage on capacity to engage in telemedicine in addiction medicine and MAT services
Neurocognitive Dysfunctions in individuals with opioid dependence: Does the type of opioid matter?

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Background: Chronic opioid use is associated with generalized cognitive dysfunctions. Little research is done to see whether neurocognitive dysfunctions vary with the type of opioid use.

Aim: To explore the neuropsychological deficits in individuals with opioid dependence and to determine differential effects of natural opioids, heroin, and pharmaceutical opioids in cognitive functions.

Methods: We recruited 126 treatment naïve consecutive patients of either gender, with opioid dependence (OD) from the addiction services. Fifty of these participants were dependent on heroin, 46 on natural, and 30 on pharmaceutical opioids. We enrolled 50 healthy controls (HC). We administered the following neuropsychological tests to assess intelligence (Standard progressive matrices, SPM), executive function (Wisconsin card sorting test, WCST), decision making (Iowa gambling test, IGT), processing speed and attention (Trail making test-A and B, TMT), verbal and visual working memory (N-back tests, NBT).

Results: After controlling for age, years of education and corrections for multiple comparisons, OD group performed worse (than HC) in SPM, WCST and IGT; took higher time completing TMT-A and B; showed poorer performance in verbal and visual 2-back tests. Higher duration of opioid use was associated with poorer performance in WCST, IGT, and TMT. The natural opioids and heroin group performed worse in all parameters of WCST, IGT, and visual 2-BT than the HC. The group with pharmaceutical opioid dependence did poorer than HC in WCST and verbal and visual 2-BT. Only the natural opioid group performed inferior than controls in SPM. Pharmaceutical opioid users performed worse than natural opioid users in verbal and visual NBT and TMT-A. Heroin users did better than pharmaceutical opioid users in TMT-A but did worse than natural opioid users in visual 1-back test. However, these between-group differences lost significance after corrections.

Conclusion: The type of opioid use may influence the extent and pattern of cognitive deficits.

Learning Objectives: by the end of this presentation participants will be able to:  
- Discuss the neurocognitive impairments in individuals with opioid dependence  
- Examine whether the type of opioid use influence the pattern and severity of neuropsychological dysfunctions
Growing cannabis use among youth in Iran – a systemic review, meta-analysis and trend analysis

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Objectives: Cannabis is the leading illicit substance used worldwide. There have been various health-related harms associated with recreational cannabis use, significantly with early use. We aimed to estimate the prevalence and trends of cannabis use among youths in Iran.

Methods: International and Iranian databases were searched up to March 2021. We applied backward citation tracking, contacted experts, and hand-searched our center archives of addiction studies to find all relevant reports and theses. We estimated the overall prevalence of use through random-effects model among sex subgroups of the target populations, including the young general population, university students, high school students, and “combined youth groups”. The trends of various use indicators were assessed among sex subgroups.

Results: Sixty studies were included. The pooled prevalence of last-year cannabis use was 4.9% (95% CI: 3.4-6.7) and 0.3% (95% CI: 0.0-1.3) among males and females of “combined youth groups”, respectively in the 2016-2020 period. The linear trend of last-year cannabis use increased significantly from 2000 to 2020 among males of “combined youth groups” (b=0.05; P=0.035) and female university students (b= 0.005; P=0.02).

Conclusions: Although cannabis use in Iran is lower than in many regions, we found strong evidence of increasing cannabis use in Iranian youths. Cannabis use and associated perceived harms should be monitored. Specific preventive and educational programs are also needed.

Learning Objectives: by the end of this presentation participants will be able to:

- Review the pooled estimate of last year cannabis use which was 5% among male youths and 0.3% among female youths in the latest period in Iran
- Discuss the prevalence of last-year cannabis use increased significantly in male youths and female university students during 2000-2020 in the country
Reaching the hard to reach: global challenges, discussions and ideas to ensure people who use drugs (PWUD) are not left behind in vaccination for COVID-19

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People who use drugs (PWUD) are disproportionately affected by the global burden of disease and it is proposed that COVID-19 will follow this pattern. The 2015 Global Burden of Disease study found that while population health is improving, those who use drugs have not followed this trend. Instead, PWUD have had less uptake of healthcare resulting in more than 20% increase in disability-associated life years (DALYs).

As COVID-19 continues to affect populations around the world, we are now able to understand more about the virus epidemiology. Vulnerable populations including the homeless and PWUD are subject to greater risks and harms as a result of COVID-19. This is caused by barriers in accessing healthcare, poorer health and underlying comorbidities. Those who use drugs are also at a greater risk of transmission due to behaviors associated with drug use. Marginalization and stigmatization are reported as two common reasons for barriers in accessing healthcare for PWUD. We therefore must ensure that we provide PWUD the ability to access vaccination in a safe and accessible way. Harm reduction services should now look at ways to encompass and ensure vaccination as part of its approach, in order to support vulnerable populations from the virus.

PWUD suffering from illness and injury is not a new phenomenon. As such, we are able to take forward lessons learned from years of treatment and care within this population and apply this in a targeted approach to COVID-19 vaccination programmes. Hepatitis C treatment amongst PWUD has fought with adherence issues for many years. This has been overcome by innovative practice which acknowledges the needs of the population. For example, the use of tablets instead of injections for Hep C treatment. By generating a discussion, we hope that we can eliminate barriers and develop innovative solutions, to ensure this hard to reach population is not left behind in mass vaccination campaigns.

Learning Objectives: by the end of this presentation participants will be able to:

- Discuss the barriers people who use drugs may face in regard to accessing COVID-A9 vaccinations
- Review global ideas on how best to reach those who are hard to reach
- Discuss other vaccination programmes in specific global, geographic areas of China, India, and Brazil and discuss how we can apply
Addiction Education & Training for Psychiatry in the CBME Era

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Addiction psychiatry is a critical component of general psychiatric training. In July 2020, Canadian residency training in psychiatry transitioned to Competency by Design (CBD), consisting of 17 Entrustable Professional Activities (EPAs). Current curriculum guidelines for addiction training in psychiatry need to be adapted to the CBD framework to integrate clinical skills in addiction. We conducted a systematic review of the published literature to identify curricular and educational interventions to build competency among psychiatry residents and fellows in addiction psychiatry to better align with the existing CBD framework. Examples of effective educational interventions to enhance addiction competency include specific modules for substance use disorders and integrated clinical rotations that simultaneously combine multiple skills. Lived experience appears to effectively improve trainee attitudes towards the practice of addiction psychiatry and its treatment. Notably, the receipt of training in addiction psychiatry as a resident seems to increase the likelihood that one will continue to practice addiction psychiatry following graduation. Current evidence supports strategies for developing knowledge of addiction content, improved attitudes towards persons with addiction and treatment outcomes, clinical rotations/fellowships design, self-assessment and scholarly development. The six current EPAs in place for psychiatry residency training to address addiction only partly overlap with curriculum training guidelines and studies identified in this review. These EPAs need to be better identified for training programs, competence in those EPAs better delineated for residents and preceptors, and evaluations should be done to ensure that adequate competence in addictions is attained and sustained.

Learning Objectives: by the end of this presentation participants will be able to:

1. Review existing entrustable professional activities (EPAs) for addiction psychiatry
2. Discuss strategies for how to meet the competence using findings from a recent review

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There have been infinite accounts that have ebbed and flowed over centuries to capture the recognition of alcoholism as an illness rather than a matter of moral weakness or lack of self-control and willpower. This paper highlights similarities between alcoholism and the emerging condition of processed food addiction by providing a history on the conceptualisation and treatment of alcoholism advocated by Dr W. D. Silkworth and a vignette of a processed food addict. Dr Silkworth is well-known for his theory of alcoholism as an illness that is underpinned by the experience of a physical allergy coupled with a mental obsession, and the need for a psychic change, which subsequently formed the foundation of Alcoholics Anonymous. Alcoholics Anonymous. Problematic (e.g., excessive, uncontrolled) consumption of processed food is widely considered a cause of many health issues (e.g., diabetes, coronary heart disease, hypertension, gallbladder disease), as well as a key symptom of behavioural and emotional signs and symptoms of disordered eating. For some individuals, processed food misuse or abuse can be managed through conventional or mainstream interventions such as psychotherapy. However, for a small proportion of individuals, the consumption of processed food is or can become an addiction, as is the case for alcoholism. Through this paper, we also introduce the concept of processed food addiction to the wider medical and professional community, focusing on processed food addiction as a disease of the 21st Century that would benefit greatly by following the diagnosis and treatment approach for alcoholism as attested here. Evidently, further investigation and validation is required.

Learning Objectives: by the end of this presentation participants will be able to:

1. Describe the parallel between alcoholism and processed food addiction.
2. Identify processed food addiction as a disease versus processed food abuse.
Impact of alcohol withdrawal training program on knowledge, attitude and perception among healthcare providers in a hospital setting

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Background: Delirium tremens is a life-threatening complication of alcohol withdrawal, which is preventable by prompt recognition and management. This study aimed to evaluate the impact of an alcohol withdrawal training program on knowledge, attitude, and perception among healthcare providers in a hospital setting.

Methods: This was a quasi-experimental study with a pre and post-test design conducted at the Department of Psychological Medicine, University Malaya Medical Center, Malaysia. A total of 36 participants consisted of postgraduate psychiatry trainees who underwent a 60-min online training program whereby pre- and post-training evaluation was done using a locally validated 21-item knowledge, attitude, perception questionnaire on alcohol withdrawal and the Clinical Institute Withdrawal Assessment for Alcohol–Revised (CIWA-Ar) scales.

Results: There was a significant difference between pre- and post-training scores in knowledge, attitude, and perception domains (p < .05). Furthermore, significant difference in pre- and post-training CIWA-Ar scores (p < .05) were detected. Post-training CIWA-Ar score approached the true value and with minimal variation of scores among the participants.

Conclusion: The alcohol withdrawal training program was clinically significant with an effect size of 0.75. It can be utilized to train healthcare providers from various departments treating alcohol withdrawal patients to ensure better standardization of care.

Learning Objectives: by the end of this presentation participants will be able to:

1. Identify early signs of alcohol withdrawal and prevent progression to delirium tremens
2. Display knowledge and skills of administering the CIWA-Ar scale
The association between markers of vulnerability to cannabis-related harms and source of supply: results from a cross-sectional survey in Quebec, Canada

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Introduction:  
In 2018, Canada legalized the recreational use of cannabis to reorient consumers to a new legal market. In Quebec, “the Société Québécoise du Cannabis” (SQDC) was created to manage cannabis sales with a focus on public health protection by offering controlled product, reaching a growing number of consumers. However, a significant proportion of them still purchase cannabis from other sources. It remains unknown how the cannabis supply source of consumers affects their vulnerability profile to cannabis-related harms.

Objectives:  
To compare the vulnerability profile of consumers buying their cannabis from the SQDC with those getting their cannabis elsewhere.

Methods:  
We used data from a cross-sectional, representative population survey (>18 years, n=1834), the Enquête Québécoise sur le Cannabis, which was completed between February and June 2019. We used adjusted binary logistic regressions, incorporating population weights, to assess seven indicators of vulnerability related to the risk of cannabis harms.

Results:  
The profile of vulnerability of SQDC users (47.8%) and those purchasing their cannabis elsewhere (52.2%) was similar in terms of mental health distress (Adjusted odd ratio (AOR)= .99; CI=0.26-3.79), drug-impaired driving behaviors (AOR=0.93; CI=0.26-3.36), co-consumption of other substances (AOR=0.80; CI=.14-.75), risk of problematic cannabis use (AOR=.46; CI=.13-1.64), use to cope (OR=.62; CI=.16-2.46) and frequency of cannabis use (AOR=.46; CI=.12-1.67). However, SQDC users were more likely to be aware of the cannabinoid content of the product purchased compared to other users (AOR=4.12; CI=1.10-15.40).

Conclusion:  
Vulnerability profiles to cannabis related harms appeared similar between consumers purchasing at the SQDC and those purchasing elsewhere, but SQDC consumers were more aware of the cannabinoid content of the products purchased. Whether this knowledge translates into a reduction in the negative consequences related to consumption is still to be determined. Overall, this can also suggest that at-risk cannabis users are reached by the legal cannabis supply source in Quebec.

Learning Objectives: by the end of this presentation participants will be able to:

1. Review the core indicators associated with cannabis-related risk/harm outcomes – based on current best evidence in context of the legislation of recreational cannabis use  
2. Describe the association between the sources of supply of cannabis and vulnerability indicators for cannabis-related harms
A tale of two Wernicke’s: how this common presentation is still missed in ‘atypical’ patients

Presenter: Dr. Kelly Ridley
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Objective: Wernicke’s encephalopathy is a commonly missed presentation, especially in patients not fitting the ‘usual’ demographics of an alcohol dependent older male. Missing the diagnosis can have devastating consequences for patients in the short and long term.

Methods: Here we compare two case studies, a 23 year old man and a 94 year old woman, presenting to the same hospital, in the same month, both with initially undetected Wernicke’s encephalopathy.

Results: In both cases the classic triad of symptoms was present, but not examined for in preference of other diagnoses. Once Wernicke’s was considered both were treated successfully.

These cases highlight the need for education around the need to routinely examine for Wernicke’s encephalopathy, to provide parenteral thiamine for those at risk and consider the possibility of thiamine related illnesses at any age.

Learning Objectives: by the end of this presentation participants will be able to:

1. Recognize clues for the diagnosis of Wernicke’s encephalopathy in ‘atypical’ patients
2. Recognize the importance of educating staff at all levels in recognizing and treating thiamine related illnesses
The association between Methadone dosage and fracture risk in Taiwan

Presenter: Dr. Wenyu Hsu
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Objective: Our previous study confirms the associations between opioid use disorder and fracture risk or opioid use disorder and osteoporosis in Taiwan. There are some studies showed the association between opioid use disorder and osteoporosis. Methadone, a kind of medication for maintenance treatment in patients with opioid use disorder, might have associations with osteoporosis or risk of fracture in some studies. However, there is no study to investigate the association between methadone dosage and fracture in patients with opioid use disorder. This study purpose is to investigate the association between methadone dosage and fracture risk in patients with opioid use disorder.

Methods: A retrospective cohort analysis was performed using Taiwan Illicit Drug Issue Database (TIDID) and National Health Insurance Research Database (NHIRD) during 2012-2016. We included 1,402 and 18,106 MMT patients as the fracture and non-fracture groups according to the medical record of NHIRD, respectively. The risk of fracture was calculated by Cox proportional hazards regression model with time-dependent exposure to MMT.

Results: Elderly, male, higher maximum dosage of methadone, hypertension, hyperlipidemia, stroke, alcohol-related illness, osteoporosis, and end-stage renal disease are significant higher in fracture group than in non-fracture group. After adjusting for age, sex, marital status, education, maximum dose, and comorbidities, male patients had a higher risk of fracture (hazard ratio =1.28) than female patients. Patients with maximum dosage of methadone more than 90 mg daily and 65-89 mg daily had a higher risk of fracture (hazard ratio =1.28; hazard ratio =1.19) than patients with maximum dosage of methadone less than 45 mg daily. Patients with hypertension had a higher risk of fracture (hazard ratio =1.19) than patients without hypertension. Patients with stroke had a higher risk of fracture (hazard ratio =1.60) than patients without stroke. Patients with alcohol-related illness had a higher risk of fracture (hazard ratio =1.67) than patients without alcohol-related illness. Patients with osteoporosis had a higher risk of fracture (hazard ratio =5.59) than patients without osteoporosis.

Conclusion: Patients with higher maximum daily dosage of methadone had a higher risk of fracture than patients with lower daily dosage. There is an association between methadone dosage and fracture risk in patients with opioid use disorder.

Learning Objectives: by the end of this presentation participants will be able to:

1. Review the association between methadone dosage and fracture risk in patients with opioid use disorder
2. Describe the need to screen for osteoporosis regularly in a methadone clinic
Rule-based algorithmic approach to classify Primary Care Electronic Health records of alcohol consumption in Scotland

Presenter: Dr. Amaya Azcoaga Lorenzo
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Objectives
1. Classify the UK Biobank cohort participants in Scotland with available Primary Care data into discrete alcohol consumption categories as follows:
   • Non-drinker
   • Sensible drinkers (1-14 units/week)
   • Moderate drinkers (15-21 units/week)
   • Hazardous drinkers (22-35 units/week)
   • Harmful drinkers (> 35 units/week).
2. Combine the Primary Care codes (Read codes) on alcohol consumption recorded within 5 years of the UKB assessment to develop a classification algorithm to match the above-mentioned categories.
3. Calculate the agreement between the results of the algorithm and data from the UKB and evaluate if it improves by restricting the algorithm to use different types of Read Codes and by limiting the period between assessments.

Methods: To achieve this we created a rule-based multiclass, classification algorithm to classify Scottish UKB participants and compare it with their classification using primary care data (based on Read codes). We evaluated agreement metrics (Simple agreement and Kappa statistic) as well as experimented with different approaches for classification (temporal limitation and using quantitative and qualitative descriptors only).

Results: Among the Scottish UKB participants, 18,838 (69%) had at least one Read Code related to alcohol consumption and were used in the classification. The agreement between UKB and Primary Care data, including assessments within 5 years was 59.6%, and kappa was $k = 0.23$ (95%CI 0.21-0.24). Differences in classification between the two sources were statistically significant ($p<0.001$), more individuals classified as "Sensible drinkers" in Primary care records compared to the UKB. Agreement improved slightly when using numerical values ($k=0.29$) and decreased when using qualitative descriptors only ($k=0.18$).

Conclusions: Our algorithm classifies Primary Care alcohol consumption codes into discrete meaningful categories. These results suggest that alcohol consumption may be underestimated in Primary care. Rule-based algorithmic approaches are easy to adjust to local contexts to capture singularities and can easily be implemented periodically to monitor trends.

Learning Objectives: by the end of this presentation participants will be able to:

1. Describe how the algorithm permits multi-class classification of alcohol consumption into 5 categories using Primary Care Electronic Health Records data
2. Discuss how the presented findings provide further insight into how alcohol is recorded in primary care and using self-reported questionnaires
Suicidal ideation among outpatients with alcohol use disorder

Presenter: Dr. Wenyu Hsu
Psychiatry attending physician
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Introduction: Suicide risk is increased in substance use disorder, especially in alcohol use disorder. It’s important to recognize the suicide risk in patients with substance use disorders, especially alcohol use disorder (AUD) for clinical physicians.

Methods: In this retrospective chart review, we reviewed 2 years (2019-2020) charts in alcohol treatment program in central Taiwan. We collected data regarding CAGE questionnaire, Alcohol Use Disorders Identification Test(AUDIT), Brief Michigan Alcoholism Screening Test(MAST), Beck Depression Inventory(BDI), Beck anxiety Inventory(BAI), suicide ideation question, and several related variables. In total, 136 subjects were recruited.

Results: Patients in suicide ideation group had significantly younger age, higher female proportion, higher domestic violence history, severer severity of alcohol addiction, including AUDIT and MAST, severer depression(BDI), severe anxiety(BAI), fewer social support, lower quality of life(WHOQOL), and poorer sleep quality(Pittsburgh Sleep Quality Index, PSQI) than patients in non-suicide ideation group. Suicide ideation score had correlation with AUDIT after controlling age, BDI, BAI, WHOQOL, and PSQI(P=0.034).

Conclusion: Female, young age, domestic violence history, alcohol addiction severity, depression, anxiety, poor social support, poor quality of life, and poor sleep quality might have association with suicide ideation in this population. Patients with higher AUDIT might have higher risk of suicide ideation.

Learning Objectives: by the end of this presentation participants will be able to:

1. Discuss high suicide idea rates in patients with alcohol use disorder
2. Describe how patients with higher AUDIT might have a higher risk of suicide ideation
Oxytocin and substance use disorders: From preclinical evidence to treatment and recovery

Overview
Organizer: Dr. Christos Kouimtsidis  Email: drckouimtsidis@hotmail.com

Alexis Bailey, BSc, PhD, Reader in Neuropharmacology, St. George’s University of London
The talk will focus on preclinical evidence from our laboratory implicating the central oxytocin system in the neurobiology underlining of drug-related emotional dysregulation. We will highlight findings that point towards oxytocin-based pharmacotherapy as a promising intervention for the management of this comorbidity and consequently relapse. Given the high prevalence of depression coexisting with drug addiction, which is accompanied by more severe symptoms, higher service utilization and higher relapse rates, clinical studies assessing the efficacy of OT-based pharmacotherapies in the management of drug relapse following abstinence are warranted.

Yannis Paloyelis, PhD CPsycho FHEA, Senior Lecturer in Neuroscience and Psychology, King’s College London
The translational application of preclinical findings in humans has been problematic. To a large extent, this is due to difficulties in targeting the central oxytocin system in humans, how it reaches the brain, the mechanisms of entry to the brain, whether it exerts its effects though central or peripheral actions, and its pharmacodynamics once it is in the central nervous system. We discuss recent findings that shed light on the above questions. I will also be discussing the importance of understanding the physiology of the central oxytocin system and the pharmacology of intranasal oxytocin if we are to design effective clinical trials to evaluate its efficacy as a potential treatment in a range of disorders, including addiction.

Theodora Duka MD PhD, Professor of Experimental Psychology, University of Sussex
Evidence is accumulating those individuals with alcohol use disorders and other substance-dependences show altered interoceptive processing. The hormone oxytocin influences afferent transmission of bodily signals and, through its potential modulation of craving, is proposed as a possible treatment for alcohol use disorders. We present data on the acute effects of alcohol on interoception and on the effects of an acute dose of Oxytocin on interoception.

Ben Houghton MSc, PhD student, St. George’s University of London
Reducing opioid craving is key to reducing opioid-related deaths but no pharmacotherapies exist that can be used as needed to reduce craving. Furthermore, not everyone reports to feel cravings yet higher attentional bias in opioid users is associated with impulsivity and can predict future.

Learning Objectives: By the end of this session participants will be able to:

1. Understand the impact of drugs of abuse and drug abstinence on the central oxytocin system
2. Discuss the preclinical data demonstrating a key effect of oxytocin analogue in reducing the emotional consequences of drug abstinence and in relapse prevention
3. Identify the neurobiological mechanisms underlining the therapeutic effect of oxytocin based pharmacotherapy in the management of drug-related emotional dysregulation and relapse to drug use
Migrants, refugees and substance use disorders and challenges: a European perspective

Overview
Organized by: Dr. Christos Kouimtsidis
Consultant Psychiatrist, National Coordinator for Addressing Drugs of Greece, Greece
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Since 2015, Europe has been facing an unprecedented arrival of refugees and migrants: more than one million people entered via land and sea routes mainly through Greece. During their travels, refugees and migrants often face harsh living conditions, limited access to healthcare, and violence in transit and host countries. The national health system and humanitarian actors on the field faced huge challenges trying to respond to the needs of transiting populations. Overcrowded reception centers and hotspots are highly demanding and are associated with severe disease burden including infectious diseases, mental health, women’s health issues, SGBV and children’s health issues public health risks arise both from health conditions during the journey and from health problems in the host country. On the other hand, there was little pre-existing experience in Europe on the reception and integration of refugees and less so of migrants.

Refugees and migrants are extremely vulnerable to substance use disorders due experiences from war, loss of the homeland, uncertainty about the future, barriers into accessing work, and above social marginalization. There is a lack of epidemiological health data and quantitative evidence on the refugees’ experiences and the mental health problems they face during their displacement.

Ms Rania Botsi from the Pompidou Group of the Council of Europe will set the scene and the work done by PG in collaboration with Greece on capacity building and the development of a handbook and guiding principles for professionals working with migrants and refugees in the field of addiction and drug prevention.

Dr Chryssa Botsi, Consultant in Respiratory Medicine, will discuss aspects of the unmet physical and mental health needs of refugees and asylum seekers in Greece.

Ms Savvopoulou Foteini, psychologist, will discuss the experience the intervention in the long term accommodation sites for refugees of one of the relevant programmes in Greece, that of KETHEA Mosaic.

Learning Objectives: by the end of this session participants will be able to:
Dual Disorders: an update from WADD (World Association on Dual Disorders)

Overview
Organizer: Dr. Yatan Balhara

Presenters:
Dr. Nestor Szerman  Email: contgacto@nestorszerman.com
Prof. Leo Sher  Email drleosher@gmail.com
Dr. yatan Balhara  Email: ypsbalhara@gmail.com

The current symposium is presented by the World Association of Dual Disorders (WADD). The symposium shall include three presentations themed on dual disorders. The first presentation shall offer insights into the relevance of the dual disorders in context of the practice of addiction medicine. The second presentation shall discuss the psychobiology of suicidal behavior in Dual Depression with alcohol use disorder. The third presentation in the symposium shall focus on the screen time, behavioral addictions and other mental disorders.

1- Why we need a Dual Disorders perspective? Nestor Szerman, Spain.
2- “Psychobiology of suicidal behavior in Dual Depression with alcohol use disorder” Leo Sher. USA
3- “Screen time, Behavioral Addictions and other Mental Disorders”. Yatan Balhara. India

Learning Objectives: by the end of this session participants will be able to:

1. Describe the relevance of dual disorders in context of the practice of addiction medicine
2. Discuss the psychobiology of Suicidal behavior among persons with alcohol use disorders
3. Identify the interaction between screen timer, behavioral addictions and other mental disorders
HIV, HCV, and Bacterial Infections Among People Who Use Drugs: Optimal practices in the “new normal” of the COVID-19 world

Overview
Organizer; Dr. Jenna Butner
Physician, Yale School of Medicine, USA
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People who use drugs (PWUD), including injection and intranasal use account for about 10% of the 37.9 million cases of HIV-infection in the world. Of the 71 million people living with HCV in the world, the majority have a remote history of drug use, and active PWUD accounts for 75% of incident cases of HCV infection. Although harm reduction has traditionally been based upon blood borne viruses (BBV’s), bacterial infection and skin and soft tissue infections (SSTI’s) are increasingly causing alarm. Increase of these infections has no direct cause, although it is thought contributing factors include; homelessness, personal hygiene, poor injecting technique and unsanitary injecting environments. These factors will be undoubtedly exacerbated by the COVID-19 pandemic. It is therefore more important than ever that harm reduction is readily available at the individual level, breaking down barriers that obstruct PWID’s from seeking accessible and stigma free services. The main issue in these more vulnerable populations is the absence of an appropriate infrastructure to secure and maintain engagement in care. Many programs have been developed to address this paradigm. The most successful of these focus on patient-centered multidisciplinary care. This generally nests HIV and HCV care within a framework of addiction and other support services, to maximize engagement in care and adherence to antiviral therapy once it is initiated. With the advent of the COVID-19 pandemic, essential services have been drastically disrupted within most of these multidisciplinary treatment settings and community-based networks. For example, the availability of social services (showers, sanitary facilities, meal services) was severely curtailed. Different modalities of treatment led to disengagement from care and harm reduction services. Access to opioid treatment programs (OTPs) to receive opioid agonist treatment (OAT) were severely limited, which in turn has caused a great uptick in opioid overdose death rates worldwide. Additionally, in those OTPs where HIV and HCV care and treatment were delivered co-synchronously within a multidisciplinary team setting, continuity of care may have been severely disrupted, resulting in decreased access to HIV and HCV treatment. Lastly, little is known thus far on the COVID vaccination uptake among PWUD, and this is an area we would like to explore further to have a better understanding of our patients' apprehension or acceptance.

Learning Objectives: by the end of this session participants will be able to:

1. Review the global disease burden in people who use drugs during the pandemic via workforce development and discussion of how harm reduction practices have adapted
2. Describe COVID vaccination in PWUD and hard-to-reach populations
3. Discuss the implications of COVID on HIV prevention, screening and treatment and how the WHO 90-90-90 goals have been affected
4. Recognize the global challenges of hepatitis C prevention, screening, diagnosis, education and treatment in the post-pandemic era, and how this has affected the WHO’s goals of hepatitis C elimination by 2030
The impact of COVID-19 on quality of life, drug use and experience of PTSD of people on opioid substitution treatment

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Objective: Given the aggravation on the general population’s quality of life due to Covid-19 and the vulnerability of people who use drugs to acute stress, a study was conducted to better comprehend the impact of Covid-19 on quality of life and mental health of substance users, their drug use patterns, and the continuation of their treatment.

Method: As an extension of a study conducted before the Covid-19 outbreak, quality of life, indicative PTSD symptoms, and drug use patterns of people who were attending an Opioid Substitution Treatment in Athens, Greece, were assessed in May and June 2020, after the first lockdown measures. 104 patients agreed to participate. The World Health Organization Quality of Life Questionnaire (WHOQOL-BREF) and the Post-Traumatic Stress Scale (PCL-C) were used as well as toxicological tests.

Results: A reduction in the dimension of WHOQOL-BREF referring to the relationship between the individual and their environment was observed. There was found a non-significant increase in the PTSD scores. Regarding the drug use patterns, there was an increase in amphetamines use and a decrease in opioid and benzodiazepine use.

Conclusions: According to national and global guidelines, all patients have been provided with more extended take-home doses of medications (buprenorphine / methadone) and face to face consultation was restricted. These changes raised certain concerns, but no overdoses or dropouts were observed, and patients adhered to their medication whatsoever. Pandemic's impact on life of people on opioid substitution treatment should be taken further into consideration because of the already existed physical and mental problems of this population. Drug use patterns seem to be affected by the new social reality under Covid-19, but it is still uncertain whether the identified changes will remain or not. Therefore, this area needs to be further studied, so as to raise awareness of the long-term pandemic’s consequences.

Learning Objectives: by the end of this presentation participants will be able to:

1. Discuss the impact of COVID-19 on PWUD and their drug use patterns
2. Describe the loosening of policies that an Opioid Substitution Treatment program in Greece implemented in order to face the challenges of COVID-19
Prevalence and risk factors of Internet gaming disorder and problematic internet use before and during the COVID-19 pandemic: a longitudinal online survey of Japanese adults

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Internet gaming disorder (IGD) and problematic internet use (PIU) may be exacerbated by lifestyle changes imposed by the coronavirus 2019 (COVID-19) pandemic. This study investigated changes in IGD and PIU during the pandemic every 4 months, and risk factors for these exacerbations. 3935 Japanese citizens participated in part or in full in online surveys presented in December 2019 (before the pandemic, T0), August 2020 (T1), Dec 2020 (T2), and April 2021 (T3). Comparisons before (T0) and during the pandemic (T1), revealed that probable IGD prevalence has increased 1.6 times, and probable PIU prevalence by 1.5 times (IGD: χ² = 619.9, p < .001, PIU: χ² = 594.2, p < .001). Youth (age < 30) and COVID-19 infection were strongly associated with IGD exacerbation (odds ratio, 2.10 [95%CI, 1.18 to 3.75] and 5.67 [95%CI, 1.33 to 24.16]). Although their prevalence peaked at T1 and has been gradually decreasing in T2 and T3, it remains significantly higher compared to the baseline (T0) in the latest data as of August 2021 (T3) (IGD: χ² = 339.3, p < .001, PIU: χ² = 342.8, p < .001). For the effective prevention and treatment of these problems, continuous real-time monitoring is required. At the conference, the results of sequential real-time data will also be provided.

Learning Objectives: by the end of this presentation participant will be able to:

1. Discuss the prolonged effect of internet-related addictive behaviors due to the COVID-19 pandemic
2. Identify strategies to prevent internet-related addictive behaviors
Prácticas de economía comportamental aplicadas a la prevención y asistencia de las adicciones en Latam

Overview: Dr. Dario Gigena
Secretary of Prevention and treatment of Addictions, Ministry of Health, Cordoba, Argentina

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En los últimos años ha habido importantes avances en las ciencias del comportamiento, específicamente, en lo que respecta a los behavioural insights o economía del comportamiento. Entender la manera en que las personas toman decisiones y actúan es imprescindible para diseñar intervenciones. En este sentido, los behavioural insights nos permite comprender cómo piensan y se comportan las personas y herramientas para poder intervenir intentando cambiar el comportamiento de las personas en una dirección concreta.
Por ende, se ha fomentado la aplicación de la economía del comportamiento a las políticas públicas, específicamente, en salud pública. Existen muchas herramientas de la economía del comportamiento que han probado ser efectivas en el campo de la salud, especialmente en lo que tiene que ver con aumentar las tasas de vacunación, de exámenes médicos y de adherencia a los medicamentos1.
En este sentido, la OMS ha creado el Grupo de Asesoramiento Técnico (TAG, por sus siglas en inglés) sobre conocimientos y ciencias del comportamiento para la salud que ha generado, por ejemplo, estrategias basadas en las ciencias del comportamiento para promover hábitos saludables y de prevención durante la pandemia por COVID-19. Asimismo, el Banco Interamericano de Desarrollo ha revisado las recomendaciones de la OMS y ha planteado la aplicación de la economía del comportamiento para aumentar la adherencia a los cambios de hábitos necesarios para prevenir los contagios por COVID-191.
A pesar de estos avances, la aplicación de la economía del comportamiento al campo de las adicciones y de los problemas asociados con el consumo de sustancias es aún emergente. En este sentido, este simposio se propone presentar algunas de las aplicaciones más recientes a este campo en el contexto latinoamericano.

Conferencias:
1-Del “decí que no…” al “sabías qué…” Una aplicación de la economía del comportamiento a la prevención del consumo de alcohol en adolescentes. - ARGENTINA- Pautassi, Ricardo
2-Regatear un cigarrillo: un experimento de campo natural sobre la discriminación de precios en los mercados informales de cigarrillos de la Ciudad de México -MÉXICO- Bejaranoa, Hernan. Córdoba, Rodrigo. Ellynez, Lissandra
3-El rol de los behavioural insights en el abordaje de la confianza: posibilidades de trabajo en diversos campos- COLOMBIA- Silva J., Santiago
4-¿Aumentan los recordatorios la adherencia al tratamiento por abuso de sustancias? -ARGENTINA- Bonino, Pablo. Caneto, Florencia.
OPTIMA: Comparing Flexible Buprenorphine/Naloxone with Methadone to Reduce Opioid Use in People with Prescription-Type Opioid Use Disorder: Trial Results

Presenter: Dr. Didier Jutras-Aswad
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Background: Buprenorphine/naloxone (BUP/NX) and methadone remain the two most commonly prescribed OAT in Canada. The safety profile of BUP/NX offers the advantage of early flexible take-home dosing, which could be more acceptable to people with OUD. However, most trials have compared efficacy of OAT when offered under strict supervision in individuals primarily using heroin, who may differ from prescription-type opioid users with OUD (POUD) in regard to the potency of the substances they use and their comorbidities. The OPTIMA trial aimed at testing whether a BUP/NX flexible model of care with early take-home doses was non-inferior to a standard closely supervised methadone dosing regimen to decrease opioid use under realistic treatment conditions among individuals with POUD.

Study Design: Multicenter pragmatic open-label two-arm non-inferiority randomized controlled trial conducted between October 2, 2017 and July 29, 2020 in seven (7) Canadian clinical settings. Interventions: 24-week treatment with oral BUP/NX (flexible model of care with early take-home doses) or methadone (standard model of care), 1:1 ratio. Main outcomes: Opioid use (primary outcome - % negative urine drug screens; non-inferiority margin: -15.0%), retention, quality of life and safety.

Results: 138 participants were randomized to BUP/NX and 134 to methadone. The mean proportions of opioid-free urine drug screens were 24.0% in the BUP/NX group and 18.5% in the methadone group (5.6% adjusted mean difference), confirming the non-inferiority hypothesis. At 24 weeks, 32/137 (23.4%) participants randomized to BUP/NX were retained on this treatment compared with 45/133 (33.8%) treated with methadone, but showed similar retention on any OAT. Quality of life and drug-related adverse events were similar between groups.

Conclusion: First-line treatment BUP/NX model of care including a flexible approach to take-home doses is safe and effective for people with POUD.

Learning Objectives: by the end of this session participants will be able to:

1. Explain why the OPTIMA trial was needed to inform how to approach OAT for individuals with POUD
2. Describe key elements of Optima’s study design
3. Summarize OPTIMA’s main findings in regard to opioid use, retention, safety and quality of life
4. Contrast OPTIMA’s results and previous findings on OAT’s effectiveness
Some patterns of Tobacco Smoking among students of Belarus

Presenter: Prof. Vladimir Vdocenkon
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Objective: To find out the attitude of university students to tobacco smoking.

Methods: Based on the original questionnaire, consisting of 17 questions, in June 2021 a survey was conducted among 128 students of all years in three Universities of Grodno and Minsk.

Results: The students (mostly (77.4%) females) were of the following age groups: 17-20 years old (81.8%); 21-23 years old (16.4%); over 23 years old (1.8%). The most students (60.7%) buy cigarettes of the middle price class. While 69.1% of students were not ready to spend their last money on cigarettes, 31% of them were. The reason for starting smoking for most students (60.9%) was the experience that cigarettes reduce the level of stress. According to the results of the survey, 54.8% of students have smokers in the family. When asked whether smoking can affect future professional activity, 59.8% of students answered negatively, 25.9% answered that it is possible and only 14.3% answered positively. 55.3% of students did not notice adverse effects on their health after picking up smoking, 14.9% experienced respiratory system disorders, 3.2% experienced issues with the cardiovascular system, 1% with the nervous system, and 25.6% noted a general worsening of their health. The majority of students (38.7%) had a smoking experience of 2-3 years, 19.4% had less than 6 months, 17.2% had more than 5 years, 14% had 4-5 years, 8.6% had about a year, and 2.2% had 6 months. 53.8% of students have thought about quitting, 28% tried to quit, 18.2% never wanted to quit.

Conclusions:
1) The majority of students started smoking as teenagers;
2) A significant part (31%) of students is strongly addicted to smoking, because they are ready to spend their last money on cigarettes;
3) A significant number of students don’t notice a relationship between tobacco smoking and adverse effects on their health and future professional work.

Learning Objectives: by the end of this presentation participants will be able to:

1. Review the questionnaire for tobacco students used
2. Discuss smoking among Byelorussian students
Education and Training in Addiction Medicine during COVID-19

Overview
Organizer: Dr. Cornelis DeJong
Email: nispa.dejong@gmail.com

In this symposium, five international scholars will present the results of studies on aspects of training and education in Addiction Medicine. Dr. Annabel Mead from Canada will present a multisectoral, collaborative approach in developing tailored training that is effective in enhancing the care of pregnant and postpartum women with substance use. Dr. Barbara Broers From Switzerland will inform you about the MOOC “drugs, drug use, drug policy, and health”. Dr. Cornelis DeJong from the Netherlands will give an overview of online seminars that were given to addiction medicine specialists and psychiatrists in training in the Netherlands and Lithuania during the pandemic. Dr. Leendert van Rijn from the Netherlands will present results from a qualitative study on help-seeking behavior in medical doctors in the Netherlands, Lithuania, and Indonesia. Dr. Enjelina Hanafi from Indonesia (ISAM NExT member) will present the proposal on a global survey on Training Needs in addiction medicine.

Learning Objectives: by the end of this presentation participants will be able to:

1. Discuss different ways of online teaching and training.
2. Describe the barriers in the help-seeking behavior of doctors and the possibilities to deal with them.
3. Participate in an important survey on training needs in addiction medicine.
Sharing experiences in teaching and education in times of the COVID-19 pandemic

Presenter: Prof. Cornelis DeJong
Professor in Addiction and Addiction Care, Radboud University, Nederlands
Email: nispa.dejong@gmail.com

In this symposium, members of the ISAM Education and Training Committees are invited to share their experiences of online education and training activities in addiction medicine in times of the COVID-19 pandemic. This symposium is organized by the two ISAM committees.

Learning Objectives: by the end of this session participants will be able to:
- Discuss different ways to deliver addiction medicine education and training online
- Describe how to integrate it into face-to-face education
Behavioral Addiction: Emerging Issue in Asia Countries during Covid-19 Pandemic

Overview
Organizer: Dr. Kristiana Siste

Presenters
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A group of several behaviors asides from psychoactive substance ingestion produces short-term rewards that may engender persistent behavior despite knowledge of adverse consequences. These behaviors which have diminished control with the concept of psychoactive-substance-dependence were classified as non-substance addiction or behavioral addiction. The outbreak of Coronavirus Disease 2019 (COVID-19) spread across the entire world has curtailed most individuals' daily activities and movements. In response, COVID-19 Pandemic lets individuals getting more engaged with technology use that provides escapism to several activities (e.g., shopping, eating, gambling, gaming, doing physical exercise) that allows them to find some acute emotional relief, albeit pathologically. These behaviors happened by accessibility, availability, and the absence of prevention and management programs for excess use. Particularly, the symposium will highlight the emerging issue of behavioral addiction in Asia Countries during the pandemic, exploring global solutions to international problems in the field of addiction medicine. In this symposium, there will be three topics presented by professional addiction psychiatrists:

• Behavioral Problems and Health Benefits of Daily Life Habits Focusing on Physical Exercises during COVID-19 Pandemic (Prof. Hironobu Fujiwara, MD, Ph.D., Department of Neuropsychiatry, Graduate school of Medicine, Kyoto University, Japan, hirofuji@kuhp.kyoto-u.ac.jp)

• Implications of COVID-19 and Lockdown on Internet Addiction Among Adolescents: Data from a Developing Country (Kristiana Siste, MD, Ph.D., Department of Psychiatry, Faculty of Medicine, Universitas Indonesia - Cipto Mangunkusumo General Hospital, Indonesia, ksiste@yahoo.com)

• The Implementation of Online Psychotherapy during Pandemic: DBT Skill Training for Behavioral Addiction (Enjeline Hanafi, MD, BMedSci, Department of Psychiatry, Faculty of Medicine, Universitas Indonesia - Cipto Mangunkusumo General Hospital, Indonesia, enjelinehanafi@gmail.com)

Learning Objectives: by the end of this session participants will be able to:

• Describe emerging cases of physical exercise addiction during the COVID-19 pandemic era
• Discuss the effect of the COVID-19 pandemic on daily lifestyle, especially physical activity and exercise
• Examine Internet Addiction (IA) prevalence among adolescents due to lockdown during the COVID-19 pandemic
• Associate the influence of psychosocial factors towards the increased risk of IA during the COVID-19 pandemic
• Provide the definition, structure, and the components contained in Dialectical Behavioral Therapy (DBT)
• Review the effectiveness of DBT as a non-pharmacological therapy modality in the field of behavioral addiction, especially internet addiction.
A Global Survey on Training Needs in Addiction Medicine during the COVID-19 Pandemic

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Over the last few decades, the medical concept of addiction disorders has undergone tremendous development. Addictive disorders are currently considered a multifactorial chronic disease and have become a significant cause of global health problems and other psychiatric disorders. Based on data from UNODC, there were 275 million people who use drugs in 2020, which was an increase of 22% from 2010. By 2030, it is estimated that the number of drug users worldwide will increase by 11%. Not only drug addiction but also the number of behavioral addiction patients continues to increase. A meta-analysis showed that the global prevalence of gaming disorder was 3.05%. Moreover, currently with the COVID-19 pandemic, many countries are proposing to lock down, which could lead to higher risk of behavioral addiction.

The number of expert estimates available does not contest the increasing number of addiction cases. For example, in the United States, in 2018, of the 21.2 million people with substance use disorders, only 11% received treatment. One in five people expressed confusion because they did not know where to turn for help. Furthermore, currently, there are only an estimated 3,000 healthcare professionals in the addiction field in the US.

Training is necessary as one effort to answer this problem. Beforehand, it is necessary to conduct a survey regarding training needs, especially during pandemic. The survey is also helpful for comparing the training needs of different countries. By the completion of the survey, attendees will be able to know the need for a global survey on training needs in addiction medicine as this study also aims to assess the standards and professional pathways into Addiction Medicine, once qualified as a physician, as has previously been investigated in previous studies. It would be a cross-sectional study involving several countries. The study will be conducted in 2021. Coordination with the addiction specialists in each country would be needed.

Learning Objectives: by the end of this presentation the participants will be able to:

1. Discuss the need for a global survey in addiction medicine to assess and compare the standards and professional pathways into Addiction Medicine once qualified as a physician
India: What will the addiction treatment scenario look like in the post-pandemic world?

Overview
Organizer: Prof. Atul Ambekar
Email: Atul.ambekar@gmail.com

Countries in South and Southeast Asia have unique challenges with respect to the availability of addiction treatment services such as substantial number of people requiring services, proportionately lower amount of resources and a dynamic scenario of pattern of substance use. The unprecedented COVID19 pandemic has adversely affected almost all the areas of human life including provision of health care services. In the context of addiction-related health-care, the pandemic has added yet another challenge in the form of need to protect the already vulnerable population of people who use drugs and the health care providers as well as ensuring the continuity of care. Through this international symposium, national-level experts in addiction psychiatry from Bangladesh, India, Myanmar, Nepal, Sri Lanka and Thailand will describe the challenges in organizing and delivering addiction-related interventions and services in their respective countries in the context of ongoing COVID19 pandemic. Each presenter will raise issues for discussion and propose a set of recommendation moving forward.

Learning Objectives: by the end of this presentation participants will be able to:

1. Debate the commonalities and diversities in the Addiction treatment scenarios in the South and Southeast Asian countries
2. Present a set of recommendations for dealing with the challenges in the context of the ongoing COVID-19 pandemic
Predictors of non-fatal opioid overdose among people who inject drugs in India: a community-based study

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Background: Drug overdose is a common cause of death among People Who Inject Drugs (PWID). Non-fatal opioid overdose (NFOO) predicts future fatal opioid overdose and is associated with significant morbidity. We aimed to study the factors that predict NFOO among PWID in the past year.

Methodology: Community-based, cross-sectional study. One-Hundred-and-Four participants 18 years and above receiving HIV prevention services were selected through simple random sampling. Drug use patterns, NFOO rates, and risk factors of NFOO were assessed by a structured tool developed for the study. The pattern of psychoactive substance use was assessed by Alcohol Smoking and Substance Involvement Screening Test, and opioid dependence severity by Leeds Dependence Questionnaire. Co-morbid psychiatry illness was assessed using Mini International Neuropsychiatric Interview (version 7), while Opioid Overdose Knowledge Scale (OOKS) was used to assess knowledge of opioid overdose. Those who experienced NFOO in last one year (NFOO group) were compared with those who did not (non-NFOO group).

Results: About 25% (n=26) had experienced NFOO in last one year. Multivariate logistic regression showed that the number of lifetime NFOO (adjusted Odds Ratio, AOR: 3.72), abrupt switching from one opioid to another (AOR: 8.84), and concomitant benzodiazepine use while injecting opioids (AOR: 11.98) predicted risk of having an opioid overdose in the past year. Increased duration of opioid use predicted lower likelihood of opioid overdose (AOR: 0.81).

Conclusion: There is an urgent need to develop strategies to prevent and manage opioid overdose among PWID in India.

Learning Objectives; by the end of this presentation participants will be able to:

1. Discuss how Drug overdose is a common cause of death among People Who Inject Drugs (PWID) and non-fatal opioid overdose (NFOO) predicts future fatal opioid overdose and is associated with significant morbidity.

2. Describe Factors like number of non-fatal opioid overdose events over lifetime, abruptly switching from one opioid to another and concomitant benzodiazepine use while injecting opioids can predict the risk of opioid overdose.
Digitalizing aspects of drug use disorder treatment service provision – Experience from Indonesia and Tanzania

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Objectives: Having an integrated remote and digitalized service provision, even though with a view to the digital divide, ensuring the continuity of adequate access to health and social services for people with drug use disorders is in line with the International Standards for the Treatment of Drug Use Disorders.

Methods: In the framework of providing a continuum of care and access to treatment, Indonesia is developing “Rehab.Net” App as a new form of outreach and linking clients with stimulant use disorders with treatment services by offering basic intervention such as initial screening, followed by an appointment and the option for online counselling for referral. In Tanzania, the “Huru App” is being developed to link people with drug use disorders to locally available services in the coastal region, Tanga and broaden ways of service provision.

Results: The developing process in Indonesia was inclusive and brought together many stakeholders in Indonesia including government, civil society and UNODC. Implementation data will become available in due course and are currently not yet available. In Tanzania, formative research informed the feasibility and the development of the Huru app, helping to define the target group as people with mild to moderate substance use and general community members.

Learning Objectives: by the end of this presentation participants will be able to:

1. Discuss Developing technology (apps) used to inform people with drug use disorders and the community about available services and setting up for online service provision, seems feasible in diverse settings such as in Indonesia and Tanzania.
2. Describe Virtual treatment options and mobile technology to link people to services, might in the future be an additional way to provide diversified services in a continuum of care and to help close the treatment gap, even though in both sides also limited access to smartphones remains a barrier even for online service provision.
Moving towards online capacity-building of healthcare workers in addiction management: Strategies for adapting to the new normal

Organizer: Dr. Arpit Parmar

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Substance use disorders (SUDs) are one of the most serious public health problems. According to the latest national survey 2019, alcohol is consumed by around 14.6% of the population of India. Opioids and cannabis use are also common, with prevalence rates of current use being 2.1% and 2.8%, respectively. The National Mental Health Survey 2016 reported a large treatment gap (>70%) for SUDs in India. Thus, there is a significant mismatch between the demand and availability of treatment services for SUDs. There is also a huge shortage of psychiatrists, with only 0.3 psychiatrists per 100,000 population. In such a scenario, capacity building and training of the non-addiction specialist doctors, general medical doctors, and other healthcare professionals in addiction management is the need of the hour. The COVID-19 pandemic and the resultant nationwide lockdown in India further added to the woes of the addiction patients. However, the COVID-19 pandemic pushed digital technology as an essential tool in the Indian healthcare scenario. It led to many functional and structural changes in addiction-related healthcare, which might benefit the patients in the long run. One such welcome change is the online methods' use for capacity building of doctors and other healthcare professionals. The symposium would share the experience of various addiction experts in running different programs of capacity building for a wide variety of healthcare professionals ranging from trainees, general medical doctors, specialist psychiatrists, hepatologists, and nurses. The presenters provided training for various types of substances and their treatment, special issues such as opioid agonist maintenance treatment, and addiction management in the presence of medical comorbidities such as alcohol-related liver disease. The symposium would also share the various operational challenges and lessons learned from the virtual capacity-building programs. The use of digital technology for capacity building needs to be adapted and further refined to train healthcare professionals from various backgrounds.

Learning Objectives: by the end of this session participants will be able to:

1. Identify the role of online modes of capacity building for addiction management.
2. Discuss the challenges faced during online capacity building in low-resource settings.
Virtual Capacity building of medical doctors for opioid agonist maintenance treatment (OAMT): the early Indian experience

Presenter: Dr. Arpit Parmar
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National AIDS Control Organization (NACO) of Ministry of Health and Family Welfare, Government of India provides opioid substitution therapy (OST)/Opioid Agonist Maintenance Treatment (OAMT) to people who inject drugs (PWID) as a harm reduction strategy under National AIDS Control Program. NACO runs more than 220 OST centers across India, covering around 35 thousand PWID clients and thus, is the largest OST treatment provider in the country. NACO, under its OST strategy, provided sublingual buprenorphine as a directly observed treatment to the clients, and the option for take-home was not available before the COVID-19 pandemic. COVID-19 pandemic and the resultant lockdown of the entire country posed many challenges in the OST service delivery for the NACO OST centers. The daily dispensing policy was largely incompatible with the social distancing norms of COVID-19 spread curtailment. As a first step, a revised NACO OST strategy was developed in collaboration with various other Indian agencies and institutes. The second step constituted training of the healthcare professionals working in these OST centers. As the rapid response was necessary, online training of the healthcare professionals was carried out over two days. Keeping in mind the various backgrounds of the participants, the training was conducted in English and Hindi separately. A total of 608 health care and other professionals were trained over three training programs of three hours each. Once the training was completed, the revised strategy was implemented across the nation from the very next day. This was the first time the take-home buprenorphine policy was implemented on such a large scale in India, with positive feedback from all stakeholders.

Learning Objectives: by the end of the presentation participants will be able to:

1. Describe the use of online capacity building for opioid substitution therapy in a low resource setting.
2. Discuss the challenges and the way forward for such programs.
Online capacity building approach for refresher training of medical doctors and its impact

Presenter: Dr. Amit Singh
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Opioid agonist treatment or Opioid Substitution Treatment (OST) is a well-established harm reduction approach for preventing the transmission of HIV and other blood-borne infections among the people who inject drugs. In India, the OST centres operating under National AIDS Control Organisation (NACO) constitute the largest provider of OAT services. There are more than 220 such centres across India. At the service delivery front, one of the major challenges the OST program faces are the high staff turnover including the medical officers responsible for OST service delivery. Every newly appointed staff is provided adequate training by regional and national level trainers before they start working. The COVID-19 pandemic forced the physical training activities to either halt altogether or limit to some local workshops. Besides, NACO adopted several new strategies during the pandemic for unimpeded OST service delivery. So, to train and provide support to the medical officers and project staff from all over India, and apprise them with newer developments, NACO conducted a series of webinars of 2-hour duration each. Batches consist of 10-15 invited participants. In case one fails to attend a session, they were allowed to attend another session at a future date. Each session consisted of a quick summary of the OST practice guidelines, followed by a question-and-answer session where all the participant queries were resolved, improvisations done for service delivery during the COVID pandemic would be discussed, and feedback would be provided about the overall OST program performance of the region represented. It was followed by a discussion on five case scenarios relevant to everyday practice.

Learning Objectives: by the end of this presentation participants will be able to:

1. Discuss the Feasibility of video-conferencing methods for training in a multicultural country
2. Examine Flexibility in the training approach for greater involvement of participants

Presenter: Dr. Udit Panda  
Consultant Psychiatrist, National Institute of Mental Health and Neurosciences, Bengaluru, India  
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The prevalence of addictive disorders in India is high (22.4 %, NMHS 2015), with Alcohol and Tobacco use disorders making most of the cases. SUDs require structured long-term management by skilled professionals to have a better outcome. India has a shortage of mental health services, especially in primary care setups. We conducted an online certificate program named “Advanced certificate course in Management of Addictive Disorders” (ACCMAD 2021) of 6 months duration, which had weekly online live sessions (46 hours) and self-paced e-learning (14 hours) totaling to be 60 hours of blended online learning. The participants were 125 practicing psychiatrists, psychiatry residents, and primary care physicians who had already completed basic addiction training from our center. Total 24 live sessions were divided into six modules, with each module focusing on areas like alcohol use, opioid use, sedative use, stimulant use, cannabis use, and dual diagnosis management. The live sessions were designed on the “ECHO” model with brief didactic lectures, regular quizzes, and case discussions brought by participants. The case discussion was done in break-out rooms with limited participants to encourage discussion involvement and give input. Pre-assessment, post-assessment test, and 6 Assignments after each module were done for appraisal and evaluation of learning. We were able to discuss 182 substance use-related cases in this forum, and for each case recommendation on management was provided to help the doctors better manage the cases. Monthly evaluation reports were collected, showing that the participating doctors have managed 27,336 cases over six months. In the era of the COVID pandemic, where manpower and resources are constrained, we believe such training programs are effective in capacity building in the area of addictive disorder management in primary care.

Learning Objectives: by the end of this presentation participant will be able to:

1. Identify methods of Conducting a digital training programme on Addictive Disorder for Doctors  
2. Review Outcome measures to evaluate the effectiveness of Such programmes
Hepatologists often come across patients with alcohol use disorders (AUD) having a spectrum of alcohol-related liver disease (ALD). Hence they are uniquely placed to provide AUD intervention. Project extension for community healthcare outcomes (ECHO) is a model of knowledge sharing and capacity building developed to reduce disparities in managing chronic diseases between urban centers and rural communities. With project PRATHAM, we aimed to extend the ECHO model to train and update specialist physicians working in different specialty set-ups on best practices in AUD management. The Centre for Addiction Medicine NIMHANS ECHO (Hub) conducted eight weekly tele-ECHO clinics for 20 hepatologists (Spokes) from the USA, Spain, Chile, and India using a secured video-conferencing app. Each tele-ECHO clinic consisted of case presentations by the hepatologist to the Hub team and their peers, which provided recommendations on best practices in the management of their patients. The objective was to improve skills in effective screening, identify the severity and provide appropriate intervention in AUD for their patients with ALD. Each clinic would end with a brief didactic delivered by an addiction expert on various topics such as assessment, psychotherapy, and pharmacotherapy for relapse prevention. Pre, post-assessment surveys and e-assignments were conducted to evaluate the effectiveness of the program. The hepatologists discussed 11 cases of ALD and 8 cases of end-stage liver diseases. More than half of hepatologists were between 41-50 years of age and 10-20 years of practice. The competency of the hepatologists in AUD management increased over the program duration. Hepatologists are usually the final point of care for cases of AUD with ALD. Training them will ensure effective treatment for AUD as well. This will likely have a better clinical outcome.

Learning Objectives: by the end of this presentation participants will be able to:

1. Examine how Training and mentoring of a hepatologist on SBIRT will be useful in their practice
2. Discuss Real Case based learning by using tele-ECHO is a low-cost, high impact and scalable model especially in the time of COVID 19
Addiction treatment services during COVID 19 pandemic- Experience from a Community Drug Treatment Clinic in Delhi, India

Overview Organizer: Dr. Ravindra Rao
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Opioid use disorders are one of the most serious global health problems. According to the latest national survey, the current use of any opioid was 2.1% and an estimated 8.5 Lakh people who inject drugs (PWID) are in India. Opioid Agonist Treatment (OAT) is the most effective evidence-based strategy for the management of opioid use disorders. In India, OAT is provided in government hospitals and through community-based OAT clinics. The covid-19 pandemic and nationwide lockdown have adversely impacted OAT services delivery in the country. The National Drug Dependence Treatment Centre (NDDTC) runs a community drug treatment clinic in an urban impoverished area of East Delhi and provides low-threshold, free-of-cost OAT services for patients residing in the clinic’s vicinity. The clinic responded to the COVID-19 pandemic challenge and continued OAT throughout the pandemic by making substantial changes in its operations.

This symposium shares the experience of NDDTC in running community-based OAT services using Clinical Workflow Automation based digital platform, teleconsultations, and various strategies adapted to deliver uninterrupted services during this unprecedented time.

The various operational challenges faced and lessons learned during the delivery of OAT services would also be discussed.

Learning Objectives: By the end of this session participants will be able to:

1. Discuss the utility of low-cost community based mobile methadone dispensing bus model for effective service delivery during Covid-19 pandemic
2. Describe the application of digital technology for opioid agonist treatment (OAT) delivery in the community setting
Addiction treatment scene for opioid use disorders and Covid-19 situation in India: challenges

Presenter: Dr. Roshan Bhad
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Opioid addiction is a public health problem in India with an estimated population prevalence of 0.3 percent which translates to 2.8 million individuals with opioid dependence. There are an estimated 850,000 people who inject drugs (PWID) in India. Addiction treatment services for opioid use disorders in India are delivered through stand-alone drug treatment centres, addiction treatment facilities, and through a network of community-based OAT centers. The Covid-19 pandemic has posed many challenges for addiction treatment services in India. Due to a large number of covid-19 infections, human resources such as doctors and nurses were diverted for covid-19 services resulting in the increase in waiting for time and non-registration of new cases in many opioid addiction treatment facilities in the country. The restrictions imposed due to lockdown resulted in limited movement of patients and service providers alike that affected access to addiction treatment. This was especially true for OAT where availability of OAT medicines regularly is of paramount importance.

Learning Objectives: by the end of this presentation participants will be able to:

Discuss the impact of COVID-19 on delivery of OAT services in India
Community drug treatment clinics: principles and operations

Presenter: Mr. Deepak Yadav
Senior Social Service Officer, National Drug Dependence Treatment Centre (NDDTC), AIIMS, India
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The community clinic in East Delhi run by NDDTC focuses exclusively on the treatment of opioid use disorder (OUD). This community drug treatment clinic is in an urban impoverished area of East Delhi and provides short-term and long-term treatment of OUD. Most patients are on long-term Opioid Agonist Treatment (OAT) with methadone or buprenorphine. The clinic registers patients residing within a catchment area of 6–8 kilometers and provides low-threshold OAT services for patients with OUD. There is no waiting period for initiating treatment; treatment is provided free of cost. The patients used to visit the clinic daily to receive their OAT medicines. Since March 2019, the clinic also started dispensing methadone through a mobile van stationed at the periphery of the catchment area to reduce the travel distance for patients. Before the Covid-19 pandemic, the clinic, along with the mobile van, used to provide medicines to more than 500 patients on any given day. The medical and dispensing records have been digitized to ease record-keeping and to ensure there is no duplication of dispensing of medicines from the clinic and the mobile van.

Learning Objectives: by the end if this presentation participants will be able to:

Describe the operational aspects of running a mobile methadone dispensing unit in India
Providing addiction treatment services in India during COVID-19: Experiences and learning from a Community Drug Treatment Clinic

Presenter: Dr. Ravindra Rao
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The covid-19 pandemic and lockdown posed many challenges for treatment delivery through community clinics e.g. restrictions in travel, the necessity to manage to overcrowd, the safety of staff, and the inability of patients to come for daily dispensing in the containment zones. Key changes introduced in the operation of community drug treatment clinics included allowing take-home of buprenorphine and methadone, spacing the consultations for renewal of treatment, and telemedicine services used for remote consultations. Our experience shows that locating treatment services closer to the residential areas of the patients, either through a static clinic or through a mobile van, eases treatment access. Take-home doses of both BPN-N and methadone have helped in reducing the clinic load and difficulty in travel for patients. The impact of take-home doses of methadone on diversion and overdose needs to be carefully studied, though feedback from patients and informants suggests that diversion of methadone has been minimal. Using teleconsultation services and digitization of the records has also helped in reducing physical contact between service providers and OAT clients.

Learning Objectives: by the end of this presentation participants will be able to:

Review an experiential account of managing challenges of OAT take home dispensing during the COVID-19 pandemic
Online Seminars on Competencies in Addiction Psychiatry

Presenter: Prof. Cornelis DeJong
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In the Netherlands and Lithuania online seminars were given to addiction medicine specialists and psychiatrist in training. The outline of the seminars and the satisfaction with it will be presented

Learning Objectives: by the end of this presentation participants will be able to:

Discuss ideas on how to turn FTF education and training into an online format
Overview

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In this symposium, Addiction Counseling Matrix (ACM), CoDependency Scale and psychoeducation program, Change Workbooks, BAMPERDE (Performance Evaluation System) and YEDAMSoft (The software system) will be introduced.

ACM is a scheme consisted of eight components for determining comprehensive risks and needs for the patients. Examples to these components can be seen below:

1. Medical Support
2. Social Support
3. Psychoeducation
...

CoDependency Scale is a 14 item assessment scale for evaluation of codependency in patient's families. Additionally, a psychoeducation program is developed that includes a series of cards that are considered as effective therapeutic tools.

Change Workbook is a workbook that enables interviewers to work with all the aspects of addiction treatment by structured exercises that are put together. The workbooks can be applied by psychologists and social workers as there are three versions of it: individuals', family, and social change workbooks.

BAMPERDE is an assessment system that primarily aims to assess two main domains of performance: institutive and individual work performances. Institutive performance dimensions include compliance with standards, capacity utilization, total number of sessions and attendance of clients, treatment outcome and satisfaction survey results of clients.

YEDAMSOFT is the name of the software system used in the Green Crescent Addiction Counseling Centers. It includes different pages which are client registration, client list, calendar, forms and notes.

More information of each tool will be detailed throughout the symposium.

In this symposium, members of the ISAM Education and Training Committees are invited to share their experiences of online education and training activities in addiction medicine in times of the COVID-19 pandemic. This symposium is organized by the two ISAM Committees.

Learning Objectives: by the end of this session participants will be able to:
1. Discuss different ways to deliver Addiction Medicine education and training online
2. Describe how to integrate delivery into face-to-face education
Novel Interventions at Turkish Green Crescent Counseling Centers

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Addiction is a multidimensional disorder. Therefore, evaluating all dimensions of the disorder plays a critical role in terms of determining the roadmap for treatment. These evaluations are necessary for both patients with addiction disorders and specialists that offer help for them. Since the Turkish Green Crescent has over 400 personnel, there has been new novel interventions in order to create a standardized and useful procedures for both the clients and the personnel.

Learning Objectives: by the end of the session participants will be able to:

1. Determine the risks and needs for patients with addiction disorders and implement their evaluations into sessions through standardized workbooks which were prepared meticulously. In addition, they will be introduced of the Codependency Scale of Substance Use Disorders (CodSuds) and discover the psychoeducation program created for codependencies of people who are relatives of a patient with an addiction disorder.

2. Acknowledge is that the performance assessment system of 400 personnel and how it is beneficial for both administrators and specialists working with addiction disorders. Lastly, they will be introduced of a systematic functioning for professionals of Green Crescent Addiction Counseling Centers.
Anabolic androgenic steroids used as performance and image enhancing drugs in professional and amateur athletes: Toxicological and psychopathological finding

Presenter: Dr. Daria Piacentino
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Objective. The use of anabolic androgenic steroids (AASs) as performance and image enhancing drugs (PIEDs), once restricted to professional athletes, now includes amateurs and regular gym visitors. AAS use is associated with psychopathology, yet this relationship is complex and not fully understood1. Here, we describe the results of a multisite, cross-sectional study in fitness centers in Italy with professional and amateur athletes training in a variety of sports. We aimed to assess the presence of AASs and other misused substances in athletes’ biological samples and link toxicological to psychopathological findings.

Methods. We recruited 122 athletes (84 men; age range=18-45 years; professionals: 32.8%). Athletes completed questionnaires, interviews, and toxicology testing for AASs, other PIEDs (e.g., amphetamine-like substances, sympathomimetics), misused drugs (e.g., cannabinoids, cocaine, opioids), and non-prescribed psychotropics (e.g., benzodiazepines). Toxicology was conducted in blood, urine, and hair.

Results. Self-reported and toxicologically detected use rates of AASs and other misused substances showed slight-to-fair agreement (Fleiss’ κ=0.104-0.375). There was slight-to-moderate agreement among the three biological samples used for AAS testing (κ=0.112-0.436). Thirty-one athletes (25.4%) tested positive for AASs. Sociodemographic, clinical, and psychopathological characteristics were compared between AAS users and nonusers via Mann Whitney U-test and t-test; those characteristics differing significantly between the two groups were included in a backward stepwise regression. More sport hours/week, narcissistic or antisocial personality disorders, and higher nonplanning impulsiveness scores predicted AAS use (Nagelkerke’s R2=0.769). AAS users did not differ significantly from non-users in major psychopathology, but their Hypomania Checklist-32 score, which also predicted AAS use, was significantly higher, suggesting increased odds for cyclothymic disorder or subthreshold hypomania.

Conclusions. Our results have implications for studying AAS users, as they identify a cluster of variables that may be relevant in future understanding of AAS use risks (e.g., personality disorders). Possible disagreements between AAS assessment methods should be considered when implementing individualized treatments strategies, surveillance programs, and harm reduction interventions2.

Learning Objectives: by the end of this presentation participants will be able to:

1. Be aware of the possible disagreement between different assessment methods of AAS use (self-report measures vs. toxicology testing), which should be considered when implementing WADA surveillance programs and harm reduction policies, such as needle and syringe distribution, health education, and counseling.

2. Identify a cluster of variables that may be relevant in future understanding of AAS use risks (for example, personality disorders, hypomania, and concurrent PIED, illicit drug, and non-prescribed psychotropic medication use).
Evaluating the impact of urine drug screen frequency on retention in opioid agonist treatment in Ontario, Canada

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Objective: The objective of this study was to evaluate how urine drug screening (UDS) frequency impacts treatment retention in opioid agonist treatment (OAT).

Methods: Data for this retrospective cohort study of 55,921 adults with OUD in Ontario, Canada, were derived from administrative data sources between January 1, 2011, and December 31, 2015. All patient information was linked anonymously across databases using encrypted ten-digit health card numbers. Descriptive statistics were calculated for comparing urine drug screening frequency groups (less than monthly, monthly, bi-weekly and, weekly) using standardized differences (d) where d less than 10% indicated a statistically significant difference. A logistic regression model was then used to calculate odds ratios for the association between UDS frequency and one-year treatment retention adjusting for baseline covariates, including sex, age, location of residence, income quintile, mental disorders, HIV status and deep tissue infections.

Results: Over 70 percent of the cohort had four or more UDS per month (weekly UDS). Significant associations were observed between UDS frequency and one-year treatment retention in OAT bi-weekly (adjusted Odds Ratio (aOR) = 3.20, 95% confidence interval (CI) 2.75-3.75); weekly UDS (aOR = 6.86, 95% CI, 5.88-8.00) and; more than weekly (aOR = 8.03, 95% CI, 6.87-9.38) using the monthly or less groups as the reference.

Conclusion: This study identified a significant association between weekly UDS and one-year treatment retention in OAT. Therefore, these findings put into question the recent changes in OAT guidelines recommending UDS only be conducted monthly. More research is needed to strengthen the evidence base for UDS frequency in OAT.

Learning Objectives: by the end of this presentation participants will be able to:

1. Review the association between urine drug screening frequency and retention in opioid agonist treatment.
2. identify future research priorities regarding urine drug screening frequency and opioid agonist treatment outcomes.
Altering the Opioid Crisis: An evaluation of opioid prescribing patterns and implications for a novel behavioral science based solution

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The opioid crisis has become the leading cause of accidental death in young adults. Approximately 75% of teenagers use opioids that were originally prescribed to another person. The purpose of this study was to examine the relationship between the quantity of opioids prescribed post surgery, and the number of requests for prescription refills. It was hypothesized that opioids are overprescribed and patients who were prescribed a lower quantity of opioids would not request more refills when compared to patients who were prescribed higher quantities. 500 consecutive subjects (332 total knee replacement, 168 total hip replacement) with de-identified data was obtained from an existing joint replacement registry. Following joint replacement surgery, subjects were categorized into two groups: a lower quantity group that was prescribed 40 opioid tablets post surgery and a high quantity group that were prescribed 60 tablets post surgery. The number of prescription refill requests for each group was recorded and preoperative pain and mental health scores to assess differences between the groups were compared. Independent sample T-tests revealed preoperative pain score (p=.50) and mental health scores (p=.11) were not significantly different between groups. Chi-square analysis revealed no association between quantity of tablets provided and the number of refill requests (p=0.79). Two proportion Z-test revealed no significant difference in the proportion of refill requests (p=.37346). The results suggest a lower quantity of opioid tablets can be prescribed post surgery without the need for increased prescription refills, resulting in fewer opioids available for misuse and diversion. A behavioral science based default option in the electronic prescribing interface, a condition that sets a lower quantity in place unless an alternative is actively chosen, represents a promising approach to guide clinicians towards prescribing small quantities of opioids.

Learning Objectives: by the end of this presentation participants will be able to:

1. Review the extent to which opioids are being overprescribed and misused by teens and young adults
2. Describe the benefit of lowering the amount of opioids that are prescribed and possible use of novel behavioral science based solutions
Rapid transition to telebuprenorphine to treat opioid use disorders during the pandemic: a qualitative review

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Introduction: The Covid-19 pandemic has highlighted the importance of telemedicine to expand access to effective pharmacotherapies for substance use disorders. However, physician and administrator perspectives regarding the delivery of buprenorphine treatment for patients with opioid use disorder using telemedicine is lacking.

Methods: This qualitative study explored buprenorphine prescriber (n=##) and administrator (n=##) experiences launching telemedicine services, assess for clinical, administrative, and regulatory factors influencing the delivery of care, details pertaining to clinical workflow and optimization, and preferences for improving telemedicine access to vulnerable patient subgroups.

Results: Most respondents experienced a rapid transition to telemedicine services requiring significant changes in staff roles and clinical workflows. Nearly all respondents lacked clinical, legal, or health information technology support to launch telemedicine services. Many providers lacked adequate financial support from their health systems and departments of health to provide optimal telebuprenorphine services and decreased reimbursement by insurers was a major barrier to sustaining clinical services. Positive outcomes included increased accessibility to opioid agonist treatment, particularly for vulnerable patient populations (e.g., undomiciled patients, rural populations, and criminal justice involved patients during community reentry). Challenges to telebuprenorphine services included lack of mobile phone or video-conferencing capabilities among vulnerable patient sub-groups, difficulties transitioning patients to community treatment, increased episodes of precipitated withdrawal symptoms attributed to prior exposure to fentanyl, and pharmacist refusal to dispense out-of-state prescriptions.

Discussion: Buprenorphine prescribers and administrators are generally favorable to the provision of telebuprenorphine services. However, additional financial and administrative-level support are needed to optimize access and sustainability of telebuprenorphine.

Learning Objectives: by the end of this presentation participants will be able to:

1. Describe the role of telebuprenorphine services as an expansion of opioid use disorder treatment during the pandemic
2. Discuss the importance of telebuprenorphine service delivery during the pandemic
3. Identify challenges in implementation of telebuprenorphine and ways to optimize access and sustainability.
To investigate the relation between smoking and communication skills among young adults

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The smoking habit has increased over the years among the young adults. The number of rehabilitation addiction centre has increased number and it has become an area of concern in many institutions. Communication skills is widely used in the smoking cessation process and introducing effective communication skills reduces or delays the chances of smoking. The aim of the study is to investigate the relation between communication skills and smoking among the young adults. The participants from age group of 20-30 age group participated in the research. The participants completed the questionnaire through google forms, which consisted questions from both the respective scales. After performing the correlation there was a moderate negative correlation between smoking and harmonious assertiveness. There was a moderate correlation between smoking and the other three communication skills. According to our findings, it was revealed there moderate relation between smoking and communication skills. As the correlation only reveals the relationship between the two factors but does not reveals the cause of the action.

Learning Objectives: by the end of this presentation participants will be able to:

1. Discuss how the study results can be used widely in the rehabilitation center in the training of smoking addiction and in the psychology department in the intervention with different therapies.
2. Discuss how it can be used in school and college curricula to help in preventing or delaying smoking among young adults at an early stage in life
Telemedicine-mediated Medication-assisted Treatment (TMAT): An Indian Experience

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Six hundred thirty-four patients consulted the telemedicine services. 410 (64.7%) had OUD. Current guidelines in India do not sanction the prescribing of MAT following a telemedicine consult alone (Telemedicine Practice Guideline, 2020). We therefore used our teleconsultations to inform and explain MAT, prioritize patients’ appointments, minimize waiting time for in-person visits, and prescribe symptomatic treatment for withdrawal symptoms. Out of the 221 eligible patients, 170 (77%) were suitable for MAT. We assessed 100 patients who accessed both telemedicine and physical consultations. We used the telehealth satisfaction questionnaire to as part of the program evaluation. Patients rated better therapeutic relationships and perceived physician’s empathy in physical than telemedicine consultation. A qualitative study is underway to explore the perceived differences between care modalities, barriers, facilitators, and mediators of telemedicine in the Indian context and culture. We face limited awareness and skill and challenges in relational integration of the workforce while implementing the telemedicine program. There is an urgent need to expand the access and availability of MAT in India, and telemedicine may work as a vehicle. Scaling up and integrating the existing TMAT programs, interoperability, and advocacy for easy access to the medications for MAT is to be addressed in the future.

Learning Objectives: by the end of this presentation participants will be able to:

1. Discuss a hierarchical, synchronous, direct care model of TMAT
2. Share the experience of TMAT in an Indian context
3. Appreciate the impact of digital disadvantage on capacity to engage in telemedicine in addiction medicine and MAT services
Spatial Modeling Using Kernal Density Analysis for Drugs Crime Risk Mapping Index

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A key component to resolve a crime problem is to involve an analysis of where the crime has occurred. Hotspots are the areas where it has the highest concentration of crime from all the observed areas. The knowledge of hotspot mapping and drug abuse vulnerability can indicate the risk level of drug crime in an area. The purpose of this study is to map the drug crime risk index in Depok City based on drug crime hotspots analysis and vulnerability index mapping using kernel density geo-spatial modelling. The use of spatial modeling kernel density to mapping the drug crime risk can assist the government in identifying areas that have a high risk index of drug crime, using that information the regional priorities can be determined through integrated policies. This study is a retrospective study with a quantitative approach using secondary data, spatial analysis scoring, weighting, classification, overlay, and kernel density geoprocessing, with the use of mapping unit analysis size 10x10 m2 pixels. The results from the hotspots mapping shows the high level of drug crime hazard in 8 sub-district namely Limo, Cimanggis, Pancoran Mas, Beji, Sukma Jaya, Bojongsari, Sawangan, and Cilodong, while the high level of physical and social vulnerability of drug crimes are in 2 sub-districts namely Cilodong and Cimanggis. The distribution of high levels of drug crime risk are in 8 sub-districts namely Sukma Jaya, Cimanggis, Cinere, Pancoran Mas, Cimanggis, Cilodong, Sawangan, and Beji. The conclusion is that Spatial modeling kernel density of drug crime risk provides an accurate, comprehensive, interesting, and easy to understand description of drug crime in an area. The potential risk of drug crime in Depok, West Java, Indonesia is in 8 sub-districts. By knowing the distribution of the level of risk, it can also be seen the main causes of the high hazard of drug crimes by looking at the hotspot mapping, and with the vulnerability approach it can also be known what socio-economic factors have the most role in causing the high risk of drug crime in an area. By knowing the various components above, the government can develop an integrated policy plan in the war against drugs, not only in terms of eradicating drugs but also the human factor approach which plays a very important role in determining the vulnerability.

Keywords: Hotspot Mapping, Vulnerability Drug Crime, Spatial Analysis

Learning Objectives: by the end of this presentation participants will be able to:
1. Map the drug crime risk index in Depok City based on drug crime hotspots analysis and vulnerability index mapping using kernel density geo-spatial modelling.
2. Describe the use of spatial modeling kernel density to map the drug crime risk and how it can assist the government in identifying areas that have a high risk index of drug crime, using that information the regional priorities can be determined through integrated policies.
Treating Complex Pain and Opioid Withdrawal with bio-electrode therapy

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Bio-electrode therapy is an adjunctive technique used for the treatment of opioid withdrawal discomfort and pain, as well as post-acute symptoms and relapse prevention. Copper and silver electrodes are used to stimulate specific acupuncture points to harness our body’s natural endogenous electrical energy. The application of electrodes generates an ionic charge resulting in a beneficial electro-physiological response, balancing electrolytes in diseased cells and tissues. This is accomplished by utilizing the Chinese medicine meridian theory of energy and specific acupuncture points.

Method:
The human body functions are dependent on electrical factors. Bio-electrode Therapy integrates the western scientific understanding of electrophysiology and bioelectricity with the Traditional Chinese Medicine acupuncture meridian theories. Electrodes are used as an acupuncture point stimulus method. Acupuncture points on the body are known to have higher electrical conductivity than surrounding skin tissue. Endogenous DC electric fields are important, fundamental components of development, regeneration, and wound healing. When electrodes are applied to acupuncture points, positive and negative ions and electrons are generated, creating a micro-current between the electrodes. No external power source is necessary. The Chinese medicine theory of health is based on the efficient passage of energy (micro-current) in the meridian system of the body. Any disruption in the normal ion-charge in the meridians affects the positive and negative charge in cells, manifesting as pain and development of disease. With the judicious application of electrodes, a micro-current can be directed to target injured or diseased organs and tissues. When injured or diseased cells have been electrically stimulated by the electrodes, the permeability of the cell membranes is affected. The result is a balancing of positive and negative ions (sodium, potassium, etc.) and the restoration of intracellular fluid levels, replenishment of electrolyte levels, removal of toxins and re-establishment of homeostasis.

Learning Objectives: by the end of this presentation participants will be able to:

1. Discuss new evidence-based, simple, safe, affordable therapy for treating opioid withdrawal and complex pain
2. Integrate and administer bio-electrode therapy in any treatment setting
Alcohol Use Disorders medications in essential medicines lists of 134 countries: An observational study

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Objectives: Essential medicines lists (EMLs) include medicines to meet the priority needs of the world’s more than 7 billion population. The World Health Organization (WHO) publishes a model EML, and countries are free to modify the list based on their own needs. Alcohol use is a leading cause of global disease burden and causes substantial morbidity/mortality. We analyzed the EMLs of countries to determine how many of them include alcohol use disorder (AUD) medicines (Disulfiram, Acamprosate, and Naltrexone).

Methods: A retrospective observational study was conducted using EMLs of all UN member countries (n=193). We searched the Global EML database, WHO repository, and other governmental sources for the most recent EMLs. EMLs for all countries were searched, and details of AUD medicines were extracted in August 2021. Analysis was performed using SPSS V20.0.

Results: The WHO essential medicine list 2019 contains 460 medications, including methadone (and buprenorphine), naloxone, and NRT. However, it does not include any AUD medicines. Of the 193 countries, 135 had their EML. The total number of medicines ranged from 19-983 (median 313; IQR: 445-268). The countries contain a median of 223 medicines from the WHO EML list (IQR: 260-192). Disulfiram was the most common AUD medicine included by the countries in their respective EMLs (n=24; 17.8%), while naltrexone and acamprosate were present in EMLs of 19 (14.1%) and 04 (3.0%) countries, respectively. A total of 36/134 (26.86%) countries had at least one AUD medicine in their EMLs. There were no differences in the inclusion of AUD medicines based on World Bank income groups.

Conclusion: AUD medicines do not appear on the EMLs of most countries. There is a need to expand the EMLs of these countries, especially considering the high public health burden of AUD and related psychiatric/medical comorbidities.

Learning Objectives: by the end of this presentation participants will be able to:

1. Discuss the concept of the Essential Medicines List and its implications
2. Identify the need to include the medications used for alcohol use disorder in the WHO model list of EML and country-specific EMLs.
Background:
Opioid Use Disorder (OUD) is a chronic and relapsing issue, which could cause disability and even death. Canada is experiencing an opioid crisis, with an estimated 121,174 opioid-related deaths between January 2016 and December 20201. With a growing health, economic and social burden, there has been increasing public demand to address this issue. In Canada, since 2018, buprenorphine-naloxone is recommended as preferred first-line therapy due to a lower overdose risk, by the Canadian Research Initiative in Substance Misuse2 ¬¬. Methadone is recommended for patients poorly responding to buprenorphine-naloxone2. Currently, there is a lack of Canadian specific evidence to understand prescribing patterns in OUD. This study analyzes real-world treatment prescribing patterns for OUD patients to determine if practices match recommendations and inform future health policy.

Methodology:
Using IQVIA’s longitudinal Ontario Drug Benefit database (ODB), new patients initiating treatment for OUD between January 2017 – December 2020 in Ontario were selected in the analysis. The proportion of patients receiving buprenorphine-naloxone versus those receiving liquid methadone was assessed.

Results:
Among all patients initiating therapy in the OUD market during 2017-2020, the use of buprenorphine-naloxone in first line has grown over time, stabilizing at around 50% of new patients by the end of 2020. However, close to half of all new patients are initiated on methadone, despite Canadian guidelines.

Conclusion:
While the proportion of buprenorphine–naloxone used in first-line therapy for OUD has increased over time, close to half of new patients are still initiated on methadone, showing a gap between current guideline recommendations and actual real-world practice. Further research into understanding the factors contributing to this gap is warranted and may provide insights to support policy in addressing this important public health issue.

Learning Objectives: By the end of this presentation participants will be able to:
1. Explain the difference between clinical guideline recommendations and Canadian real-world prescribing patterns in OUD.
2. Discuss the unmet need in OUD.
Real-World Evidence for the Optimal Management of Opioid Use Disorder (OUD) During COVID-19 pandemic for Patients receiving Opioid Agonist Treatment (OAT)

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Introduction
Increased opioid use-related deaths were observed across Canada in 2020 due to disengagement from follow-up among patients receiving OAT during the COVID pandemic. The recent Canadian approval of SUBLOCADE® a monthly-injectable buprenorphine formulation may allow maintenance of optimal OAT delivery when direct contact with providers is limited. There is a need to collect real-world data in the context of the COVID pandemic on the safety and efficacy of OAT modalities, including relationship between treatment and opioid overdose events.

Methods
This is an open-label, retrospective observational study of patients on OAT for moderate to severe OUD receiving either Sublocade (300 or 100mg/month), buprenorphine/naloxone tablets (buprenorphine) (2 to 34mg/day) or methadone (18 to 210mg/day). Data were collected once using a standardized 6-month data collection form for participants who initiated treatment between 3/11/20 and 1/31/21, period immediately following imposition of COVID-related healthcare access restrictions. Baseline patient characteristics, non-fatal and fatal overdoses as well as substance use during the 6-month follow up period were collected, with analysis conducted on an intent-to-treat (ITT) basis, as a function of the initial OAT regimen prescribed.

Results
Seven clinics in British Columbia and Ontario provided data on 140 patient cases (41/51/48) on Sublocade/buprenorphine/methadone. Patient characteristics were well-balanced amongst cohorts (64% male, median age 38 years) except for prior injection drug use (Sublocade 54%; buprenorphine 61%, methadone 88%). Non-fatal overdose rate was 2, 12 and 19% in the Sublocade, buprenorphine and methadone groups while the urine drug screen-validated fentanyl use during the follow up period was 32, 29 and 73% on Sublocade, buprenorphine and methadone. No fatal overdoses occurred.

Conclusion
These preliminary observations suggest that the use of Sublocade as OAT may be associated with lower rates of overdose events and fentanyl use and warrant validation in a follow up study.

Learning Objectives: by the end of this presentation participants will be able to:
1. Describe the patient demographics and behavioral characteristics of patients treated with methadone, buprenorphine-containing transmucosal tablet and buprenorphine extended-release injection
2. Discuss the difference in non-fatal opioid overdose events between patients treated with methadone versus buprenorphine-containing transmucosal tablet versus buprenorphine extended-release injection
Examining the benefit of RBP-6000 300mg versus 100mg maintenance dose in opioid injector

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Aim: RBP-6000 is a once-monthly, extended-release depot formulation of buprenorphine for treating moderate to severe opioid use disorder (OUD). We conducted post-hoc analyses from the pivotal Phase III study (NCT02357901) to compare efficacy and safety of RBP-6000 300mg versus 100mg maintenance doses in participants who used opioids via injection route.

Methods: Adults with moderate or severe OUD were randomized to RBP-6000 300/100mg, 300/300mg (2 initial monthly injections of 300mg followed by 4 monthly maintenance doses of 100mg or 300mg), or placebo for 24 weeks. Opioid abstinence assessment was based on weekly opioid-negative urine samples and negative self-reports. Each participant’s percentages of abstinence after first, second, and third maintenance injections of 300mg or 100mg were compared separately for injectors and non-injector subgroups. Inverse propensity weighting using propensity scores was used to balance pre-maintenance dose risk factors that might impact response to the maintenance doses. Numbers of participants reporting treatment-emergent adverse events (TEAEs) were summarized separately for the periods during the first and second 300mg injections (initiation) and maintenance dosing.

Results: Analyses included 174 opioid-injecting and 229 non-injecting participants at screening. Injection users' percentage abstinence during the 300mg maintenance dose improved and separated from the 100mg dose after each new maintenance injection: risk-adjusted differences (95% CI) were 13.0% (-1.6, 27.6), 16.5% (1.6, 31.4), and 18.7% (3.9, 33.4) after first, second, and third maintenance doses, respectively. Incidence of TEAEs among injectors was generally lower or comparable for the 300/300mg vs 300/100mg dosing regimens during initiation and maintenance dose periods (46% vs 63% and 60% vs 67% for 300/300mg and 300/100mg, respectively).

Conclusion: These analyses suggest treatment of injecting opioid users with RBP-6000 300mg maintenance dose may improve efficacy with a comparable safety profile. This added benefit is clinically relevant in this high-risk, difficult-to-treat population.

Learning Objectives: by the end of this presentation participants will be able to:
1. Discuss In the opioid-injecting user population, RBP-6000 300mg maintenance dose delivered clinical meaningful improvement in opioid abstinence/treatment retention and provided similar safety profiles, compared with 100 mg maintenance dose.
2. Discuss the benefit of RBP-6000 300mg maintenance dose as clinically relevant in this high-risk difficult-to-treat population.
Long-Term Efficacy and Safety of a Monthly Subcutaneous Buprenorphine Depot Injection for Opioid Use Disorder

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Objective: Evaluate the efficacy, safety, and exposure of Bup-XR via integrated analysis of a clinical phase 3 program.

Design/Method: Study 1 was a 24-week randomized, double-blind, placebo-controlled trial, where participants received 6 monthly injections of BUP-XR 300/300 mg (n=201), BUP-XR 300/100 mg (2X300 mg, 4X100 mg, n=203) or placebo (n=100). Study 2 was a 49-week, open-label trial enrolling 257 completers from Study 1 for 6 monthly injections and 412 de novo participants for 12 monthly injections. Study 3 was a 24-week, open-label extension study enrolling 208 Study 2 completers for 6 monthly injections. In Studies 2 and 3, participants received BUP-XR doses of 100 mg or 300 mg at the investigator’s discretion (flexible dosing). Total treatment duration was up to 18 months. Participant’s percentage opioid abstinence was defined as percentage of negative urine drug screen (UDS) among his/her available UDS results during treatment. Treatment emergent adverse events (TEAEs) were analyzed by 6-month treatment periods.

Results: At the 18th injection, the proportion of patients receiving 300 mg had decreased to 54.8%, and 22.9% for de novo and Study 1 cohorts. Opioid abstinence improved continuously: by the end of 18 months, 92.7% de novo and 81.8% Study 1 participants who remained on treatment were abstinent. Longer treatment duration was associated with higher participants’ percentage abstinence (10.1% increase for an additional 6 months). The incidence of TEAEs, including injection-site reaction, drug withdrawal signs and symptoms, and hepatic disorder, was lower in the second and third 6-month treatment periods versus the first 6 months. An exposure-adjusted TEAE analysis in de novo participants when receiving flexible doses suggests that 300mg and 100mg dosages had similar prevalence for the overall TEAEs.

Conclusions: The combined safety and efficacy profiles of BUP-XR support its clinical benefit for the treatment of moderate-to-severe opioid use disorder up to 18 months.

Learning Objectives: By the end of the presentation participants will be able to:
1. Discuss the long-term efficacy and safety of BUP-XR in treatment-seeking adults with moderate to severe opioid use disorder (OUD).
2. Evaluate extending treatment with BUP-XR beyond 6 months provided additional improvement in opioid abstinence, while the incidence of TEAEs decreased over time. The combined efficacy and safety profiles of BUP-XR support its clinical benefit for the treatment of moderate to severe OUD up to 18 months.
Initiating Monthly Buprenorphine Injection After Single Dose of Sublingual Buprenorphine

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Aim  
Buprenorphine extended-release injection (Bup-XR) is indicated for treatment of moderate/severe opioid use disorder (OUD) in patients who have initiated treatment with transmucosal buprenorphine (TM-Bup), followed by dose adjustment for a minimum of 7 days. To meet clinical needs in this COVID 19 era,1,2 we evaluated safety and tolerability of initiating BUP-XR following a single dose of 4 mg TM-Bup.

Methods  
Eligible participants abstained from short-acting opioids for 6h and long-acting opioids for 24h. Qualitative and quantitative urine drug screens, self-reported drug use, and the clinical opiate withdrawal scale (COWS) were completed before buprenorphine administration. If COWS score was ≥8, staff administered 4 mg TM-Bup. If the participant did not exhibit hypersensitivity, symptoms of precipitated withdrawal (PW), or sedation within 1h, 300 mg of Bup-XR was administered and clinical assessments were completed for 28 days. Rescue medications and supplemental TM-Bup were permitted to treat withdrawal. Endpoints were: 1) COWS score increase of ≥6 and 2) independent physician adjudication of PW.

Results  
26 participants received TM-Bup, 24 proceeded to Bup-XR injection, and 20 completed the study. After Bup-XR injection, mean±SD COWS scores decreased from a pre-Bup-XR baseline of 12.6±4.1 to 6.9±4.1 at 6h and to 4.2±3.2 at 24h. Most participants (62.5%) experienced their maximum COWS score pre-injection. Two participants experienced a COWS score increase of ≥6 from the pre-injection value (events occurred at 1h and 2h post-injection). By independent adjudication, 2/24 participants experienced PW. No participants experienced severe withdrawal and one participant experienced moderately severe withdrawal (maximum COWS score=27 at 2h post-injection). Irritability, anxiety, nausea, and pain were the most common adverse events (AEs). There were no serious AEs or AEs requiring Bup-XR discontinuation.

Conclusion  
Initiating Bup-XR 300 mg following a single 4 mg dose of TM-Bup demonstrated a safety profile similar to that observed with Bup-XR induction per current labelling.

Learning Objectives: by the end of the presentation participant will be able to:

• Consider rapid induction of OUD patients with extended-release buprenorphine with a more complete understanding of the safety profile

• Provide potential flexibility in induction procedures that may assist in starting new patients on treatment with extended-release buprenorphine
Psychedelics – a paradigm shift in addiction treatment

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Psychedelic substances have been used by humanity on a global scale for millennia. Unscientifically banned in the 70s, these molecules are currently having a renaissance in interest and research. Found mainly in nature, with important synthetic variants, psychedelics work via cortical 5HT2A receptors triggering entropic processes and massive neuro-plastic changes. These effects are mirrored in the phenomenological experiences of subjects, facilitating ego-dissolution, and reworking of entrenched ways of seeing oneself and the world. If addiction is reimagined as a response to trauma, it is no surprise that rates of addictions are high on a global scale. Psychedelics, for the first time, offer a new paradigm in mental-health treatment in which a pharmaceutical compound facilitates psychotherapy. This super-charged therapeutic process, known as psychedelic-assisted therapy, has the power to integrate underlying trauma, allowing new patterns of thoughts, emotions, and behaviours to emerge. Early research-studies in psychedelics for addiction are showing outstanding results. With effect-sizes significantly greater than current treatments, and excellent safety profiles, these non-addictive compounds offer hope for millions around the world.

Learning Objectives: by the end of this presentation participants will be able to:

1. Describe the nature and mechanism of action of psychedelic medicines
2. Discuss the current state of research for psychedelic-assisted psychotherapy in addiction
Parental Attitudes towards Children’s Smartphone Usage

Presenter: Dr. Gayatri Bhatia  
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Introduction  
During the 2020 COVID-19 pandemic and associated lockdown/social distancing, many scientists pointed towards the problem of increased digital technology overuse in both children and adolescents. However, parents’ perception of and attitudes toward children’s smartphone use have seldom been investigated. This study aims to assess

Methodology  
Parents with children more than or equal to 10 years of age, who visited Pediatrics Out-patient Department or were employed in Department of Pediatrics were randomly selected till a sample size of 100 was obtained. After obtaining informed consent, they were asked to respond to a questionnaire comprising of socio-demographic details, Media and Technology Usage and Attitudes Scale (MTUAS) and Parent and Child Internet Addiction Test (PCIAT). Children who were present during the interview were asked to respond to the Smartphone Addiction Scale- Short Version after obtaining assent. The parents who did not have their children with them were sent the Smartphone Addiction Scale- Short Version for their children via email.

Results  
Parents’ score on attitude towards media and technology usage scale (MTUAS) had a significant negative correlation with their perception of their child’s internet usage pattern (Pearson’s coefficient: -0.244, p 0.014) and a significant positive correlation with their children’s score on smartphone addiction scale (Pearson’s coefficient: 0.253, p 0.011). Scores on PCIAT were negatively correlated with parental age (Pearson’s coefficient: -0.254, p 0.011) and age of the child (Pearson’s coefficient: -0.295, p 0.003) and a significant positive correlation with scores on smartphone addiction scale (Pearson’s coefficient: 0.411, p 0.0001).

Male children had a significantly higher mean score (23.50±6.5) than females (16.55±6.1) on Smartphone addiction scale (p>0.0001). Only children (26.61±5.8) had significantly higher scores than those who had siblings (16.95±5.44). Children’s scores on Smartphone Addiction Scales had a negative correlation with their age (Pearson’s coefficient: -0.207, p 0.038).

Conclusions  
Parents of older age group have a negative attitude towards media and technology usage and thus perceive higher smartphone usage in their children as compared to younger parents. Parents were, in general, able to identify when their children are having problematic smartphone usage but tended to be more lenient towards younger children.

Learning Objectives: by the end of this presentation participants will be able to:

1. Recognize that parents' attitudes towards internet and technology may color their perception and report of their children's smartphone usage
2. Discuss how that parents tend to be stricter on their children's smartphone use as they get older, and there is a need to sensitize them towards harms of problematic smartphone use patterns in young children.
Protocol for Long-Acting Buprenorphine Formulations for MAT

Presenter: Dr. David Mathis
Psychiatrist, Detox Dox Mathis P.C., USA
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To use long-acting buprenorphine formulations for protection against drug diversion.
Step 1 - Treat acute opioid withdrawal using a 15-day Clonazapam taper.
Step 2 - Once detox is complete, start Buprenorphine 2 mg sublingual daily.
Step 3 - Start a long-acting version of Buprenorphine, for example Sublocade 100 mg subcutaneously.
Step 4 - Maintenance dose of Sublocade 100 mg or 300 mg subcutaneous monthly.
Urine Drug testing at each visit. Advise patients evidence of benzodiazepine or other opiate use will likely result in discontinuing use of maintenance Buprenorphine- by offering 15-day Clonazapam taper. Use of Cannabis, Amphetamines or other problem drug use is a risk and can lead to a decision to stop Buprenorphine maintenance.
Review of State Pharmacy Prescription monitoring sites at each visit.

Learning Objectives: by the end of this presentation participants will be able to:
1. Discuss a protocol to safely transition a patient to low dose buprenorphine for MAT.
2. Evaluate drug screen results, and state prescription monitoring boards results for safe continuation of MAT, and how to safely take a patient off of MAT when needed.
Types of income inequality and per capita alcohol consumption across the world

Presenter: Lekhansh Shukla
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Authors
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Objective:
To measure the effect of crude (Gini index) and fine (thresholds, inequality within brackets, ratio of top and bottom fractions) measure of income inequality on per capita alcohol consumption

Method:
The data sources are the same as for the other two analyses in this symposium. However, 15 per cent of the observations had to be removed due to missing values and no logical way of imputing them. The main predictor variables are the Gini coefficient and distributional measures of income inequality. We have used a Bayesian variable selection procedure of spike and slab priors to choose the best predictors from average income, share in national income, entry threshold and inverse Pareto coefficients of various percentiles of the population. These predictors measure different but overlapping aspects of unequal distribution especially, the inverse Pareto coefficient is a good measure of inequality with a percentile while thresholds are measures of economic mobility. All real-valued measures i.e. average income and thresholds are made comparable by converting to purchasing power parity (2019 USD).

Results:
We found that broad measures of income inequality like the Gini coefficient have low explanatory value for per capita alcohol consumption (inclusion probability less than 0.01). On the other hand, finer measures pertaining to the bottom 50 per cent of the population (p0 to p40, p10 to p50) have higher explanatory values. This includes their share in net national income, the threshold of entry in the p10 to p50 bracket and inequalities within the middle class (p40 to p90 inverted Pareto coefficients). These measures had an inclusion probability above 0.5. It is remarkable that the average incomes of the middle class have a substantial effect on per capita alcohol consumption even after controlling for net national per capita income, gender ratio and religious affiliations.

Conclusion:
Similar to earlier research on depression and income inequality, there is preliminary evidence of a link between within-country inequities and per capita alcohol consumption. Furthermore, inequities within certain brackets and poor opportunities of economic mobility may be more relevant to substance use outcomes than broad measures.

Learning Objectives: By the end of this presentation participants will be able to:
1. To describe the types and measurements of income and wealth inequality.
2. To discuss the convergent evidence for role of inequalities in causing poor mental health outcomes overall and in alcohol consumption especially.
Effect of economic growth on effect of consumption of fractions of alcohol consumption per capita

Presenter: Dr. Darshan Shadakshani  
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Objective:
To measure the effect of economic growth and other relevant variables on total alcohol consumption and on the consumption of three fractions of alcoholic drinks.

Method:
The dependent variables are per capita alcohol consumption data (Total, spirits, beer, wine, other alcoholic beverages) collected from the WHO Global Health Observatory for all available countries and years 1961 - 2019. Independent variables namely, net national income per capita expressed in purchasing power parity, US dollars 2019, the proportion of the population in 20 - 60 years age bracket, a measure of inflation (GDP deflator/ consumer price index) were collected from world inequality database for these 186 countries (n = 186 countries x 59 years). Proportion of Muslim population in these countries are available for the year 2010 and 2020 and are included as a covariate (Pew Research). A hierarchical, structural time series analysis was done allowing for a country-level effect of time and per capita income and fixed effects of the proportion of the Muslim population, gender ratio and the proportion of population 20-60 years old. Inferences are drawn based on high-density intervals, probability of directional effect and Bayes factor calculated through the sampling of the posterior distribution using package 'rstan' of R statistical analysis software.

Results:
There is a significant effect change of per capita alcohol consumption in 172 out of 186 countries. In 46 countries the per capita alcohol consumption decreased with an increase in net national income whereas, in the remaining 126, an increase in alcohol consumption was noted with an increase in net national income. As evidenced by a Bayes factor of 3 and above which is considered strong evidence against the null hypothesis. This effect is after controlling for the percentage of the Muslim population, proportion of the population for 20-60 years of age, measure of inflation and gender proportion. Further analysis is done on the 4 subtypes of alcohol in a multi-response multi-bayesian regression.

Learning Objectives: by the end of this presentation participants will be able to:
1. Compare the effect of economic growth on all types of alcohol combined
2. Describe the effect of economic growth on three fractions of alcohol
Relation between demographic variables, economic factors, and per capita alcohol consumption

Presenter: Dr. Diptadhi Mukherjee  
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Objective:  
To empirically identify clusters of countries based on the demographic cycle, religion, economic growth trajectory, and their relationships with the per capita alcohol consumption (PCAC).

Method:  
The dependent variables are PCAC (Total, spirits, beer, wine, other alcoholic beverages) collected from the WHO Global Health Observatory for all available countries and years 1961 - 2019. Independent variables namely, net national income per capita expressed in purchasing power parity, US dollars 2019, the proportion of the population in 20 - 60 years age bracket, a measure of inflation (GDP deflator/ consumer price index) were collected from world inequality databases for these 186 countries (n = 186 countries x 59 years). Proportion of Percentage of population with the Muslim population in these countries are available for the year 2010 and 2020 and are available from pew research centre was also included as a covariate (Pew Research). We used the technique of profile regression to achieve bayesian mixture clustering. The predictor and dependent variables are contemporaneous time series and the model is required to calculate a dissimilarity matrix based on two factors- shape of change in the time series’ and dependency structure of the time series’. This dissimilarity matrix is used for fuzzy partition clustering where countries are allowed to move in and out of a cluster across time but can inhabit only one cluster in a year. This analysis is conducted in R package ‘PReMiuM’ using a non-informative Dirichlet process priors

Results:  
At model convergence, 6 distinct but overlapping clusters were formed. These 6 clusters when arranged in increasing amounts of PCAC reveal- a minimum alcohol use in countries with low per capita income and high Muslim population. Another cluster revealed relatively low alcohol use despite high NNI which is not explained by the percentage of Muslim population or any legal sanctions on drinking. Finally, there is a cluster of countries with middle-level per capita income and disproportionately high total alcohol consumption. These clusters are then projected onto time (years) and space(World regions) and prototypical countries are described.

Learning Objectives: by the end of the presentation participants will be able to:  
1. Describe the relationship between demographic variables and per capita alcohol consumption in different countries.
2. Describe the relationship between economic factors per capita alcohol consumption in different countries.
Creativity for Problem Substance Use: The Practice of Human Sciences

Overview: Organizer Dr. Eric Peyron
Email: Ericpeyron@wannadoo.fr

Presenters
Dr. Eric Peyron Email: ericpeyron@wannadoo.fr
Dr. Sarah Namirembe Email: namires12@gmail.com
Dr. Helena Hansen Email: hhansen@mednet.ucla.edu
Prof. Fatima El Omari Email: fatima_elomari@hotmail.com
Dr. Tomo Shiraska Email: Shirasaka.t@gmail.com

This symposium will present innovative practices from varying cultural and national contexts to cultivate creativity and spirituality as tools for recovery from problem substance use. Panelists will highlight effective techniques for engaging participants with visual art, dance, yoga, Buddhist practice and traditional Ugandan healing rituals. Panelists will highlight common themes of how creativity allows participants to alter how traumatic experiences reside in the body, as well as to promote social support, mutual aid, and agency. The discussant will address the role of human sciences in understanding creativity as a medium for acting on the relational etiology of problem substance use.

(Eric Peyron to interpret) Chloe Vialle, French visual artist
(Sarah Namirembe to interpret) Mukasa Khalid, Ugandan spiritual healer
(Helena Hansen invited) Ruben Lopez – New York City based recognized “outsider” artist in recovery who began his career in art therapy
(Fatima El Omari to interpret) Naima Bet – Yoga therapist/social worker in mental health and addiction treatment, Arrazi U psychiatric hospital Rabat Sale Morocco
(Tomo Shirasaka to interpret) Takeshi Ashizawa – buddhist psychiatrist, Chitose Hospital Japan

Eric Peyron to serve as discussant
Incarceration in the US: How do we measure success?

Presenter: Lori D. Karan, MD, FACP, DFASAM
Addiction Medicine Program Director
Professor of Internal Medicine and Preventive Medicine
Loma Linda University and VA Loma Linda Health Care System
Former Medical Director, Department of Public Safety, Hawaii
Email: lori.karan@gmail.com

The goals of incarceration include deterring society members from committing wrongful acts, punishing those that do, separating criminals from society to ensure public safety, and rehabilitation of the offender. Restorative justice in the United States is unusual. The goals of rehabilitation and punishment run counter to each other. With a confused mission, the measures of success for incarcerated individuals are inadequately defined.

In the US, generally, jails are city or county administered institutions that house both persons awaiting trial and those who have been tried and sentenced to 1 year or less of incarceration. Jails provide urgent care. A significant number of pretrial inmates are released in court for “time served” for their misdemeanors and spend less than 72 hours in jail. It is difficult to provide adequate screening, treatment and discharge planning when court and community medical records are not available, and pretrial inmates have variable and unpredictable lengths of stay.

In contrast, prisons are state or federal facilities that house “felons” who are sentenced to terms of incarceration longer than 1 year. Prisons range from low-security “prison camps,” to medium security “correctional institutions,” to maximum security “penitentiaries” and “supermax” facilities. The dates that felons are released to parole or “max out” (fulfill their entire sentence behind bars and are released without parole supervision) are planned. Prisons have increased opportunity to provide patients longitudinal care and continuity of care when incarcerated individuals have longer stays and their discharge dates are known.

In the United States, neither the Sheriff’s offices that run County Jails nor the State and Federal Department of Corrections which run Prisons directly report to the Department(s) of Public Health. A constitutional right to health care has been legally enforced by the Department of Justice. It is lawsuits that advance the standards of healthcare. Legal suits are reactive, costly and inefficient. It should not be enough for Wardens to meet minimal standards of confinement, prevent riots, thwart escapes and keep the staff safe. Rather reducing morbidity, mortality, and recidivism and strengthening our families, communities, public safety, and public health ought to be the measures by which the success of incarceration and re-entry are designed and evaluated.
Drug use response in the Criminal Justice System in the United Arab Emirates (UAE)

Presenter: Hamad Al Ghaferi, MBBS, MPH, Ph.D
National Rehabilitation Center- World Health Organization Collaborating Center, Abu Dhabi-UAE; University of Science and Technology-Jordan
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Drug use is a criminal offense in the United Arab Emirates (UAE) subject to imprisonment for up-to 2 years. Preliminary and exploratory studies examining disease burden of substance use in the UAE attribute majority of the disease burden to cost incurred by the CJS mainly prosecution and imprisonment costs (not including crime prevention and post prison costs). Other drug related crimes for example drug trafficking and trading, and crimes committed under the influence of drugs add to the drug use related burden in the criminal justice system (CJS). Providing CJS based treatment and care is acknowledged for reducing morbidity, mortality and recidivism.

The UAE drug use response philosophy positions drug use as a public health disorder driving milestone legislative amendments in 2016 that reduced the maximum sentence period for drug use crimes by 50% (from 4 years to 2 years). The UAE legislation encourage voluntary treatment seeking by dropping any legal charges for patients seeking treatment voluntarily. This privilege for voluntary treatment seeking individuals was extended to requests made by 1st and 2nd degree family members to the district attorney to mandate treatment to family members with problematic substance use and who continue to refuse to seek treatment. The 2016 amendments have set the stage to expand the 8-week relapse prevention treatment in community based specialized treatment and care services for individuals referred from the CJS. These amendments have geared developing a legislative proposal for a drug court model and providing CJS based treatment and care that are both currently under review.

This presentation discusses the current drug use response efforts and challenges and opportunities for operating a comprehensive CJS based treatment and care commencing from arrest to post prison care.
An ethical imperative: offering evidence-based treatment for individuals with opioid use disorder who are incarcerated

Presenter: Elizabeth Salisbury-Afshar, MD MPH
University of Wisconsin- Madison, USA
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Medications for opioid use disorder (MOUD) are considered first line treatments for opioid use disorder and offering MOUD is considered clinical standard of care in the United States. However, most jails and prisons in the United States do not continue or initiate MOUD for incarcerated individuals with opioid use disorder- a practice which has been associated with increased risk of opioid overdose and death at the time of release. Nearly five percent of all deaths from illicit opioids in the US occur among individuals who were recently released from jail or prison. Research has shown that starting or continuing methadone or buprenorphine for incarcerated individuals improves treatment entry and retention upon release and reduces post-release mortality. Access to MOUD in US jails and prisons is a critical public health and ethical issue that must be addressed in the midst of a worsening opioid overdose crisis.
Rebalancing the addicted brain: What’s oxytocin got to do with it?

Presenter: Dr. Alexis Bailey
Reader in Neuropharmacology, St. George’s University of London
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Long term use and abstinence from drugs of abuse is frequently associated with lowered mood, increased anxiety, irritability and social withdrawal and isolation which all constitute key motivational triggers for relapse. Therefore, understanding the neurobiological mechanisms underlying coexisting drug addiction-depression comorbidity will have important therapeutic implications in the prevention of relapse. The talk will focus on preclinical evidence from our laboratory implicating the central oxytocin system in the neurobiology underlining of drug-related emotional dysregulation. We will highlight findings that point towards oxytocin-based pharmacotherapy as a promising intervention for the management of this comorbidity and consequently relapse. Given the high prevalence of depression coexisting with drug addiction, which is accompanied by more severe symptoms, higher service utilization and higher relapse rates, clinical studies assessing the efficacy of OT-based pharmacotherapies in the management of drug relapse following abstinence are warranted.

Learning outcomes:
- Understand the impact of drugs of abuse and drug abstinence on the central oxytocin system
- Discuss the preclinical data demonstrating a key effect of oxytocin analogue in reducing the emotional consequences of drug abstinence and in relapse prevention
Preclinical studies increasingly demonstrate the critical involvement of oxytocin in the development and regulation of a range of physiological processes and behaviours. Indeed, oxytocin has been receiving research attention as a potential treatment for several brain disorders in humans due to promising preclinical results. Specifically, preclinical evidence supports a key role for oxytocin in addiction, including craving and drug consumption. However, the translational application of these findings in humans has been problematic. To a large extent, this is due to difficulties in targeting the central oxytocin system in humans. Human studies have extensively relied on the use of intranasal oxytocin, which is thought to reach the brain through direct nose-to-brain pathways. Yet uncertainties remain regarding whether and how it reaches the brain, the mechanisms of entry to the brain, whether it exerts its effects through central or peripheral actions, and its pharmacodynamics once it is in the central nervous system. I will be presenting recent findings that shed light on some of these questions. I will also be discussing the importance of understanding the physiology of the central oxytocin system and the pharmacology of intranasal oxytocin if we are to design effective clinical trials to evaluate its efficacy as a potential treatment in a range of disorders, including addiction.

Learning Objectives:

- Identify the neurobiological mechanisms underlining the therapeutic effect of oxytocin-based pharmacotherapy in the management of drug-related emotional dysregulation and relapse to drug use.
- Preliminary evidence on how intranasal oxytocin could used.
Interoceptive processing substance use and the role of oxytocin

Presenter: Dr. Theodora Duka
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Evidence is accumulating that those individuals with alcohol use disorders and other substance-dependences show altered interoceptive processing. The hormone oxytocin influences afferent transmission of bodily signals and, through its potential modulation of craving, is proposed as a possible treatment for alcohol use disorders. I will present data on the acute effects of alcohol on interoception and how this may influence the perception of drug induced effects and contribute to craving. I will also present data on the effects of an acute dose of Oxytocin on interoception. The significance of these findings in understanding the role of Oxytocin as a possible treatment of alcohol use disorders will be discussed.

Learning objectives:
- Interoceptive processing and alcohol use disorders
- Evidence on effect of oxytocin on interoceptive processing as a potential underlying mechanism of action
Understanding Fatal and Non-Fatal Drug Overdose Risk Factors (OdRi): A conducted cross-sectional study in Scotland

Presenter: Radhouene Doggui
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Background: Drug overdoses (fatal and non-fatal) are major risk factors of death and disability among substance users. Understanding overdose risk factors is a crucial step forward in the prevention process. The current study aimed to identify fatal and non-fatal drug overdose risk factors for a predominantly opioid-dependent treatment-seeking population.

Methods: Data were collected from 640 adult patients using a self-reported 25 item OdRi questionnaire pertaining to drug use and identified related domains. The Exploratory Factor Analysis (EFA) was primarily used to identify the questionnaire's construct and facilitate its interpretability. Two sets of EFA were conducted; the first one used all items while the second experience related to overdose was removed. Logistic regression was performed to examine the relationship between the latent factors and overdose (fatal and non-fatal).

Results: A three-factor solution accounting for 75% and 97% of the variance was found in the 1st and 2nd sets of analysis, respectively. Factor 1 labeled ‘illicit drug use and lack of treatment’ was common for both sets of EFA analysis (Cronbach's alpha = 0.70). In the 1st set of analysis, Factors 2 (Cronbach's alpha = 0.60) and 3 (Cronbach's alpha = 0.34) were labelled ‘mental health and emotional trauma’ and ‘chronic drug use and frequent overdose’, respectively. The increase of Factor 2 score by one unit was found to be a risk factor for fatal drug overdose (adjusted coef.=1.94, 95% CI [1.03 – 3.63]). In the 2nd set of analysis, all factors were found to be risk factors for non-fatal drug overdose ever occurring (factor 1: coef.= 1.8, 95% CI [1.1 – 3.0]; factor 2: coef.=2.7, 95% CI [1.5 – 5.0]; factor 3: coef.=3.4, 95% CI [2.1-5.6]). Only Factors 1 (coef.= 3.8, 95% CI [1.6 – 9.1]) and 3 (coef.= 3.1, 95% CI [1.4 – 7.2]) were positively associated with non-fatal overdose (one in a past year).

Conclusion: The development questionnaire (OdRi) was found to be a useful tool for the overdose risk assessment. Mental health appeared to be predictive factor of both fatal and non-fatal overdose. Then, integrating validated tools for mental health would increase the questionnaire's consistency and validity.
Responding to the need of Philippine society: The development of the first Addiction Medicine Fellowship Training Program in the Philippines

Presenter: Dr. Salvador Benjamin Vista
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Introduction
It was estimated that the Philippines has about 1.8 million individuals who currently use drugs. Among these, almost 1.2 million individuals submitted for drug rehabilitation during the unprecedented government campaign against illegal drugs between 2016 and 2017. This has led to the overcrowding of both the drug rehabilitation and penal system. In response to the need to improve drug treatment and rehabilitation services, training and research in the country, the Division of Addiction Medicine of the University of the Philippines - Philippine General Hospital (UP-PGH) developed the first Addiction Medicine Fellowship Training Program in the country.

Methods
In this pursuit, multiple focus group discussions were done. Initially, competencies, outcomes, and learning plans were designed and consulted with various experts, service providers, and scientists involved in the addiction field in the Philippines. Afterward, these were presented to several health professions education specialists for comments and suggestions.

Results
A 2-year Addiction Medicine Fellowship curriculum and training program was developed for physicians from various fields. The main outcome of this training program was to produce specialists who can competently assess and manage people with addiction problems, engage in an inter-professional practice, use system-based collaborative management of healthcare programs, and utilize and create relevant clinical and community-based research projects in the field of addiction medicine. The faculty members for the program represent different fields including psychiatry, neurology, toxicology, and social sciences.

Conclusion
In the hope of starting a ripple effect of addiction medicine training programs that address the needs of contemporary Philippine society, the UP-PGH Addiction Medicine Fellowship Training Program was launched in 2021. While this may serve as a positive development in the field of Addiction Medicine in the country, there is more to be done to address the needs of society and sustain the training program including the development of culturally-appropriate interventions and researches, continuous training of future physicians and faculty members, and the establishment of collaboration with the wider local and international community. Nonetheless, ripples can be a start of far-reaching changes. Hence, this ripple in the Addiction Medicine field may continuously benefit the need of contemporary Philippine society for addiction treatment, training, and researches.
National Challenges in the Management of Alcohol and Substance Use Disorders: An Overview to the Eastern Mediterranean Region

Overview
Organizer: Dr. Hamed Ehktiari
Email: h.ekhtiari@gmail.com

Substance use disorder (SUD) is one of the most critical global issues. Recent data reported that substance use related mortality has more than tripled since 2000. About 70,000 deaths from substance misuse were reported in the US in 2019, and more than 70% of deaths were due to any opioids overdose (n:49,860) (1). Costs related to crime, job loss, and health care surpassed $700 billion, or $2195 per person (2, 3). The presence of SUD was also reported to be associated with various mental/psychiatric comorbidities, including suicide, mood disorders, anxiety disorders, and disruptive behavior disorders (4). The situation in the EMR is even more complicated given its unique geopolitical situation and internal/external conflicts.

The estimated prevalence of SUD in the EMR is 0.29%, which is 1.3-fold higher than the global prevalence (5). Diversity and instability of economic, cultural, geopolitical, and sociodemographic characteristics in these 22 countries have increased the issue’s complexity (6). Moreover, holding different addiction-related records by the countries in this region, such as the highest rates of opium production, use, and seizure in the world, has challenged regional healthcare systems while many of them are facing different limitations ranging from immature infrastructures and financial issues to inefficient registry or data collection systems (5, 7).

We believe developing a regional network of addiction medicine experts in the EMR with regular meetings and discussion to bold pressing regional issues in the management of SUD and plan for collaborations in addressing the national and regional concerns might be a reasonable solution in the current situation. As a promoter for such a network, the ISAM Regional Council has designed a symposium entitled “National Challenges in the Management of Alcohol and Substance Use Disorders: An Overview to the EMR”

In a 90-minute symposium, ten distinguished addiction medicine experts will discuss the most critical issues their countries face regarding the mass management of SUD. The long-term goal of this event is to prepare the ground for developing a regional network of addiction medicine experts in the EMR

Co-chairs: Greg Bunt (NYU, USA), Hossein Mohaddes Ardabili (Mashhad University of Medical Sciences, Iran)

Panelists:
Maged El-Setouhy, Saudi Arabia
Mohammed Alnejibi, UAE
Khalid Saeed, Egypt
Ali Farhoudian, Iran
Riaz Khan, Pakistan
Amira Al-Raaidan, Oman
Jallal Toufiq, Morocco
Salih Mehdi Al Haswani, Iraq
Rabih El Chammay, Lebanon
Raghdah elgamil, Egypt

Overview

Organizer: Dr. Hamed Ekhtiari
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Expert opinion constitutes an important source of information, especially when other types of data are scarce, the issues under discussion are complex and difficult to address with available data, or there is a need for rapid synthesis of information and intervention formulation (Hemming et al. 2018; Bojke et al. 2021). The dynamic and complex nature of substance use disorders and behavioral addictions necessitates the formation of global networks which can rapidly identify emerging challenges, synthesize cross-national information, and provide valid consensus opinions on areas of disagreement.

As an initial step, an ISAM working group conducted a survey of 189 experts in addiction sciences from 72 countries in 2020 to assess shifts in the patterns of addiction, substance use, and national service provision as a result of the COVID-19 pandemic (Radfar et al. 2021; Farhoudian et al. 2021). The ISAM Global Expert Network (ISAM-GEN) aims to build on this endeavor and develop a global expert infrastructure based around ISAM which can enable valid and reliable expert elicitation and consensus-building in the various sub-disciplines of addiction sciences.

In the proposed symposium, we aim to review the strengths and weaknesses of the ISAM 2020 survey, discuss rigorous examples of expert elicitation from a variety of disciplines, and discuss how recent innovations in expert opinion elicitation methodology are being incorporated in the ISAM-GEN protocol. The symposium will end with a discussion of ISAM-GEN’s potential as a global expert community in addiction sciences, and outline how experts from across the addiction sciences can join and contribute to the network.

In a 90-minute symposium, presenters will discuss state-of-the-art techniques and best practices in expert elicitation, discuss the current status and future directions of the ISAM-GEN network, and end with an invitation for experts in addiction sciences to join the network.

1. World Addiction Medicine Report: A Global Need for Clinicians and Policy Makers, Alexander Mario Baldacchino (University of St Andrews, UK), Marc Potenza (Yale University School of Medicine, USA), Hamed Ekhtiari (University of Minnesota, USA)
2. From the ISAM 2020 Global Survey to the ISAM Global Expert Network: Progress and the Road Ahead, Arash Khojasteh Zonoozi (Mashhad University of Medical Sciences, Iran)
3. The Promise of Expert Elicitation: Exemplar Projects and Protocols, Arshiya Sangchooli (Iranian National Center for Addiction Studies (INCAS), Iran)
4. Different Facets of Reliable Expert Elicitation, Victoria Hemming (The University of British Columbia, Canada)
5. Protocol Development for Structured Expert Elicitation, Anca Hanea (University of Melbourne, Australia)
6. Social Network Analysis for Recruitment and Validation in Expert Networks, Dimitris Christopoulos (MODUL University Vienna and Edinburgh Business School, Scotland)
7. Conclusion and discussion: Alexander Mario Baldacchino (University of St Andrews, UK), Marc Potenza (Yale University School of Medicine, USA), Hamed Ekhtiari (University of Minnesota, USA)
Addiction treatment services during COVID 19 pandemic - Experience from a Community Drug Treatment Clinic in Delhi, India

Overview
Organizer: Dr. Roshan Bhad
Assistant Professor, NDDTC, India
Email: drroshansindia@gmail.com

Opioid use disorders are one of the most serious global health problems. According to the latest national survey, current use of any opioid was 2.1% and an estimated 8.5 Lakh people who inject drugs (PWID) are in India. Opioid Agonist Treatment (OAT) is the most effective evidence-based strategy for management of opioid use disorders. In India, OAT is provided in government hospitals and through community-based OAT clinics. The covid-19 pandemic and nation-wide lockdown have adversely impacted OAT services delivery in the country.

The National Drug Dependence Treatment Centre (NDDTC) runs a community drug treatment clinic in an urban impoverished area of East Delhi and provides low-threshold, free-of-cost OAT services for patients residing in the clinic’s vicinity. The clinic responded to the COVID-19 pandemic challenge and continued OAT throughout the pandemic by making substantial changes in its operations.

This symposium shares the experience of NDDTC in running community-based OAT services using Clinical Workflow Automation based digital platform, teleconsultations, and various strategies adapted to deliver uninterrupted services during this unprecedented time. The various operational challenges faced and lessons learned during delivery of OAT services would also be discussed.
Addiction treatment scene for opioid use disorders and Covid-19 situation in India: challenges

Presenter: Dr Roshan Bhad
Assistant Professor (Psychiatry) at NDDTC, AIIMS, New Delhi, India
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Opioid addiction is a public health problem in India with estimated population prevalence of 0.3 percent which translates to 2.8 million individuals with opioid dependence. There are an estimated 850,000 people who inject drugs (PWID) in India. Addiction treatment services for opioid use disorders in India is delivered through stand-alone drug treatment centres, addiction treatment facilities, and through network of community-based OAT centers. The Covid-19 pandemic has posed many challenges for addiction treatment services in India. Due to large number of covid-19 infections, human resource such as doctors and nurses were diverted for covid-19 services resulting in the increase in waiting time and non-registration of new cases in many opioid addiction treatment facilities in the country. The restrictions imposed due to lockdown resulted in limited movement of patients and service providers alike that affected access to addiction treatment. This was especially true for OAT where availability of OAT medicines regularly is of paramount importance.
Running community drug treatment clinic during COVID-19: Experience and learning

Presenter: Dr Ravindra Rao  
Additional Professor (Psychiatry) at NDDTC, AIIMS, New Delhi, India  
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The covid-19 pandemic and lockdown posed many challenges for treatment delivery through community clinics e.g. restrictions in travel, necessity to manage overcrowding, safety of staff and inability of patient to come for daily dispensing in the containment zones. Key changes introduced in the operation of community drug treatment clinic included allowing take-home of buprenorphine and methadone, spacing the consultations for renewal of treatment, and telemedicine services used for remote consultations. Our experience shows that locating treatment services closer to the residential areas of the patients, either through a static clinic or through mobile van, eases treatment access. Take-home doses of both BPN-N and methadone has helped in reducing the clinic load and difficulty in travel for patients. The impact of take-home doses of methadone on diversion and overdose needs to be carefully studied, though feedback from patients and informants suggest that diversion of methadone has been minimal. Using teleconsultation services and digitization of the records has also helped in reducing physical contact between service providers and OAT clients.
Using long term buprenorphine in Scotland: context and application

Overview
Organizer: Dr Joe Tay Wee Teck
Email: jbtwt1@st-andrews.ac.uk

Long term buprenorphine use in the field of addiction medicine is relatively a novel delivery system. In this symposium the presenters will describe use of long term buprenorphine in Scotland as a vehicle to support Medication Assisted Treatment (MAT) standards. The presenters will describe, through case scenarios and/or treatment system acquired information, examples of long term buprenorphine use as part of a risk reduction programme, stabilisation and detoxification protocols. There will also be opportunities for presenters to share their personal experiences of using this novel delivery system as medical and non-medical prescribers.

Presenters:

1. Ms Tracy Clusker (tracey.clusker@nhslothian.scot.nhs.uk) - Medication Assisted Treatment (MAT) and long term buprenorphine as a risk reduction intervention: a national approach.

2. Dr James Tidder (james.tidder@borders.scot.nhs.uk) – Establishing long acting buprenorphine in a community setting: a clinicians’ perspective.

3. Dr Craig Sayers (craig.sayers@nhs.scot) – Establishing long active buprenorphine in a prison setting: a consumers’ perspective.

4. Dr Joe Tay Wee Teck (jbtwt1@st-andrews.ac.uk) - Long acting buprenorphine and micro dosing in an assertive outreach setting.
Long acting buprenorphine and micro dosing in an assertive outreach setting

Presenter: Dr Joe Tay Wee Teck
Email: jbtwt1@st-andrews.ac.uk

Innovative, flexible and responsive medication assisted treatment approaches to opioid use disorder has become even more important during the COVID-19 pandemic. People who use opioids and other drugs have heightened health and social risks increasing their vulnerability to poor outcomes. They also often experience greater exclusion and isolation, family separation, unstable housing or homelessness and imprisonment. These factors alongside an increased risk of withdrawals in the absence of treatment mean that social distancing, self-isolation or shielding advice is more difficult to follow. We describe 3 MAT Service Innovations During the Pandemic incorporating

- A Low Threshold and Assertive Outreach medication assisted treatment Service
- Buprenorphine Microdosing to Enable Same Day Induction Onto Oral Buprenorphine
- Transitioning to an Injectable Long-Acting Buprenorphine Depot
Impulsivity and addictions: from early risk to clinical phenotypes

Symposium Chairs:

Dr. Antonio Verdejo-Garcia
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Dr. Marc N. Potenza,
Departments of Psychiatry, Neuroscience and Child Study, Yale University School of Medicine, New Haven, CT, USA; Connecticut Council on Problem Gambling, Wethersfield, CT, USA; Connecticut Mental Health Center, New Haven, CT, USA; Wu Tsai Institute, Yale University, New Haven, CT, USA
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Impulsivity, encompassing behaviours characterized by little forethought, reflection, or consideration of the consequences of an action or decision, is associated with vulnerability to and chronicity of substance and behavioural addictions. However, the biological and cognitive mechanisms that underpin these behaviours are complex and partly unknown. In this symposium, presenters will provide updates into novel approaches to discover and measure the neurobiological and neuropsychological drivers of impulsive behaviours manifested in addictive disorders. Dr. Potenza will present on the International Society for Research and Impulsivity and preclinical and clinical efforts and research aiming to advance our understanding of different forms of impulsive behaviours and their relevance to substance and behavioural addictions. Dr. Anastasio will describe findings in a rodent model suggesting that antecedent motor impulsivity relates to cocaine relapse and may represent a relapse prevention target in humans. Dr. Sanchez-Roige will present on cutting-edge genetic approaches to reveal novel biological pathways that confer vulnerability to impulsive behaviours and could potentially become biomedical treatment targets. Dr. Verdejo-Garcia will introduce a novel assessment method to digitally phenotype various cognitive aspects of impulsive behaviours using an online interface, and present on large-scale research and clinical utilities of this innovative tool. Dr. Anderson will present on the link between impulsive tendencies and craving states by leveraging online assessment tools and online treatment services to uncover the impulsive mechanisms associated with the intensity of craving. Together, this symposium will cover a range of novel research and clinical applications tapping into the link between impulsivity and addictive disorders’ risk and clinical presentation, providing participants with novel research tools and clinically relevant information.
Pivoting During the Pandemic: Sharing experiences of online Addiction Medicine Training

Organizer: Dr. Cornelis A. J. De Jong
Emeritus professor in addiction and addiction care at the faculty of social sciences of the Radboud University Nijmegen, the Netherlands.
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This presentation presents the results of a study done to explore the attitudes of doctors (thoughts, feelings and behaviours) when in need of help from a colleague or when having to offer professional care towards a colleague. This was done using a mixed design. First, rich cases were selected and used for qualitative analysis. Then the remaining questionnaires were coded and the answers were used for quantitative analysis in order to determine differences between cultures, gender and age groups.

The imaginary situation elicited a variety of, mostly negative, thoughts, feelings and behaviour, most commonly: anxiety, fear, insecurity and nervousness. Behaviour was mostly influenced by thoughts and different thoughts would elicit similar feelings. The negative thoughts and feelings before the appointment did not always lead to a delay in seeking help, instead it mostly led to more preparation before a consultation. Besides, during the appointment people reported more positive thoughts than before. Several differences were found between the different cultures, genders and age groups. Dutch respondents were less fearful than the others and more concerned about the knowledge of the other doctor. Women filled out the questionnaires more extensively than men and reported relatively more fearful thoughts and feelings. The youngest respondents felt most anxious, while the eldest respondents would be most confident.

We will present several new starting points for further research about the cultural, gender and age differences when seeking help or when having to help a colleague being-patient and cognitive behavioural therapy as a possible tool used to change the reaction chain.

Online Teaching of Leadership to Addiction Specialists during COVID-19: Lessons Learned
Presenter: Dr. Lucas Pinxten
Email: lpinxten@gmail.com

In the training for addiction medicine specialist leadership is an important part of the whole package. During COVID the course had to be given only online. In the presentation adaptations on the face-to-face course and the student’s evaluations will be presented. Hints for a blended version will be given.

Public Health online
Presenter: Dr. Hans Dupont
Email: h.dupont@mondriaan.eu

analysis of who participated in our MOOC with a huge increase in participants during the COVID-epidemic, we’re now at over 22'000 participants. With details on profiles, performance and exchange between students. So it’s a reflexion on an e-learning method in different languages (English, Spanish, French, Russian and more recently German and Italian).

Online seminars on improving help seeking behavior in medical doctors
Presenter: Dr. Anju Dhawan
Email: dranjudhawan@gmail.com

In the Netherlands and Lithuania online seminars were given to addiction medicine specialists and psychiatrist in training. The outline of the seminars and the satisfaction with it will be presented.
Barriers in help seeking behaviour in medical doctors
Presenter: Leendert van Rijn  
Email: lvanrijn@vnn.nl

The barriers were investigated in a qualitative study in medical doctors in Lithuania, Indonesia and the Netherlands. The results provide tools for training medical doctors how to ask for help and how to deliver help for a doctor as a patient.

A global survey on Training Needs in Addiction Medicine
Presenter: Enjelina Hanafi  
Email: enjelinehanafi@gmail.com

This will be a proposal as a follow-up of the survey of Gabrielle Welle-Strand a few years ago on addiction medicine training. In this follow-up the same questions will be used and the TNA will be added to it. This presentation is also to make ISAM members enthusiastic to participate.
Strengthening the global focus on addictions: Yale Global Addictions Faculty Network.

Symposium Chairs:

Dr. Marek C. Chawarski
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Dr. Marc N. Potenza,
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Global, international aspects of addictions are an important focus among researchers, clinical practitioners, and scholars at Yale University. The Yale Institute for Global Health encourages faculty members at Yale to form long-term, collaborative academic and research partnerships centered on thematic or geographic areas. In the Spring of 2021, the Yale Global Addictions Faculty Network was established. The Network includes a multidisciplinary group of Yale faculty working on research, clinical care, education, prevention, and policy pertaining to individuals with addictions or unhealthy substance use. Through scheduled meetings, the Network offers a space for broad discussions across disciplines that aim to stimulate collaborations with global community partners. The Network discussions also focus on international drug policy and aims to become a forum for hosting invited presentations and conferences. We will present overviews of international collaborative research and educational efforts of the network members.

Presenters
Dr. Marek C. Chawarski will describe the formation of the Yale Global Addictions Faculty Network and present on Longstanding Multifaceted Collaboration between Yale University and the Universiti Sains Malaysia in Penang, Malaysia.
Dr. Theddeus Iheanacho will present on Addiction Mini-Residency Curriculum for Primary Healthcare Workers in Nigeria.
Dr. Kaveh Khoshnood, will present on Rapid Situational Assessment of Substance Use among Lebanese nationals and Displaced Populations in Lebanon.
Dr. Marc Potenza will present on global research initiatives involving ISAM, the World Health Organization and other entities to address substance use and addictive behaviors in the setting of COVID-19.
Drs. Ellen Edens and Brent Moore will present on Coursera online course Addiction Treatment: Clinical Skills for Healthcare Providers. Together, the presentations offer a glimpse of some of the exciting work being done by the Yale Global Addictions Faculty Network and its partners to address in a global fashion concerns related to substance use and addictive behaviors.
The motivational background of gambling and gaming behavior

Presenter: Dr. Zsolt Demetrovics
Centre of Excellence in Responsible Gaming, University of Gibraltar, Gibraltar, Gibraltar
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Co-Authors:
Zsolt Horváth
Anna Magi
Orsolya Király (Institute of Psychology, ELTE Eötvös Loránd University, Budapest, Hungary)

Drinking motives have been identified as the most proximate predictors of alcohol consumption, explaining up to 50% of the variance of adolescent alcohol use. Recently several efforts have been made to explore the motivational background of other addictive behaviors as well. This presentation aims to summarize the current developments regarding the understanding of the motivational background of gaming and gambling behavior. The efforts to reveal the motives related to gambling and gaming showed that while some of these motives are similar than those identified in relation to alcohol use, others might be specific for these behaviors. Furthermore, the development of psychometrically sound measurement tools (i.e., Gambling Motives Questionnaire [GMQ and its revised versions], Motives for Online Gaming Questionnaire [MOGQ]) opened the door for assessing the relationship between motivates and problem severity, as well as to understand the mediating role of the motives between personality characteristics, psychiatric symptoms and the severity of gaming and gambling problems.

Learning Objectives: By the completion of this presentation, attendees will 1) become familiar with the theoretical background and assessment of the motivational factors in gambling and video game use. They (2) will also understand the direct and mediating role of the motives between the psychological characteristics and gambling/gaming problems.
Genome and phenome-wide association establish the role of CADM2 in impulsivity in humans and mice

Presenter: Dr. Sandra Sanchez-Roige
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Email: sanchezroige@health.ucsd.edu

Co-Authors:
Mariela V Jennings, University of California San Diego; Hayley Thorpe, University of Guelph; Jared Young, University of California San Diego; Sarah L Elson, 23andMe, Inc.; Jibran Khohar, University of Guelph; Jin Yi Wu, University of California San Diego; Samuel Barnes, PhD, University of California San Diego; Amanda Barkley-Levenson, University of California San Diego; 23andMe Research Team; Sevim Bianchi, University of California San Diego; Sarah L Elson, 23andMe, Inc.; Pierre Fontanillas, 23andMe, Inc.; Jibran Khohar, University of Guelph; Jin Yi Wu, University of California San Diego; Hayley Thorpe, University of Guelph; Jared Young, University of California San Diego; Abraham A Palmer, University of California San Diego.

Objective: Impulsivity, which has been defined as “actions which are poorly conceived, prematurely expressed, unduly risky or inappropriate to the situation, and that often result in undesirable consequences”, is an endophenotype for a constellation of psychiatric diseases, particularly substance use disorders. We previously performed genome-wide association analyses (GWAS) of impulsive personality traits measured via two of the most well-established impulsivity questionnaires, the Barratt Impulsiveness Scale (BIS-11) and the Impulsive Personality Scale (UPPSP). Our work revealed that, whereas there is some common genetic overlap across impulsivity facets, the overlap is incomplete - suggesting that each impulsivity domain is governed by different biological mechanisms. One of the common loci implicated in impulsivity is located in the genomic region including the gene Cell Adhesion Molecule 2 (CADM2). Although CADM2 is thought to mediate synaptic plasticity and it is enriched in the frontal cortex and striatum, which are regions that regulate reward and inhibitory processes, the role of this gene on impulsivity remains unclear. Here we sought to further explore the biology of impulsivity, and provide the first trans-ancestral and cross-species exploration of the role of CADM2 on behavior.

Methods: In a first approach, we extended upon our earlier studies by including up to 133,517 23andMe participants of European ancestry. In a second approach, we provide validation of the CADM2 loci via phenome-wide scan (PheWAS) in the global 23andMe cohort of up to 3 million participants. In a third approach, we produced Cadm2 knockout mice, and we tested them in a broad battery of behavioral tasks that included measures of impulsivity.

Results: In general, we found that impulsivity traits showed modest chip-heritability (~6-10%), and moderate genetic correlations (r_G=20-50%) with other personality traits, such as neuroticism and risky-taking; an array of psychiatric traits, including substance abuse, ADHD, depression; socioeconomic variables, including educational attainment; and medical phenotypes, such as chronic pain, insomnia and coronary artery disease. Reassuringly, we replicated results from our earlier study that examined these traits in a smaller cohort, such as CADM2, as well as found novel associations, such as with DRD2, CRHR1. PheWAS analyses replicated prior associations between CADM2 and risky behavior, in addition to revealing novel associations with allergies, anxiety, IBS, migraine, and others. Decreased expression of Cadm2 was associated with low risky responding in the mouse gambling task, and reduced waiting impulsivity in the 5-choice serial reaction time task. The effects were specific for impulsivity, and not emotionality or general locomotion.

Conclusions: We demonstrate a role for common genetic contribution to individual differences in impulsivity. We propose that genetic studies using research participants who are not ascertained for neuropsychiatric disorders may represent an efficient and cost-effective strategy for elucidating the genetic basis and etiology of genetically complex psychiatric diseases. We urge molecular studies to further understand the mechanisms whereby CADM2 affects behavior.

Learning Objectives: At the conclusion of the presentation, attendees will be able (1) discuss how population-based cohorts have revolutionized our understanding of complex traits; (2) describe how the use of questionnaires of impulsive personality, like the Barratt Impulsiveness Scale (BIS-11) and the Impulsive Personality Scale (UPPSP), can illuminate common genetic basis with substance use disorders and other psychiatric conditions and can be inexpensively measured in large cohorts; (3) describe the use of intermediate phenotypes to enable translational research.
Problematic pornography use shares features of compulsive sexual behavior disorder – but not all

Presenter: Dr. Stephanie Antons,
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Objective: Compulsive sexual behavior disorder (CSBD) has been included in the World Health Organizations ICD-11 as impulse-control disorder. In the last years, it has been discussed whether problematic pornography use (PPU) should be classified under the umbrella of CSBD or whether it may be better understood as a single entity belonging to addictive behaviors (Antons & Brand, 2021). Less is known on specific characteristics of unspecified CSBD. In addition, ethical considerations and moral incongruence related to pornography use have been associated with self-reported addictive use of pornography (Grubbs & Perry, 2019). The aim of the current study was to identify specific characteristics of PPU and unspecified CSBD with a special focus on psychopathology, self-regulation, addiction symptoms, ethical considerations, and aspects of craving to use pornography.

Methods: Data from 1105 participants have been analyzed. Questionnaires assessing symptoms of PPU and unspecified CSBD as well as on psychopathology, self-regulation, addiction symptoms, ethical considerations, and aspects of craving to use pornography were included in an online survey. Regression analyses were used with symptoms of PPU and CSBD as dependent variables.

Results: The findings illustrate that PPU shares features with CSBD. In both PPU and CSBD, aspects of craving to use pornography are significant predictors. Symptoms of obsessive-compulsive disorder seem to be less involved in PPU than in CSBD; symptoms of anxiety are significant predictors for PPU but not CSBD. Ethical considerations, moral incongruence and aspects of self-regulation seem to be more important in CSBD than in PPU.

Conclusions: PPU has often been considered as a subtype of CSBD. The current data demonstrate that unspecified CSBD and PPU share some features (e.g. the relevance of craving) but that they also differ regarding psychopathology, aspects of self-regulation and ethical considerations. These differences may be indicators for different etiologies of PPU and unspecified CSBD.

Learning Objectives: By the completion of this presentation, attendees will have a core understanding of commonalities and differences between PPU and CSBD.
BIG Updates: Current research in behavioral addictions from the Behavioral Addictions Interest Group

Symposium Chairs:

Elisa Wegmann, General Psychology: Cognition and Center for Behavioral Addiction Research (CeBAR), University of Duisburg-Essen, Duisburg, Germany
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Behavioral addictions have become established in psychiatric nomenclature systems including the DSM-5 and ICD-11. ISAM has an Interest Group focusing on behavioral addictions (the Behavioral Addictions Interest Group). In this symposium, presenters will provide updates from different jurisdictions regarding behavioral addictions.

Presenters:
Drs. Elisa Wegmann (Germany) and Matthias Brand will present on cognitive and affective processes in gaming disorder and problematic social network use, considering cue reactivity, craving, attentional biases, inhibitory control, executive functions, and risky decision-making.

Dr. Zsolt Demetrovics (Gibraltar) and colleagues will present on gambling and gaming motivations and the development of psychometrically sound instruments to assess these domains and their correlates.

Dr. Marc Potenza (USA) and colleagues will present on negative reinforcement motivations for gambling and gaming and their clinical correlates in adolescents. They note how fewer adolescents report negative reinforcement motivations than positive ones for gambling and how negative reinforcement motivations for gambling and gaming appear particularly common among youth from underrepresented minority groups.

Dr. Nady Guebaly (Canada) and colleagues will present on declining problem gambling prevalence in the setting of increasing opportunities in Canada, comparing recently collected data from over 24,000 respondents with data collected close to two decades earlier. Together, this symposium will cover a range of behavioral addictions from multiple perspectives, providing participants with clinically relevant information.
Cue-based Cognitive Interventions for Addiction Medicine: Current State and Implications

Overview
Organizer: Dr. Hamed Ehktiari
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This symposium addresses the recent progress for developing novel cognitive interventions for addiction treatment by integration of drug cues that were hitherto found to be promising approaches to supplement addiction treatment and rehabilitation.

Therapeutic interventions in addiction medicine, including pharmacological or psychosocial therapies, have been mainly focused on directly addressing addictive behaviors, especially drug use and urges to use drugs. However, the neurocognitive deficits and their influence in recovery process are often overlooked as crucial components of substance use disorders. Recent advances in cognitive neuroscience have provided scientific foundations for developing cognitive interventions as a means of facilitating recovery from drug addiction and other addictive behaviors.

In the clinical context, cue-exposure therapies and cue-based interventions for addiction recovery have been developed to extinguish the conditioned craving-provoking effects of drug cues using extinction procedures. Due to the salient content of drug-related memories formed during drug-taking behaviors, certain stimuli become encoded with reward contingencies associated with drugs. As a result of this learning processing, drug-paired stimuli acquire incentive motivational properties that change them into salient cues. Therefore, cognitive interventions that include a cue-based component could potentially alter the related motivational and emotional salience of drug cues and reduce the risk of relapse.

In the proposed symposium, we aim to review several cognitive interventions that are cue-based and have recently shown to have positive results in the process of addiction treatment. Despite the variation of targeted cognitive domains (e.g., working memory, inhibitory control, attentional bias, episodic future thinking) across studies that probed into this issue and will be presented in this symposium, promising results have been achieved in enhancing targeted cognitive functions and addiction treatment outcomes that highlights the need for incorporating cue-based cognitive interventions into other therapeutic approaches that are used more commonly in addiction medicine.

Co-Chairs:
Hamed Ekhtiari (University of Minnesota, USA), Antonio Verdejo-García (Monash University, Australia).

Speakers:
Hamed Ekhtiari (University of Minnesota, USA)
Victoria Manning (Monash University, Australia)
Samantha J Brooks (Liverpool John Moores University, UK)
Parnian Rafei (University of Tehran, Iran)
Andrew Jones (University of Liverpool, UK)
Antonio Verdejo-García (Monash University, Australia)
Gambling and Problem Gambling in Canada 2002-2018: The AGRI Comparisons

Presenter: Nady el-Guebaly
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Authors
Robert I. Williams
Carrie A. Shaw
Yale D. Belange
Rhys Stevens

Objective
This national project aimed to examine the inter-provincial rates and patterns of gambling participation in 2018 and compare them with 2002 data.

Method
A Questionnaire was administered to 24,982 individuals aged 15+ as part of the 2018 Canadian Community Health Survey.

Results
In 2018, 66.2% of people in Canada engaged in some type of gambling, primarily lottery and/or raffle tickets. The most important inter-provincial difference was in electronic gambling machine (EGM) participation. The overall pattern of gambling in 2018 was similar to 2002 although, despite increased opportunities, participation was much lower in 2018, particularly for EGM and bingo. Only 0.6% of the population was identified as problem gamblers, with an additional 2.7% at-risk gamblers. There was an overall 45% decrease in the prevalence of problem gambling since 2002. These data suggest the novelty of gambling has worn off, with more people aware of potential harm, people being removed from the population pool of problem gamblers, increased industry/government efforts to improve gambling safety and an aging population.
In the 16 year interval, a couple of features received additional consideration. Comparative online gambling prevalence in adults 18+ elicited 1% in 2002 versus 6.4% in 2018, but with lower proportion of at-risk and problem gamblers in 2018. A disproportionate concentration of EGMs were in geographic areas with the highest concentration of Indigenous people associated with higher substance use.
Behavioral Signature Identified for Relapse Vulnerability in a Rodent Model of Cocaine Use Disorder

Presenter: Dr. Noelle C. Anastasio, Assistant Professor, Pharmacology and Toxicology, Center for Addiction Research, University of Texas Medical Branch, USA
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Authors: Ashley E. Smith, PhD, University of Texas Medical Branch; Kathryn A. Cunningham, PhD, University of Texas Medical Branch

Objective: Relapse is a dynamic, essential barrier to recovery in substance use disorders. Relapse is often precipitated by exposure to drug-associated cues and has been tied to impulsive behavior, particularly in cocaine use disorder. Motor impulsivity is characterized by impulsive action or the inability to withhold a premature response. Here, we tested the hypothesis that phenotypic levels of motor impulsivity may predict drug-seeking behavior following extended abstinence from cocaine.

Methods: Naïve male Sprague-Dawley rats (n=48) were trained to stability on the 1-choice serial time reaction (1-CSRT) task and phenotyped as high impulsive (HI) or low impulsive (LI). Rats were then trained to self-administer (SA) cocaine (0.75 mg/kg/inf) until stability on a fixed ratio 5 schedule of reinforcement, followed by reinitiation of stable 1-CSRT task performance. On the day corresponding to 30 days of abstinence from cocaine SA, rats underwent a drug-seeking test session in which lever presses were reinforced with the discrete cue complex previously paired with drug infusion.

Results: Acquisition of cocaine SA and the cumulative levels of cocaine intake observed did not differ in HI vs. LI rats. Rats identified as HI or LI retained their original motor impulsivity phenotype during 30-days of abstinence from cocaine SA, with HI rats exhibiting increased lever presses for cocaine-associated cues relative to LI rats.

Conclusions: These data suggest that antecedent levels of motor impulsivity are not a major driver of cocaine intake under the present conditions, but motor impulsivity is predictor of cocaine-seeking during extended abstinence. Importantly, these results demonstrate the efficacy of the motor impulsivity endophenotype in predicting relapse-like behaviors. Identification of motor impulsivity may provide more accurate and tailored diagnoses and/or treatments for patients, which could improve treatment outcomes, especially prevention of relapse.

Learning Objectives: By the completion of this presentation, attendees will be able to:

- Describe a translational model of motor impulsivity and relapse vulnerability
- Discuss the relationship between high trait motor impulsivity and cocaine cue-induced seeking behavior.
Withdrawal and Tolerance as Related to Compulsive Sexual Behavior Disorder and Problematic Pornography Use Based on a Nationally Representative Sample in Poland

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Michał Lew-Starowicz, Prof., Centre of Postgraduate Medical Education, Warsaw
Shane W. Kraus, Prof., University of Nevada, USA

Objective: Withdrawal symptoms and increased tolerance for sexual stimuli are important features of the disorder phenotype according to the addictive model of compulsive sexual behavior disorder (CSBD) and problematic pornography use (PPU). However, hitherto, clear empirical evidence verifying this claim has been lacking. We designed a study aimed to collect information on specific characteristics of withdrawal and tolerance. We investigated the presence and features, including their frequency and strength, both for individuals with and without CSBD and PPU.

Methods: The study was preregistered and the sample (n=1541) was representative of the Polish adult population. We investigated the role of self-reported withdrawal symptoms and tolerance for CSBD and PPU symptom severity, controlling for other important factors (age, sex, frequency and duration of pornography use, relationship status) in an online survey.

Results: Both withdrawal and tolerance significantly predicted CSBD (β=.34; p<.001 and β=.38; p<.001, respectively) and PPU (β=.24; p<.001 and β=.27; p<.001, respectively) symptoms in the general population. The most prevalent withdrawal symptoms (out of 21 investigated types) appearing as a result of withdrawing from or limiting sexual activity, reported by the study participants were: more frequent sexual thoughts which are hard to stop (for participants above the diagnostic threshold for CSBD: 65.2%; above the diagnostic threshold for PPU: 43.3%), difficult to control level of sexual desire (CSBD: 57.6%; PPU: 31.0%), increased overall arousal (CSBD: 37.9%; PPU: 29.2%), irritability (CSBD: 37.9%; PPU: 25.4%), sleeping problems (CSBD: 36.4%; PPU: 24.5%) and frequent mood changes (CSBD: 33.3%; PPU: 22.6%).

Conclusions: Changes related to mood and general arousal noted in the current study were similar to the cluster of symptoms in a withdrawal syndrome proposed for gambling disorder and internet gaming disorder in DSM-5. The study provides important preliminary evidence on this understudied but crucial topic; current results have significant implications for understanding the etiology and classification of CSBD and PPU, inferences for the addictive model of CSBD, as well as for treatment and diagnosis of the disorder.

Learning Objectives: By the completion of this presentation, attendees will be familiar with preliminary evidence on the prevalence of 1) withdrawal symptoms in cognitive, emotional, and physical domains 2) increasing tolerance to sexual stimuli among individuals with and without CSBD and PPU, based on the sample representative of the Polish adult population.
Impulsivity and Behavioral and Drug Addictions

Presenter: Dr. Marc N. Potenza
Professor of Psychiatry, Child Study and Neuroscience, Yale School of Medicine
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Objective: Impulsivity is a multi-faceted construct that has clinical relevance. Translationally, preclinical and clinical studies suggest that different forms of impulsivity (e.g., response and choice) may be reliably assessed and linked to addictive behaviors. In humans, self-report and behavioral measures of impulsivity often factor independently and link to important aspects of addictions. To understand better impulsivity and how different aspects link to clinically relevant phenomena, the International Society for Research on Impulsivity was formed.

Methods: Translational research efforts will be described, as will human investigations involving clinical trials and neuroimaging results relating to impulsivity in addictions. Both substance and behavioral addictions will be considered from these perspectives, as will how impulsivity may relate to other constructs like compulsivity.

Results: The International Society for Research on Impulsivity has generated recommendations regarding the assessment of different forms of impulsivity across species. Specific impulsivity-related constructs may link across samples to addictive behaviors. Impulsivity appears to hold clinical relevance across multiple disorders including substance use, gambling, gaming, binge eating and compulsive sexual disorders.

Conclusions: Impulsivity represents a multi-faceted construct that is relevant to many psychiatric disorders including substance and behavioral addictions. Translating an improved understanding of these relationships into prevention, treatment and policy advances will be important, and efforts of organizations like the International Society for Research on Impulsivity and the International Society of Addiction Medicine can help ensure global impact of such work.

Learning Objectives: By the completion of this presentation, attendees will be able to:
- Discuss aspects of impulsivity
- Identify how collaborative research efforts may facilitate understanding impulsivity and related constructs across species in order to advance the public health of humans.
Addressing Substance Use and Addictive Behaviors: Global Considerations

Presenter: Dr. Marc N. Potenza  
Professor of Psychiatry, Child Study and Neuroscience, Yale School of Medicine  
Email: marc.potenza@yale.edu

Objective: Substance use and addictive behaviors represent global concerns that require international work to address appropriately. Different jurisdictions and populations experience varying concerns. Substance use and addictive behaviors have been impacted by current events including the COVID-19 pandemic.

Methods: Different collaborative approaches have been used to understand substance use and addictive behaviors in multiple jurisdictions. Methods have included surveys of community, clinical and provider samples and cognitive and neurocognitive assessments cross-sectionally and longitudinally, including prior to and following treatment. Policy initiatives related to substance use and addictive behaviors have been considered in international forums. These efforts have involved a large group of international investigators at multiple academic sites and affiliated with multiple organizations including the International Society of Addiction Medicine and World Health Organization.

Results: Survey findings have revealed changes in substance use and addictive behaviors during phases of the COVID-19 pandemic, and these changes have been observed in both cross-sectional and longitudinal studies involving children, adolescents and adults. Investigations into neurocognitive aspects of addictive behaviors suggest brain mechanisms related to the emergence of addictive behaviors and recovery from such behaviors. Studies integrating neuroimaging assessments into intervention trials suggest potential brain mechanisms underlying behavioral changes in addictions.

Conclusions: Global partnerships facilitate an improved understanding of substance use and addictive behaviors worldwide. Further collaborative research efforts involving multiple jurisdictions should help address the worldwide problems relating to substance use and addictive behaviors.

Learning Objectives: By the completion of this presentation, attendees will be able to:

- Describe changes that have been observed in substance use and addictive behaviors during the COVID-19 pandemic,
- Discuss how collaborative research efforts may facilitate addressing substance use and addictive behaviors across jurisdictions.
Negative Reinforcement Motivations in Youth Gambling and Gaming Behaviors

Presenter: Dr. Marc N. Potenza
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Email: marc.potenza@yale.edu

Authors: Zu Wei Zhai, PhD, Middlebury College
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Suchitra Krishan-Sarin, PhD, Yale School of Medicine.

Objective: Positive and negative reinforcement mechanisms have been implicated in both substance and behavioral addictions, although the latter are less well studied. Motivations for engaging in gambling and gaming are arguably less well understood in adolescents as compared with adults. Given that childhood and adolescence represent times for initial engagement in gambling and gaming behaviors and epidemiological data suggest that larger proportions of adolescents (as compared to adults) exhibit problems with gambling and gaming, more research is needed to understand positive and negative reinforcement motivations in youth. Here we sought to examine positive and negative reinforcement motivations for gambling and gaming in a large sample of adolescents.

Methods: Survey data from over 4000 high-school students were examined based on positive reinforcement motivations (to seek excitement) and negative reinforcement mechanisms (to relieve tension or anxiety) for engagement in gambling or gaming behaviors. Chi-square analyses and binomial and multinomial logistic regression models were conducted.

Results: Excitement-seeking gambling was acknowledged by 67% of gambling participants and was more prevalent among White males. Gambling perceptions were more permissive and at-risk/problem gambling was more frequent among adolescents with excitement-seeking gambling versus non-excitement-seeking gambling. Excitement-seeking gambling moderated relationships between at-risk/problem gambling and moderate and heavy alcohol use. Anxiety-motivated gambling was acknowledged by 6.4% of gambling participants, more prevalent among underrepresented minority youth (Black, Asian American, Hispanic) and associated with at-risk/problem gambling, more permissive attitudes towards gambling, and higher odds of heavy alcohol, drug use, smoking regularly, and violence-related measures. Anxiety-motivated gaming was more prevalent in boys and Hispanic and Asian adolescents and associated with less extracurricular involvement, poorer academic performance, more tobacco and other drug use, problematic internet use, depression and violence-related measures.

Conclusions: Positive and negative reinforcement motivations to engage in gambling and gaming show overlapping and distinct correlates. Negative reinforcement motivations may be particularly relevant to youth from underrepresented minority groups. The extent to which positive and negative reinforcement motivations factors may be targeted in interventions requires further study.

Learning Objectives: By the completion of this presentation, attendees will be able to:
- Discuss positive and negative reinforcement motivations underlying youth gambling and gaming.
- Recognize the sociodemographic and clinical correlates of these motivations in youth.
A longstanding and multifaceted collaboration between Yale University and Universiti Sains Malaysia

Presenter: Marek C. Chawarski
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Objective: Yale University, located in New Haven, Connecticut, is recognized as one of premier academic and research institutions in the US, with multiple educational, research, clinical, and other scholarly programs and centers focusing on a broad spectrum of substance use problems and behavioral addictions. Drug Research Centre (DRC) at Universiti Sains Malaysia in Penang, Malaysia, was established in 1973 and designated as Malaysian National Center for research on Drug Abuse. In 1978, DRC became a WHO Collaboration Centre on research and training in drugs of abuse, and in 2009 it was awarded the status of Higher Institution Centre of Excellence by the Ministry of Higher Education Malaysia.

Methods: In 2008, Yale and USM researchers initiated a collaborative effort aimed to synergistically advance research and clinical care in areas of opioid and stimulant use disorders, and HIV treatment and prevention. Later, Yale-USM collaboration extended onto developing international clinical and research training programs in addictions and evaluating drug use policies and clinical care systems for people who use drugs in Malaysia. The latest expansion of this longstanding collaboration includes establishing a human laboratory and clinical research program at USM to evaluate kratom, a plant based psychoactive substance.

Results: Within the scope of this collaboration, several USM researchers completed short-term visiting appointments at the Department of Psychiatry at Yale and Yale faculty worked on research and educational programs at USM, and Yale students had short term visits exchanges at USM. Our collaboration has been supported by several NIDA grants and USM received several grants from the Malaysian government to work with Yale researchers. We also collaboratively published articles in peer-reviewed journals, book chapters, and expert reports for national and international organizations.

Conclusions: In our presentation, we will describe key milestones and major achievements stemming from this collaboration, as well as challenges of maintaining a productive international collaboration.

Learning Objectives: By the completion of this presentation, attendees will be able to:
• Describe the international collaboration between Yale University and Universiti Sains Malaysia
• Discuss the achievements and challenges of successfully maintaining a longstanding collaboration involving teams of international researchers.
Properties of the Problematic Pornography Consumption Scale (PPCS-18) in Community and Subclinical Samples in China and Hungary

Presenter: Dr. Lijun Chen
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Marc N. Potenza, PhD, Yale School of Medicine.

Objective: Several scales assessing problematic pornography use (PPU) have been developed. However, most previous studies have used primarily nonclinical and Western samples to validate these scales. Thus, further research is needed to validate scales to assess PPU across diverse samples, including subclinical populations. The aim of the present study was to examine and compare the psychometric properties of the PPCS-18 in Hungarian and Chinese community samples and in subclinical men.

Methods: Samples of Chinese community men (N1 = 695), subclinical men who were screened for PPU using the Brief Pornography Screen (N2 = 4651), and Hungarian community men (N3 = 9395) were recruited to investigate the reliability and validity of the PPCS-18.

Results: Item-total score correlation, confirmatory factor analyses, reliability, and measurement invariance tests showed that the PPCS-18 yielded strong psychometric properties among Hungarian and Chinese community men and indicated potential utility in the subclinical men. The network analytic approach also corroborates that the six factors of the PPCS-18 can reflect the characteristic of the participants from different cultural contexts, and participants from community and subclinical populations.

Conclusions: The PPCS-18 had strong psychometric properties in community men from Hungary and China, and subclinical men from China who reported poorly controlled pornography use. Thus, the PPCS-18 appears to be a valid and reliable measure to assess PPU across specific Western and Eastern jurisdictions and may be used among subclinical individuals. Furthermore, relationships between the PPCS-18 domains also can reflect distinct characteristics of different populations, and the current findings suggest that withdrawal and tolerance are important to consider in PPU. The findings advance understanding by reporting subclinical and community samples in China, expanding the generalizability of the PPCS-18, and exploring relationships between different symptom domains across cultures.

Learning Objectives: By the completion of this presentation, attendees will be able to:
- Identify a scale assessing problematic pornography use (PPU) named PPCS-18 demonstrated high generalizability across cultures and community/subclinical men
- Describe how withdrawal and tolerance may be important to consider in PPU.
Rapid Situational Assessment of Substance Use among Lebanese nationals and Displaced Populations in Lebanon

Presenter: Dr. Kaveh Khoshnood
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Objectives: Pre- and post-migration stress and trauma are risk factors for substance use disorder (SUD) among refugees and populations in humanitarian crisis settings. Despite the connection, the problem of substance use among displaced populations is a neglected area of public health. The civil war in Syria that displaced 1.1 million Syrians to Lebanon. To our knowledge, there has not been any scientific investigation on substance use among displaced populations in Lebanon and how that use compares to use among Lebanese citizens. We conducted a pilot study to examine the current situation of SUD among Lebanese and displaced populations in the larger Beirut area and in an informal tent settlement in the Arsal region of Lebanon.

Methods: To obtain information about the use of psychoactive substances in Lebanon, we conducted a Rapid Situational Assessment (RSA). A convenience sample of 80 Lebanese and displaced populations who used psychoactive substances participated in individual semi-structured interviews conducted in the larger Beirut area and in an informal tent settlement. Data were analyzed utilizing a grounded theory inductive framework.

Results: The most common substances consumed among displaced populations were cannabis, Captagon (a pro-drug for amphetamine and theophylline), non-opioid painkillers, and heroin; among Lebanese, the range was broader and included psychedelics, amphetamine-type stimulants and cocaine, in addition to cannabis. For displaced populations, the most significant barrier to seeking treatment for SU was the lack of services available in the tent settlement and the surrounding area. Respondents recruited in Beirut were clients of harm reduction NGOs and although they reported greater access to SU treatment compared to respondents living in a tent settlement, they were deterred by the cost of these services.

Conclusions: These results highlight the importance of connection to and cost of services and the need to expand harm reduction and affordable treatment programs in Lebanon. Policies that improve programmatic responses are needed to address the specific service gaps in tent settlements.

Learning Objectives: By the completion of this presentation, attendees will be able to:
- Discuss SUD among forcibly displaced populations
- Describe potential interventions needed to reduce SUD among forcibly displaced populations.
A comparison of cognitive and affective processes in gaming disorder and problematic social networks use

Presenter: Dr. Elisa Wegmann  
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Objective: In the ICD-11 of the World Health Organization, gaming disorder has been included as disorder due to addictive behaviors. It is classified by impaired control over gaming, increased priority, and continuation or escalation of gaming despite experiencing negative consequences leading to significant functional impairments or marked distress. Besides others, the problematic use of social networks is discussed as potential “other specified disorder due to addictive behaviors”. Brand et al. (2020) suggest three meta-level criteria for considering potential addictive behaviors: 1) clinical relevance, 2) theoretical embedding, and 3) empirical evidence for underlying mechanisms. For a better understanding of convergent and divergent mechanisms, theoretical approaches are used to identify affective and cognitive processes involved in addictive behaviors. These include cue reactivity and craving, inhibitory control, attentional bias, executive functions, decision making, and working memory (Brand et al., 2019; Dong & Potenza, 2014).

Methods: The talk aims at summarizing theoretical considerations and recent studies which investigate the affective and cognitive processes in gaming disorder and problematic social-networks use. It also compares the involvement of these processes between both (potential) addictive behaviors.

Results: The findings illustrate that higher cue reactivity, craving, and attentional bias, and lower inhibitory control and executive functions as well as risky decision making are involved in both gaming disorder and problematic social-networks use. The number of empirical studies investigating affective and cognitive processes in problematic social-networks use is obviously lower compared with gaming disorder.

Conclusions: Affective and cognitive processes play a crucial role in the development and maintenance of gaming disorder and problematic social-networks use. Problematic social-networks use may be considered an addictive behavior based on the existent empirical evidence. Identifying convergent and divergent mechanisms for gaming disorder and problematic social-networks use should be done systematically. Moreover, studies investigating interaction effects of these components are highly needed.

Learning Objectives: By the completion of this presentation, attendees will be able to:

- Identify theoretical approaches explaining processes involved in gaming disorder and problematic social-networks use,
- Present an overview about current empirical evidence regarding affective and cognitive processes involved in gaming disorder compared to problematic social-networks use
Recovery in different cultures. Is there a commun point?

Overview:
Presenters: Humanities Addiction ISAM group of reflexion:

Fatima Elomari (Moracco),
Helena Hansen (USA),
Sarah Namirenbe (Uganda),
Tomohiro Shirasaka (Japan),
Eric Peyron (France).

In psychosocial rehabilitation, the project for the patients is to have a better quality of life. The aim of rehabilitation is not only a reduction of symptoms (as depressive mood, anxiety, drinking alcohol, …) but also to obtain a place for the patients in the community.

Psychosocial rehabilitation is based on recovery, which is the ability to first have consciousness of the difficulties, to try to overgo these difficulties, and to learn about these difficulties. The fact to know difficulties can show them the way to find their own capabilities. It is the definition established by P. Deegan (1996). How can be seen this definition in different cultures?

We would like to present the different ways to think and define recovery in different cultures (Uganda, Moracco, USA and Japan).

Based on these presentations, we would like to try to answer the question: Can we find common criteria about recovery in different cultures?

We decided to base our reflexion on the phenomenology philosophy of Jan Patocka (tcheque philosopher). We would like to speak about globality of the care in recovery, the movement of recovery, the feeling of recovery, and the place of freedom in recovery.
Migrants, refugees and substance use disorders and challenges: a European perspective

Moderator: Dr Christos Kouimtsidis

Drug related challenges for refugees and migrants in Europe and the European societies
Presenter: Ourania Botsi, sociologist, Project Officer, Pompidou Group, Council of Europe

The issue is very complex and different stakeholders have unique and specific contributions they can make from their areas of expertise and resources. To that effect an effective collaboration between the different stakeholders, in particular between professionals from law enforcement, health care and social system and legal professionals, is essential and awareness and training to this extent must be a priority to overcome structural and procedural obstacles in effectively meeting challenges. Screening with the use of screening tools are a prerequisite for assessing needs and developing targeted interventions for the most effective and efficient use of resources.
Learning points: Social integration: a preventive mechanism for substance abuse and involvement to drug trafficking
Double stigma and xenophobia

Refugees and asylum seekers in Greece. Unmet physical and mental health needs
Presenter: Dr Chrysa Botsi, Scientific Coordinator for refugees’ health programme 2016-2019 (Project PHILOS I AMIF)

Since 2015, Europe has been facing an unprecedented arrival of refugees and migrants: more than one million people entered via land and sea routes mainly through Greece. During their travels, refugees and migrants often face harsh living conditions, limited access to healthcare, and violence in transit and host countries.
The national health system and humanitarian actors on the field faced huge challenges trying to respond to the needs of transiting populations. Overcrowded reception centers and hotspots are highly demanding and are associated with severe disease burden. Public health risks arise both from health conditions during the journey and from health problems in the host country.
There is a lack of epidemiological health data and quantitative evidence on the refugees’ experiences and the mental health problems they face during their displacement. The importance of mental health services is underestimated throughout the EU. Most refugees claim that they had little or no access to information and assistance in relation to asylum procedures and mental health support
This highlights the importance of guidelines for medical screening, healthcare provision, and a well-managed transition to definitive medical facilities
Learning points: What is known about the physical and mental health care of migrants/refugees.
Challenges to health care providers

Intervention in the long-term accommodation sites for refugees-prevention and counselling services for addiction.
Presenter: Ms Savvopoulou Foteini, psychologist – therapeutic staff of KETHEA Mosaic

Since December 2017, the Centre for Treatment of Persons with Addiction (KETHEA) in collaboration with the International Organization for Migration (IOM), implements a special programme for refugees with addiction problems.
Following a mapping exercise of the field developed the following actions:
• Awareness raising seminars for professionals, regarding addiction issues (social scientists, interpreters, doctors, lawyers).
• Prevention actions addressed to unaccompanied minors and adults (women, young adults, parents).
• Access and provision of motivation enhancement and counselling for persons with addiction and the members of their families

The programme is provided in five different sites of the mainland and in chosen sites in the urban area of Athens.
Learning points: Analysis of the special conditions associated with the refugee identity
Examples of ongoing evaluation and good practice
Interest of Massive Open Online Courses during Covid-19 restrictions: the example of the MOOC “Drugs, drug use, drug policy and health”

Presenter: Dr. Barbara Broers
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Authors:
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Aymeric Reyre
Michel Kazatchkine

Objective: The MOOC “Drugs, drug use, drug policy and health”, an education project from the University of Geneva, was launched in June 2018, with 6 modules, in English and subtitled in French, Spanish and Russian. The objective was to analyse a change in participation rate and profiles during the Covid pandemic.

Method: analysis of the number and profiles of participants in the MOOC before March 2020, between March 2020 and March 2021, and after March 2021; analysis of quality of exams and assignments.

Results: whereas before the Covid restrictions the average number of new participants was around 35-50 per week, this number increased significantly (tenfold) from April 2020 onwards for a year. The total number of participants in October 2021 was 24’000. Compared to other MOOCs, there was a big proportion of Russian-speaking participants. More details regarding the participants (country, age, student or not, etc) will be presented, as well as the average number of videos seen, % of those who finished the whole course, and the quality of MCQs and exchange in the assignments.

Conclusion: The MOOC on drugs, drug use, drug policy and health offers free and accessible (depending on the available languages) teaching to a large variety of students, health workers and persons around the world, who are interested in the field of addictions, including in areas where evidenced-based information about substances (on e.g. harm reduction, opiate agonist treatment) is limited. This was also the case during Covid-19 related lockdowns. MOOCs can be integrated into regular teaching approaches in the addiction medicine field.
Online cognitive assessment of impulsivity mechanisms in addiction

Presenter: Dr. Antonio Verdejo-Garcia  
Professor (Research), Turner Institute for Brain and Mental Health, Monash University, Australia  
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Objective: Impulsivity, the tendency to trigger rapid responses without sufficient foresight, is associated with addiction vulnerability and chronicity. Despite knowledge that impulsivity is multifaceted and orchestrated by a complex set of neurocognitive systems, there are no comprehensive cognitive measures of this construct available for addiction specialists. We recently created a unified online cognitive test battery for measuring impulsivity (the Cognitive Impulsivity Suite or CIS). Here we will report evidence of construct and real-world validity of the CIS, and its ability to predict addiction-related problems in large-scale samples of community-dwelling and treatment-seeking adults; detailed results are reported in [1].

Methods: We administered the CIS, along with gold-standard measures of trait impulsivity (UPPS-P scale) and alcohol and drug use severity (Alcohol and Drug Use Identification Tests, AUDIT and DUDIT) in 1,056 healthy participants recruited through Amazon Mechanical Turk, and 578 community-dwelling participants including data from 259 treatment-seeking patients recruited through online counseling services for addiction treatment. We examined the construct validity of the CIS and its relationship with trait impulsivity and addiction severity within a structural equation modeling framework.

Results: We established the multifaceted structure of the CIS, which encapsulates three neurocognitive mechanisms implicated in impulsive behaviour: attentional focus (the ability to energise and sustain attentional resources to inhibit impulsive behaviours), information gathering (the ability to collect sufficient information before triggering a response), and monitoring / shifting (the ability to adjust action selection to prior positive and negative feedback). CIS indices of each of these mechanisms correlated with theoretically related traits as measured by the UPPS-P, indicating construct validity. We found that different cognitive mechanisms were associated with addiction problems in community versus clinical samples: Monitoring/shifting was associated with addiction problems in the Amazon Mechanical Turk sample, whereas information gathering was associated with the severity of these problems in patients.

Conclusions: We have validated a unified online test battery for impulsivity measurement that captures severity of addiction problems. The CIS can be feasibly implemented online, enabling large-scale and agile data collection and computing of results. Future studies are needed to apply the CIS in different substance and behavioural addictions and clinical settings.

Learning Objectives: By the completion of this presentation, attendees will be able to:

- Describe novel ways to assess impulsive behaviour
- Discuss the neurocognitive underpinnings of shifting severity in addiction problems.
Online training during Covid: Experiences from India

Presenter: Dr Anju Dhawan,
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Prior to covid, the teaching activities at the National Drug Dependence Treatment Centre (NDDTC) included clinical teaching as well as the formal, in-person academic programmes. The clinical teaching was carried out through outpatient brief case discussions in general addiction and speciality clinics and detailed discussion on inpatients. During the lockdown, the inpatient services were temporarily suspended so clinical teaching was confined to outpatient case discussions conducted virtually. The formal academic programme at NDDTC which was earlier held thrice a week with seminars, journal article reviews, case conference, debates and book reviews was shifted online following the onset of the pandemic.

Besides teaching the in-house resident doctors, NDDTC is also mandated to train in-service doctors from across the country. Firstly, online orientations of psychiatrists from across the country were conducted and the resource material developed was shared with them so that they could use it for conducting further training of medical officers. Secondly, online self-paced and live, online training programs (in form of webinars) are being conducted for the doctors and other health personnel working with the government hospitals and government-supported NGOs.

Academic activities have included a National CME on “ICD-11 – Disorders due to Substance Use and Addictive Behaviours: Developing a consensus”, a Symposium on Covid 19 pandemic and drug addiction treatment and a Symposium on school based interventions for substance use that shared digital resource material developed for children and parents on prevention of substance use.
Disentangling Impulsivity Processes Associated With Craving and Quality of Life in Individuals Seeking treatment for Stimulant Use

Presenter: Alexandra C. Anderson, BA, BPsys(Hons); Doctor of Philosophy (Clinical Psychology) Candidate, Turner Institute for Brain and Mental Health, Monash University, Australia
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Authors:
Dan I. Lubman, MB ChB, PhD, Eastern Health Clinical School, Monash University;
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Objective: Stimulant use disorder is underpinned by cognitive alterations leading to impulsive actions and choices, which have been associated with negative clinical outcomes, including higher drug craving and poorer quality of life. However, cognitive impulsivity is a multifaceted construct and current research has not unravelled which specific mechanisms predict these clinical outcomes. In this study we aimed to disentangle the key impulsivity processes associated with craving and quality of life in treatment-seeking individuals who used stimulants.

Methods: Cross-sectional study including 75 participants seeking treatment for stimulant use who were recruited through Counselling Online, a national treatment website for substance use problems. Measures included the cognitive impulsivity suite (a unified cognitive impulsivity battery parsing attentional control, information gathering, and monitoring of feedback/shifting mechanisms), the 21-item Monetary Choice Questionnaire (measuring impulsive choice), Penn Craving Scale and the social and psychological domains from the World Health Organization Quality of Life Scale—Brief.

Results: We found that after controlling for age, poorer monitoring of feedback/shifting significantly predicted higher craving (β=4.33 p=.014), although attentional control and information gathering were not significant predictors. In addition, steeper discounting of delayed rewards (impulsive choice) significantly predicted higher craving (β=.625 p=.011). Impulsivity processes did not significantly predict quality of life (psychological or social domains) after controlling for nuisance variables. Conclusions: We identified specific impulsivity mechanisms that are associated with higher craving in individuals seeking treatment for stimulant use, including poorer ability to monitor outcomes of past decisions and adapt future behaviour and a greater preference for immediate (rather than delayed) rewards. Understanding the cognitive drivers of substance craving in treatment-seeking stimulant users may help treatment services to tailor interventions aimed at improving these impulsive processes. These impulsivity processes should be assessed and trained early within the treatment process.

Learning Objectives: By the completion of this presentation, attendees will be able to:
• Recognize four underlying impulsivity processes
• Describe the impulsivity processes associated with craving and quality of life in people who use stimulants.
Poor Engagement in Substance Use Treatment and HIV services among Young People who Inject Drugs in India

Presenter: Dr. Lakshmi Ganapathi
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Objective: India is facing an alarming rise in injection of opioids. Among India’s ~850,000 people who inject drugs (PWID), over half are youth (YPWID: 15-29 years), who have the highest HIV incidence. We established Integrated Care Centers (ICCs) across 8 Indian cities, which provide single-window free HIV services and daily buprenorphine. We evaluated engagement of YPWID in substance use treatment and HIV testing at ICCs to inform interventions.

Methods: We retrospectively analyzed 1-year follow-up data for YPWID initiating buprenorphine between 1 January – 31 December 2018 across 8 ICCs. We used descriptive statistics to: (i) describe HIV testing and buprenorphine receipt, including receipt frequency, treatment interruptions, and treatment drop-out, and (ii) analyze differences in buprenorphine uptake between historical opioid epidemic regions (i.e., Northeast cities (NEC)) and emerging opioid epidemic regions (i.e., North/Central cities (NCC)). We used a multivariable logistic regression model to determine predictors of treatment drop-out within 6 months of initiation.

Results: 786 YPWID initiated buprenorphine (82% NCC vs. 18% NEC). 33% of YPWID in NCC, and 25% in NEC experienced ≥1 treatment interruption. About a third (34%) of YPWID in NCC vs. 57% in NEC dropped out within 6 months (p<0.0001). Over a 6-month period, 48% of YPWID in NCC vs. 62% in NEC received buprenorphine ≤2 times/week on average (p=0.0014). In multivariable models, being unemployed, HIV uninfected, and living in NEC were significant predictors of treatment drop-out by 6 months. Regular HIV testing was significantly lower in YPWID who received buprenorphine ≤ 2 times/week (7% vs. 23%, p <0.0001).

Conclusions: Despite co-located services, YPWID at ICCs have low buprenorphine receipt, retention and HIV testing uptake. Youth-responsive treatment models adapted to regional contexts are urgently needed to ameliorate these gaps.