



UNODC

United Nations Office on Drugs and Crime

In collaboration with



**World Health
Organization**

BOOK OF ABSTRACTS

**Scientific Consultation on Prevention of Drug
Use and Treatment of Drug Use Disorders**

Vienna International Centre | 08-10 December 2015

Disclaimer

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Under kind guidance and supervision of Dr. Gilberto Gerra, the Prevention, Treatment and Rehabilitation Section (PTRS) worked on the organisation of the Scientific Consultation and published this book of abstracts. Thanks are particularly extended to Anja Busse, Caecilia Handayani-Hassmann, Christina Gamboa, Elizabeth Mattfeld, Elizabeth Saenz, Emilie Finkelstein, Eva Kalf, Giovanna Campello, Hanna Heikkila, Igor Koutsenok, Moatez Chaouachi, Nataliya Graninger, Olga Parakkal, Stefanie Schmatz and Wadih Maalouf.

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UNODC would like to extend special gratitude to the speakers, who presented at the Scientific Consultation and contributed with their expertise to this book.

Foreword

In line with its mandate of promoting science-based interventions for the prevention and treatment of drug use disorders, UNODC organised a Scientific Consultation on Prevention of Drug Use and Treatment of Drug Use Disorders in collaboration with the World Health Organization from 8 to 10 December 2015 in Vienna. This event aimed to support Member States in building a solid bridge between science and policy, while prioritising the dignity of people affected by drug use disorders.

The Scientific Consultation brought together more than 30 leading researchers from around the world and over 200 policy makers from 85 countries to discuss the latest findings in drug prevention and drug dependence treatment. Central topics of the Scientific Consultation included the promotion of science-based approaches to drug use prevention and treatment of drug use disorders, as well as access to quality and ethical services for all those in need.

An essential part of UNODC's overall efforts is helping to ensure that the available science can be taken into account by policymakers, and that people receive care and treatment based on the most up-to-date science, as with any other health condition. This Scientific Consultation helped to advance these goals by providing a forum for experts and policy makers to work together to dispel ignorance and eliminate stigma; as well as to prevent the discrimination and marginalization of people who use drugs and who desperately need our support.

In response to the great interest shown by the scientific community, representatives of the Member States and International Organisations, UNODC has produced this book of abstracts to look beyond this event and to spread scientific understanding to a much broader audience. I hope this book will help answer any questions and raise awareness on issues related to the prevention of drug use and treatment of drug use disorders.

Sincerely,



Yury Fedotov
Executive Director
United Nations Office on Drugs and Crime

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Introduction

UNODC supports Member States in their efforts to increase access to drug dependence treatment, care and rehabilitation services that are based on scientific evidence, through worldwide advocacy, capacity building and expansion/development of drug treatment services.

UNODC has devoted a large proportion of its technical assistance efforts advocating for the recognition of drug use disorders, in particular drug dependence, as a multi-factorial health disorder affecting the brain, often following the course of a chronic, relapsing disease.

Thanks to the ongoing voluntary contributions from donors, UNDOC has been able to support more than 20 countries in various regions to i) assess the magnitude of their drug related problems and identify the gaps in their treatment systems; ii) systematically train health service providers on science-based treatment interventions; iii) improve the quality of treatment services, increasing availability and facilitating access to those in need; iv) monitor and evaluate interventions for further improvement.

To this regard, the aim of the Scientific Consultation on Prevention of Drug Use and Treatment of Drug Use Disorders was to promote the scientific understanding of evidence-based interventions, to support the Member States in the development of policies, strategies and methods based on rigorous scientific evidence to prevent and treat such disorders.

The overall goal of the Scientific Consultation was to help disseminating the state of the art knowledge on drug demand reduction amongst participants and to promote evidence based strategies, policies and initiatives. To this end, at the Scientific Consultation 2015 they had a chance to learn about a wide range of ethical and science-based drug prevention and treatment methods, as well as rehabilitation programs that have been proven effective in stopping or reducing the negative health and social problems caused by drug use disorders.

This event presented an opportunity for policy makers to witness how these evidence-based prevention and treatment methods can be applied to major policy issues and how the political and practical concerns about applying these methods can be resolved.

The consultation complemented the work done by UNODC and WHO in working with Member States on implementing drug prevention, treatment and rehabilitation interventions, which are integrated into the public health system and offer the population affected **nothing less** than the highest standards of medical care available for persons with any other chronic health condition.

Following the Scientific Consultation 2015, UNODC through existing technical tools and resources will continue to support Member States in their efforts to apply and put in practice this state of the arts knowledge. Some of these tools include The International Standards on Drug Use Prevention, International Standards of Treatment of Drug Use Disorders (forthcoming), Training materials for policy makers "Prevention Strategy and

Policy Makers", a training curriculum on treatment of substance use disorders specifically tailored for policy makers.

Agenda

Scientific Consultation on Prevention of Drug Use and Treatment of Drug Use Disorders

Vienna International Centre, Room C-1 | 08-10 December 2015

Tuesday, 08 December 2015

Time

08:30 - 09:15 **Registration of participants**

09:15 – 10:00 **Welcome and opening**

Yury Fedotov, Executive Director, United Nations Office on Drugs and Crime

Khaled Abdel-Rahman Shamaa, Ambassador, Chair of the UNGASS Board

*Vladimir Poznyak, Coordinator, Management of Substance Abuse,
Department of Mental Health and Substance Abuse, World Health
Organization*

Esbjörn Hörnberg, Chair, Civil Society Task Force

FUNDAMENTAL SCIENCE ON DRUG USE AND DRUG USE DISORDERS

Moderators: Aaron White and Gilberto Gerra

10:00 - 10:45 **Addiction and the Brain**

Aaron White

10:45 – 11:15 **Genetics of Substance Dependence: What We Know and How We Know It**

Joel Gelernter

11:15 - 11:45 **Early Is Better: Prevention in Early Childhood Can Reduce Drugs and Crime Later**

Sheppard Kellam

11:45 - 12:15 **The Epidemiology and Burden of Disease Due to Illicit Drug Use and Dependence**

Louisa Degenhardt

12:15 - 12:30 **Panel discussion**

12:30 – 14:00 **Lunch**

PREVENTION OF INITIATION OF DRUG USE AND ONSET OF DRUG USE DISORDERS

Moderators: William Crano and Gilberto Gerra

- 14:00 - 14:20** **Drug Prevention Programmes and Effectiveness: Environmental, Developmental and Informational Approaches** *David Foxcroft*
- 14:20 - 14:40** **Family Skills Prevention**
Wadih Maalouf
- 14:40 - 15:00** **Making Media Matter in Substance Prevention**
William Crano
- 15:00 - 15:20** **Challenges in Developing an Evidence-based Drug Prevention Strategy at a Country Level**
Pierre Arwidson
- 15:20 – 15:30** **Panel discussion, part 1**

PREVENTION OF INITIATION OF DRUG USE AND ONSET OF DRUG USE DISORDERS (continued)

Moderators: Harry Sumnall and Giovanna Campello

- 15:30 – 15:50** **European Drug Prevention Quality Standards**
Harry Sumnall
- 15:50 - 16:10** **Prevention of Prescription Drug Abuse**
Christopher Jones
- 16:10 - 16:30** **Gender Sensitive Drug Use Prevention**
Giovanna Campello
- 16:30 – 16:50** **Internet-Based Universal Prevention for Alcohol, Cannabis and New Psychoactive Substances**
Maree Teesson
- 16:50 – 17:00** **Panel discussion, part 2**
- 17:00** **Closing of the day**

Wednesday, 09 December 2015

CURRENT SCIENCE IN PSYCHOLOGICAL TREATMENT INTERVENTIONS

Moderators: Thom Browne and Igor Koutsenok

- 09:00 - 09:30 **Acute Toxic Effects of Drugs - Focus on Overdose Deaths**
Aaron White
- 09:30 - 09:50 **Low Threshold Interventions, Including Opioid Overdose**
Nicolas Clark
- 09:50 - 10:10 **Screening and Brief Interventions**
Vladimir Poznyak
- 10:10 - 10:30 **Addressing Psychological Trauma in Addiction Treatment**
Lisa Najavits
- 10:30 - 10:50 **Motivational Interviewing Training. Motivational Interviewing – Unlocking Intrinsic Motivation to Change**
Rhonda McKillip
- 10:50 - 11:10 **Recent Science on the Residential Treatment of Drug Use Disorders**
Phaedon Kaloterakis
- 11:10 - 11:25 **Panel discussion**

CURRENT SCIENCE IN PHARMACOLOGICAL TREATMENT INTERVENTIONS

Moderators: Adam Bisaga and Maree Teesson

- 11:25 - 11:45 **Opiate Substitution Treatment in the 21st Century** *John Strang*
- 11:45 - 12:05 **Long Acting Opioid Antagonists in the Treatment of Opioid Use Disorders**
Evgeny Krupitsky
- 12:05 - 12:25 **Long-term Mortality, Remission, Criminality and Psychiatric Comorbidity of Heroin Dependence: 11 Year Findings from the Australian Treatment Outcome Study**
Maree Teesson
- 12:25 - 12:45 **New Frontiers in the Treatment and Care of Patients with Psychostimulant Dependence**
Adam Bisaga
- 12:45 - 13:00 **Panel discussion**
- 13:00 – 14:15 **Lunch**

TREATMENT AND REHABILITATION INTERVENTIONS IN CLINICALLY SPECIFIC POPULATIONS AND SETTINGS

Moderators: Marta Torrens and John Strang

- 14:15 - 14:35** **Gender Sensitive Drug Dependence Treatment**
Gabriele Fischer
- 14:35 - 14:55** **Substance Use Disorders and Co-occurring**
Willem van den Brink
- 14:55 – 15:15** **Co-occurring Mental Health and Drug Use Disorders**
Marta Torrens
- 15:15 -15:35** **Responding to Poor Response**
John Strang
- 15:35 - 15:55** **Treatment of Drug Involved Offenders**
Igor Koutsenok
- 15:55 - 16:10** **Panel discussion**

GLOBAL EXPERIENCES – SUCCESSES AND CHALLENGES

Moderators: Brian Morales and Zhimin Liu

- 16:10 – 16:30** **Good Practice in Low and Middle Income Countries. The Case of Uganda**
David Basangwa
- 16:30 – 16:50** **Current Situation of Drug Abuse and the Models of Treatment in China**
Zhimin Liu
- 16:50 – 17:10** **UNODC Experiences in Pakistan and Afghanistan**
Manzoor Ul Haq (did not present)
- 17:10 – 17:30** **Good Practice in Low and Middle Income Countries, Latin America. The Perspective of Brazil**
Ronaldo Laranjeira
- 17:30 – 17:50** **The VCU Hubert H. Humphrey Fellowship Program in Substance Abuse Education, Treatment and Prevention**
J. Randy Koch
- 17:50 – 18:00** **Panel discussion**
- 18:00** **Closing of the day**
- 20:00** **Social Evening – Christmas Market Schoenbrunn**

Thursday, 10 December 2015

NEW FRONTIERS IN SUBSTANCE USE DISORDERS

Moderators: Wayne Hall

- 09:00 - 09:30 **Cognitive Behavioral Therapies**
Kathleen Carroll
- 09:30 - 09:50 **Treatment of Adolescents with Drug Use Disorders**
Sandra Brown (did not attend)
- 09:50 - 10:10 **What are the Adverse Health Effects of Cannabis?**
Wayne Hall
- 10:10 - 10:30 **New Psychoactive Substances**
Fabrizio Schifano
- 10:30 - 10:50 **From a Unified Vision of Addiction to the Development of a New Treatment**
Pier Vincenzo Piazza
- 10:50 - 11:10 **Panel discussion**

SCIENCE AT THE SERVICE OF POLICY MAKING

Moderators: Louisa Degenhardt and Gilberto Gerra

- 11:10 - 11:40 **Using Data Linkage to Examine the Effectiveness of Drug Dependence Treatment: an Analysis of the Impact of Opioid Substitution Therapy on Mortality and Crime**
Louisa Degenhardt
- 11:40 - 12:15 **Treatment Effectiveness - Why and How do Evidence-based Approaches Matter in the Treatment of Drug Use Disorders?**
Marica Ferri
- 12:15 - 12:40 **Panel discussion**
- 12:40 - 13:00 **Closing**
Aldo Lale -Demoz, Director Division for Operations, United Nations Office on Drugs and Crime (UNODC)
Vladimir Poznyak, Coordinator, Management of Substance Abuse, Department of Mental Health and Substance Abuse, World Health Organization

Session1

FUNDAMENTAL SCIENCE ON DRUG USE AND DRUG USE DISORDERS

Moderators: Aaron White and Gilberto Gerra

ADDICTION AND THE BRAIN

Aaron White
Senior Scientific Advisor to the Director
National Institute on Alcohol Abuse and Alcoholism (NIAAA)

Addiction is a chronic relapsing disorder characterized by a compulsion to seek and take a drug, loss of control over limiting use, and the emergence of a negative emotional state (e.g., dysphoria, anxiety, irritability) when access to the drug is prevented. With chronic drug use, adaptations in the brain lead to a reduction in the positive reinforcing effects of drugs and an increase in the discomfort that follows cessation of use. These changes can leave the user locked in a cycle of binging/intoxication, withdrawal/negative affect and preoccupation / anticipation (craving). We discuss our current knowledge about the brain mechanisms involved at each stage of the addiction process, beginning with the discovery of the reward system and the role of dopamine, and explore new knowledge about the role of stress circuitry in reinforcement and addiction.

About the author

Aaron White, PhD is the Senior Scientific Advisor to the Director at the National Institute on Alcohol Abuse and Alcoholism (NIAAA).

He received his PhD in Biological Psychology from Miami University in 1999. His graduate research focused on the brain mechanisms underlying alcohol-induced amnesia (i.e., "blackouts"). After completing two years of post-doctoral training in the Department of Psychiatry at Duke University Medical Center in 2001, he joined the faculty as an Assistant Professor. His research at Duke focused on the effects of alcohol on adolescent brain function and brain development, alcohol blackouts, adolescent substance abuse treatment and the development of substance abuse prevention and education initiatives. He joined NIAAA in 2008.

Dr. White's most recent scientific manuscripts examine hospitalizations for alcohol overdoses, drug overdoses and their combinations, trends in alcohol use among females relative to males, suicide related drug poisonings in adolescents and young adults, and the concurrent use of alcohol and alcohol-interactive prescription medications among the US population.

GENETICS OF SUBSTANCE DEPENDENCE: WHAT WE KNOW AND HOW WE KNOW IT

Joel Gelernter
Professor of Psychiatry, and
Professor of Genetics and Neurobiology; and
Director, Division of Human Genetics (Psychiatry)
Yale University School of Medicine.

Risk for such substance dependence traits as alcohol, nicotine, and cannabis dependence, is influenced both by genes and by environment. Recent progress in complex trait genetics, engendered primarily by new technology and new statistical methods, has been unprecedented in the history of biology; most of this progress has occurred in the last ten years. As a result we now know specific risk alleles for many substance dependence traits. As risk genes have been revealed, we are learning of new pathophysiology, guided to biosystems and biological pathways by knowledge of risk alleles. Proteins encoded by genes may identify new pharmacological targets, and genetic variation at some loci predicts treatment response. Results for alcohol, nicotine, and cocaine dependence are discussed, including clinical implications and next steps.

About the author

Dr. Gelernter is Foundations Fund Professor of Psychiatry and Professor of Genetics and Neurobiology; and Director, Division of Human Genetics (Psychiatry), at Yale University School of Medicine. He studied music and biology as an undergraduate at Yale University; completed his MD at SUNY-Downstate; and trained in psychiatry at Western Psychiatric Institute and Clinic (Pittsburgh) and the NIMH. He returned to Yale in 1988 to join the psychiatry faculty.

The research focus of his laboratory is genetics of psychiatric illness. This includes a range of behavioral phenotypes including cocaine, opioid, nicotine, cannabis, methamphetamine, and alcohol dependence, posttraumatic stress disorder (PTSD), panic, and other anxiety disorders. In addition, they study a range of intermediate phenotypes, such as neuroimaging measures; and basic issues in population and complex trait genetics.

The overall approach involves study of genetic polymorphism and sequence variation, on a molecular level, and from the perspective of population genetics, with studies based in the US, and collaborations across the US and in Thailand and Taiwan. Dr. Gelernter also co-leads the Substance Use Disorders section of the Psychiatric Genomics Consortium.

Dr. Gelernter's laboratory has published the first genomewide association studies (GWAS) for cocaine and opioid dependence, and pioneering GWAS studies of PTSD, alcohol dependence, and related phenotypes. All of these studies have resulted in the identification of novel risk loci. Whole-genome and whole-exome sequence studies of substance dependence traits are in progress.

EARLY IS BETTER: PREVENTION IN EARLY CHILDHOOD CAN REDUCE DRUGS AND CRIME LATER

Sheppard G. Kellam
Professor Emeritus
Johns Hopkins Bloomberg School of Public Health

An important early risk factor for later illicit drug abuse and crime is failure to adapt as early as the first grade of school to the classroom social task demands. These include paying attention and being able to concentrate, learning not to be disruptive or physically aggressive, developing good relationships with other children and learning the subject matter. A poor start at these tasks as early in school as first grade greatly increases the risk later school dropout, drug abuse, early entrance into crime and risky sex and incarceration in adolescence and well into adulthood. The discovery of these early risk factors has meant developing and testing prevention programs prior to and during the start of school and into early adolescence.

More tested and effective prevention programs are now available for higher risk mothers during pregnancy, for higher risk pre-school children and families, and other times of transition over the continuing life course. One program is named the Good Behavior Game (GBG) and is implemented by the first grade teacher to the entire classroom. After the first few weeks of 1st grade, all children are assigned to three teams each team with children with different levels of adapting to the student role. The GBG is played when the teacher announces "we are playing the game" which means teams obey classroom rules during this specified time. All teams can "win" by following classroom rules with less than a specified number of broken rules, but if one or more children commit more, the team is not rewarded. The teacher and the children systematically "play the game", three times a week early in the year with systematic increases in frequency over the year. Over the course of the first grade year the team's rewards evolve from small concrete to more mature activities. Such "universal" programs directed at total populations, are the first prevention level and can be integrated in a life course human services system starting early with universals.

We implemented and systematically tested the impact of GBG in first grade in large numbers of schools and first grade classrooms in partnership with the Baltimore City Public School System and the families, and with follow-up into early adulthood. The impact showed significant reductions among males in drug abuse disorders, violence and incarceration, early and risky sex, tobacco addiction and school failure as well as reduction in suicide attempts. Early aggressive behavior was more common among males who were much more likely to have had difficulty with the core social tasks in first grade. While much was accomplished with GBG among males with the early universal prevention into first grade classrooms, those who needed more became identified by their responses to GBG. The results from prevention programs like GBG, including others with benefit among females, could provide a base for a system of early prevention backed up by more specialized prevention and treatment over the life course.

About the author

Sheppard G. Kellam, M.D. is a public health psychiatrist who has played a major role in establishing concepts and methods for prevention science, as well as contributing to knowledge about early risk factors and their malleability. In close partnership with the Baltimore City Public Schools System he led three generations of large scale epidemiologically based randomized field trials testing universal preventive interventions in first and second grade classrooms directed at early antecedents of long-term problem outcomes. This work began in 1984 and is still continuing. The targeted outcomes included drug and alcohol abuse and dependence disorders, daily regular tobacco use, antisocial personality disorder, delinquency and incarceration, use of school based services as well as the centrally important outcome of school failure. All of these problem outcomes share the early risk factor of aggressive, disruptive classroom behavior as early as first and second grades. The intervention of particular importance is one known as the "Good Behavior Game", a classroom behavior management method for socializing children to the role of student while offering teachers a method for managing classroom behavior in a way that does not compete for instructional time. By young adulthood significant and meaningful reductions were found for all of the problem outcomes cited above (see Drug and Alcohol Dependence Supplemental Issue June 2008). The three generations of rigorous randomized field trials have been supported by: the United States National Institutes of Health: NIDA, NIMH, and NICHD over the last 4-5 decades.

THE EPIDEMIOLOGY AND BURDEN OF DISEASE DUE TO ILLICIT DRUG USE AND DEPENDENCE

Louisa Degenhardt
Professor, NHMRC Principal Research Fellow
National Drug and Alcohol Research Centre
University of New South Wales

Background: The global burden of disease (GBD) studies of 2010 and 2013 estimated the prevalence of amphetamine, cannabis, cocaine and opioid dependence and quantified their burden of disease (as measured in years of life lived with disability (YLDs), years of life lost (YLLs) and Disability-Adjusted life Years (DALYs)). New estimates of illicit drug use as a risk factor for other outcomes were also made.

Methods: We conducted systematic reviews of the epidemiology of drug dependence, and analysed results with a Bayesian meta-regression tool (DisMod-MR) to estimate population-level prevalence of dependence. We combined these estimates with disability weights to calculate prevalent YLDs, YLLs, and DALYs, and estimated YLDs, YLLs and DALYs attributable to drug use as a risk factor for other health outcomes.

Findings: Illicit drug dependence directly accounted for more than 17 million DALYs in 2013. Opioid dependence was the biggest contributor to this direct burden. The proportion of all-cause DALYs attributed to drug dependence varied more than 20-fold across regions, with a higher proportion of the burden in higher income countries. Injecting drug use as a risk factor for HIV and hepatitis C were significant additional contributors to disease burden. Suicide as a risk of amphetamine, opioid and cocaine dependence accounted for an additional >500,000 DALYs respectively. Regions with the highest rate of burden included High-Income North America, Sub-Saharan Africa, North Africa and the Middle East, and Australasia.

Interpretation: Illicit drug use is an important contributor to global disease burden. The contribution made to disease burden by opioid dependence and injecting drug use can be reduced by delivering opioid substitution treatment and NSP programs efficiently on the scale needed to have a population level impact. Nonetheless there are considerable evidence gaps, and estimates of illicit drug burden can be improved in future iterations of GBD.

Funding: Australian National Health and Medical Research Council; Australian Institute of Criminology (AIC) through the Criminology Research Grants Program; Australian Government Department of Health and Ageing.

About the author

Louisa Degenhardt is Professor of Epidemiology and NHMRC Principal Research Fellow at the National Drug and Alcohol Research Centre (NDARC) at UNSW. She was awarded her PhD in 2003, examining the comorbidity of drug use and mental disorders in the Australian population. She has honorary Professorial appointments at University of Melbourne's School of Population and Global Health, Murdoch Children's Research Institute, and University of Washington's Department of Global Health in the School of Public Health. Louisa conducts diverse epidemiological studies including analysis of large-scale community and clinical population surveys, data linkage studies focusing upon people with a history of drug dependence, pharmacoepidemiological studies of pharmaceutical opioid utilisation, post-marketing surveillance of new opioid medications, cohort studies of young people and of people using opioids.

Louisa's work documenting what is and is not known about the epidemiology and health effects of illicit drugs has shaped discourse at a global level, and she is regularly sought by researchers, NGOs, and UN agencies to collaborate and provide advice. Her work on illicit drug market surveillance, which continues today, is regularly used to inform policy and planning on health and law enforcement responses. Her data linkage work on opioid dependence, treatment and mortality is used by health and corrective services departments in Australia and internationally to evaluate the benefits and risks of treatment.

Sessions 2 and 3

**PREVENTION OF INITIATION OF DRUG USE AND ONSET OF DRUG USE
DISORDERS**

Moderators: William Crano and Gilberto Gerra

DRUG PREVENTION PROGRAMMES AND EFFECTIVENESS: ENVIRONMENTAL, DEVELOPMENTAL AND INFORMATIONAL APPROACHES

David Foxcroft
Professor of Community Psychology and Public Health
Oxford Brookes University

Descriptions of prevention as primary or secondary, or universal, selective and indicated, set out the different forms that drug misuse prevention can take. However, these classifications are limited because they do not consider how prevention interventions work. For example, the function of some prevention programmes is to improve the development of young people through the enhancement of social competence and social skills. In this talk I set out a framework for describing prevention that brings together both form and function into a new prevention taxonomy. Examples of prevention programmes that emphasise the development of social competence and social skills in young people are given to illustrate this approach.

About the author

David Foxcroft PhD is Professor of Community Psychology and Public Health at Oxford Brookes University in England. His programme of work is focused on understanding (and improving) behaviour in context, especially how social structures (e.g. families, schools, communities, employers, regulation, government) can support improved health and wellbeing in communities and populations. A focus is the prevention of risk behaviours in children and young people. David is President of the European Society for Prevention Research, an Editor of the International Cochrane Collaboration Drug and Alcohol Group, a recipient of the U.S. Society for Prevention Research Tobler Prize for his Cochrane work, and co-author of the prize winning book "Drug Policy and the Public Good".

Email: david.foxcroft@brookes.ac.uk

FAMILY SKILLS PREVENTION

Wadih Maalouf
Programme Coordinator
Prevention, Treatment and Rehabilitation Section
Drug Prevention and Health Branch
United Nations Office on Drugs and Crime

Families can be one of the strongest protective factors in the lives of children and early adolescence. The programme prevents drug use, substance abuse and other risky behaviours (particularly violence) through evidence-based programmes that work with parents and children. While the evidence on the effectiveness of family skills programme in preventing risky behaviours in children and adolescents is growing, a significant gap remains in the areas of adaptability and practicality of implementing such initiatives in low and middle countries.

This presentation provides an overview of the value of family skills as documented through results from a nationally representative cohort study. This study relied on a unique 2 generation and nationally representative cohort of families from the US identified from the National Longitudinal Survey of Youth 1979 (NLSY79) to assess the major role played by parenting skills in mediating the transmission of substance use behavior to the second generation.

UNODC as part of its global initiative to advocate for evidence based prevention programming, as per the International Standards on Drug Use Prevention, has been implementing a global project piloting family skills programmes in at least 18 countries in 5 different geographical regions (Central Asia, Central America, South America, South-East Europe and in East Africa.

The presentation also provided an overview of how UNODC is translating this global knowledge into a technical capacity building exercise through a global multi-country UNODC prevention programme.

About the author

Wadih E. Maalouf, a Public Health Professional (Epidemiologist and Biostatistician) originally from Lebanon. Holder of a Doctoral Degree in Epidemiology (Mental Health and Drug Dependence Epidemiology) from the Bloomberg School of Public Health at Johns Hopkins University. Prior to joining UNODC, he has been implicated in several international research projects in the field of epidemiology of drug use and dependence. He first joined UNODC in 2005 to be based in the Regional Office for the Middle East and North Africa (ROMENA) in Cairo, Egypt. He assumed several functions since then including a regional epidemiology advisor tasked to orient countries from the region on assessing and monitor their drug situation and orient their drug demand reduction strategies, and building national capacities in the field of drug demand

reduction strategies. He joined UNODC Drug Prevention and Health Branch, Prevention Treatment and Rehabilitation Section at Headquarters in Vienna in 2010. Since then he has been coordinating a global programme on prevention promoting best practices in drug prevention (with a main focus on family skills prevention and life skills education in schools). This programme has one of its key outputs the International Standards on Drug Use Prevention that were disseminated for policy makers from several countries.

MAKING MEDIA MATTER IN SUBSTANCE PREVENTION

William D. Crano
Professor of Psychology, and
Director, Health Psychology and Prevention Science Institute
Claremont Graduate University

Used properly, the mass media can play an important role in the service of substance prevention. This presentation is designed to illuminate a method to improve the effectiveness of media-based prevention efforts. It is based on fundamental principles of persuasion. The successful media operation is developed with a clear target audience in mind. In practice, it should involve attention capture followed by a series of operations designed to destabilize existing pro-substance beliefs, and then to offer alternatives that counsel substance avoidance. All of these steps must be followed if the sought-for changes in attitudes, intentions, and usage are to occur. Understanding the indirect effects of the media on the mass audience, a peculiar feature of this dissemination approach that often is neglected in practice, is the focus of the final section of the presentation.

The media operate indirectly, through opinion leaders, whose interpersonal influence has a major bearing on the success or failure of a media prevention campaign. If followed, the "rules of influence" discussed in this presentation will provide a model for use of mass media in substance prevention.

About the author

William D. Crano is the Oskamp Distinguished Professor of Psychology at Claremont Graduate University, where he also directs the Health Psychology and Prevention Science Institute. He earned his undergraduate degree from Princeton University, and his doctoral degree from Northwestern University. He has held Professorships at Michigan State University, Texas A&M University, and the University of Arizona. His primary areas of research involve the study of persuasion and social influence, including the effects of minority group influence, the effects of vested interest on attitudes, and the application of principles of persuasion to drug misuse in youth. He has published more than 200 research articles and monographs, and has authored or edited 17 books, including *The Rules of Influence*, which explores the application of psychological research on minority influence to issues of social change. His professional honors and appointments include: NATO Senior Scientist in Europe, Fulbright Senior Fellow to Brazil, Liaison Scientist in the Behavioral Sciences for the U.S. Office of Naval Research, and Program Director in Social Psychology at the National Science Foundation. He is a Fellow of the American Psychological Association, the Association for Psychological Science, the Society for Personality and Social Psychology, and the Western Psychological Association.

CHALLENGES IN DEVELOPING AN EVIDENCE-BASED DRUG PREVENTION STRATEGY AT A COUNTRY LEVEL

Pierre Arwidson
Head of Scientific Affairs
National Institute for Health Education and Prevention

Countries usually face multiple and simultaneous challenges when they try to build an evidence-based drug prevention strategy. On one side, it can be a lack of nationally conducted research and a lack of research teams involved or interested. On the other side, multiple field prevention initiatives are taken and they are usually not or poorly informed by scientific evidence. The challenge is to build a strategy that is bottom up and top down at the same time. The objectives are to bring more research teams in the field of drug prevention and to find the means to help field workers to choose evidence-based interventions. Some examples of how France is trying to face those challenges will be shared with the audience.

About the author

Dr. Pierre Arwidson studied at the Tours Faculty of Medicine in France. He was initially involved in medical education and the development of problem-based learning. Then he worked at the regional level in health education, AIDS, drug and cardiovascular diseases prevention. He is now Head of Scientific Affairs at the National Institute for Health Education and prevention where he works since 1997.

Dr. Arwidson is a former Vice-president of the International Union for Health Promotion and Education (2004-2010). He is member of the Steering board of the French Institute for Research in Public Health and also a member of the European Society for Prevention Research.

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EUROPEAN DRUG PREVENTION QUALITY STANDARDS

Harry Sumnall
Professor
Liverpool John Moores University

In recent years a number of international bodies and collaborations have begun to develop quality standards and guidelines in the field of drug demand reduction. In line with this, interested international partners have worked to coordinate their activities and improve complementarity. These aim to support policy- and other decision makers in selecting high quality and evidence based actions in order to maximize value for money and to ensure that target group receive effective, and ethical, interventions. The European Drug Prevention Quality Standards (EDPQS) are one example of such an approach, and since 2008 a pan-EU partnership, including both UNODC and the EMCDDA, have developed a number of resources to assist development of feasible, and sustainable prevention work and policy making. Consultation with the prevention field has shown that many professionals wish to develop their work in line with quality standards, but often lack support to allow them to do this. The EDPQS partnership has therefore developed a number of toolkits (www.prevention-standards.eu<<http://www.prevention-standards.eu>>) to assist in this process. To date, EDPQS toolkits have been used in helping to plan new projects, developing and optimising existing work, support professional development, and incorporated as components of funding and drug policy initiatives.

About the author

Harry Sumnall is a Professor in Substance Use at the Centre for Public Health. He is interested in all aspects of substance use, particularly young people's health issues. Harry's funded research programmes have examined the evidence base for substance misuse prevention and the mechanisms for implementing evidence based practice and policy. Harry also has research interests in psychopharmacology and addictive behaviours, with a focus upon causes, consequences, and experiences of drug use. He is also interested in the psychopharmacology of entactogens and hallucinogens and the developing field of new psychoactive substances (legal highs).

Harry is a member of the UK Advisory Council on the Misuse of Drugs, and a Board Member of the European Society for Prevention Research.

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PREVENTION OF PRESCRIPTION DRUG ABUSE

Christopher M. Jones
Director of the Division of Science Policy
Office of the Assistant Secretary for Planning and Evaluation (ASPE)
U.S. Department of Health and Human Services (HHS)

The United States is facing an unprecedented increase in prescription opioid overdose deaths. In 2013, 16,235 overdose deaths involved prescription opioids - a four-fold increase since 1999. Overdose deaths represent only the tip of the opioid crisis. In 2014, more than 10 million Americans reported nonmedical use of prescription opioids and 1.9 million individuals met diagnostic criteria for a prescription opioid use disorder. In economic terms, the cost of opioid abuse on the health system is conservatively estimated at \$72 billion per year. Dr. Jones' presentation will provide an overview of the epidemiology of prescription opioid abuse in the U.S., discuss Federal prevention policy and program initiatives, and highlight Federal, state, local, and private sector efforts that are beginning to demonstrate positive impacts on prescription drug abuse.

About the author

Christopher M. Jones, PharmD, MPH, currently serves as the Director of the Division of Science Policy in the Office of the Assistant Secretary for Planning and Evaluation (ASPE) at the U.S. Department of Health and Human Services (HHS). The Division serves as the ASPE lead on public health and biomedical science issues and initiatives, including programmatic and policy areas that involve complex or rapidly evolving science and technology. The Division is responsible for policy coordination; long-range planning; legislative development; economic, program, and regulatory analysis; and evaluation focused on the HHS science agencies – the Centers for Disease Control and Prevention (CDC), Food and Drug Administration (FDA), National Institutes of Health (NIH), and Office of the Assistant Secretary for Preparedness and Response (ASPR).

Dr. Jones previously served as senior advisor in the Office of Public Health Strategy and Analysis in the Office of the Commissioner at the FDA where he worked on a variety of priority public health issues facing FDA. Prior to joining FDA, Dr. Jones led the CDC's drug abuse and overdose work. At CDC, his work focused on strategic policy development, engaging national and state partners, and conducting research to improve policy and clinical practice.

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GENDER SENSITIVE DRUG USE PREVENTION

Giovanna Campello
Programme Officer
Prevention, Treatment and Rehabilitation Section
Drug Prevention and Health Branch
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Recent estimates at the global level with regard to prevalence of drug use (i.e. the non-medical or non-scientific use of controlled drugs) by girls and women and their access to services were reported in the UNODC World Drug Report 2015. These indicate that approximately 3 times as many men use drugs as women. However, only one woman for every 5 men accesses treatment service. Moreover, twice as many women as men use tranquilizers and slightly more women than men use prescription opioids non-medically.

There is relatively limited research on whether factors that make children and youth more vulnerable to initiating drug use differ between girls and boys, although there are some indications that there might be factors that are more relevant for girls: family factors appear to influence girls stronger, as well as low self-esteem, concerns for body image and sexual abuse. The influence of peers appears to be as powerful, but expressed differently.

In 2013, UNODC commissioned a research to identify whether and how programmes for the prevention of drug use have different outcomes on girls and boys. Only approximately 5% of the evidence-based programmes included in the most important registries (NREPP, Blueprint, EDDRA) reported outcome data disaggregated by sex. Of those that did, most family-based programme reported as good results for girls and for boys. On the other hand, more than half of school-based and community-based programmes reported positive outcomes only for boys or even (a minority) negative outcomes for girls. A couple of examples from specific programmes were provided as illustration. This indication, albeit based on a very limited sample, is consistent with the aetiology indications reported above.

The presentation concluded with some suggestions for promoting prevention of drug use that is effective for girls as well as boys. These included: not presuming that a drug prevention programme is automatically going to be as effective for girls as for boys, possibly investing in family-based prevention, and strengthening research on new programmes addressing vulnerabilities that appear to be unique to girls (including low self-esteem, concerns with body image, influence of significant others, girls developing early, girls and women victims of sexual abuse).

About the author

Ms. Campello has been working for the United Nations Office on Drugs and Crime for 20 years and the vast majority of her professional career has been devoted to promoting effective practice in drug use prevention. More recently, she has lead the systematic review of the evidence that has resulted in UNODC publishing the International Standards on Drug Use Prevention in 2013 and in leading a number of seminars with policy makers from more than 60 countries on how to improve national drug prevention systems and how to support the evaluation of effectiveness of drug use prevention.

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INTERNET-BASED UNIVERSAL PREVENTION FOR ALCOHOL, CANNABIS AND NEW PSYCHOACTIVE SUBSTANCES

Maree Teesson
Director,
NHMRC Centre of Research Excellence in Mental Health and Substance Use (CREMS);
Visiting Professor,
Black Dog Institute;
NHMRC Principal Research Fellow
National Drug and Alcohol Research Centre

Over the past decade, the Internet has emerged as a promising mode of delivering public health interventions, including alcohol and other drug prevention. Despite the advantages of Internet delivery, including scalability, sustainability and increased student engagement, there are few existing Internet-based prevention programs. This paper will provide an overview of the available interventions and the evidence for prevention in alcohol, cannabis and new psychoactive substances. A recent cluster RCT where the intervention targeted new psychoactive substance will be presented. Primary outcomes were ecstasy and NPS knowledge, intentions to use and lifetime use of ecstasy and NPS.

About the author

Professor Maree Teesson is the Director of the NHMRC Centre of Research Excellence in Mental Health and Substance Use (CREMS), Visiting Professor Black Dog Institute, NHMRC Principal Research Fellow at the National Drug and Alcohol Research Centre (NDARC), Fellow Australian Academy of Health and Medical Sciences and Fellow Australian Academy of Social Sciences. She has made a major contribution to health and medical research in the field of mental health and substance use. In particular, she is known nationally and internationally for her research on the comorbidity between mental health and substance use disorders.

Maree was recently awarded Australian Museum Eureka Prize for Outstanding Mentor of Young Researchers and named one of the Australian Financial Review/Westpac's 100 women of influence in the category of innovation. She has developed 7 interactive online psychological interventions and prevention programs and published over 280 research articles, reviews, book chapters, consumer books and invited contributions.

Session 4

CURRENT SCIENCE IN PSYCHOLOGICAL TREATMENT INTERVENTIONS

Moderators: Thom Browne and Igor Koutsenok

ACUTE TOXIC EFFECTS OF DRUGS – FOCUS ON OVERDOSE DEATHS

Aaron White
Senior Scientific Advisor to the Director
National Institute on Alcohol Abuse and Alcoholism (NIAAA)

Chronic drug use and addiction take a toll on the physical, psychological and spiritual lives of users, as well as a financial toll on society. However, drug use does not have to be chronic or reach the level of addiction to do damage to the body. We will examine the acute toxic effects of commonly used drugs, focusing on poisoning. We will discuss the sharp increases in poisoning deaths in the United States and explore how various drugs produce their toxic effects. The importance of science based prevention and intervention approaches will be examined.

About the author

Aaron White, PhD is the Senior Scientific Advisor to the Director at the National Institute on Alcohol Abuse and Alcoholism (NIAAA).

He received his PhD in Biological Psychology from Miami University in 1999. His graduate research focused on the brain mechanisms underlying alcohol-induced amnesia (i.e., "blackouts"). After completing two years of post-doctoral training in the Department of Psychiatry at Duke University Medical Center in 2001, he joined the faculty as an Assistant Professor. His research at Duke focused on the effects of alcohol on adolescent brain function and brain development, alcohol blackouts, adolescent substance abuse treatment and the development of substance abuse prevention and education initiatives. He joined NIAAA in 2008.

Dr. White's most recent scientific manuscripts examine hospitalizations for alcohol overdoses, drug overdoses and their combinations, trends in alcohol use among females relative to males, suicide related drug poisonings in adolescents and young adults, and the concurrent use of alcohol and alcohol-interactive prescription medications among the US population.

LOW THRESHOLD INTERVENTIONS, INCLUDING FOR OPIOID OVERDOSE

**Nicolas Clark
WHO**

Opioids are potent nervous and respiratory system depressants capable of producing systemic arrest. Overdose is the primary cause of drug-related mortality worldwide and opioids are the main class of substances involved with these deaths.

Naloxone is a medication that rapidly antagonizes the actions of opioid drugs and reverses the features of opiate intoxication. Naloxone may be administered intramuscularly or intranasally. Fatalities due to an opioid overdose usually occur within hours of the consumption of opioids rather than within minutes, and are likely to be witnessed by family, peers, or somebody whose work brings them in contact with the affected individual. Substantial evidence suggests that the availability of naloxone for persons likely to witness an overdose beyond medical settings is an effective low threshold public health intervention to address and mitigate the issue.

Recent WHO guidelines on the Community Management of Opioid Overdose recommend that naloxone be made available beyond medical settings, including to people who use opioids, their family and friends, and to people who come across opioid overdose in the course of their work (i.e. police, ambulance). Naloxone is effective when delivered by intravenous, intramuscular, intranasal and subcutaneous routes of administration. Persons using naloxone should select a route of administration based on the formulation available, their skills in administration, the setting and local context. Furthermore, in suspected opioid overdose, first responders should focus on airway maintenance, assisting ventilation and giving naloxone. After successful resuscitation following the administration of naloxone the affected person should wherever possible have their level of consciousness and breathing closely observed until they have fully recovered.

Other low threshold interventions are those that are centred on harm reduction strategies focusing on preventing drug users from further negative effects of their drug use behaviours; these programs may include distribution of sterile injecting equipment, opportunistic hepatitis B with vaccination, and attracting people into treatment services. Often, they include health promotion tactics that make use of outreach services.

About the author

Dr. Clark is the Medical Officer of the Management of Substance Abuse team at the World Health Organization, in Geneva. He trained in Addiction Medicine and Public Health in Australia, and conducted a number of clinical trials on opioid and alcohol dependence before joining the World Health Organization in 2007. He is a fellow of the Royal Australasian College of Physicians Chapter of Addiction Medicine.

ADDRESSING PSYCHOLOGICAL TRAUMA IN ADDICTION TREATMENT

Lisa M. Najavits
Professor of psychiatry, Boston University School of Medicine
Lecturer, Harvard Medical School

The presentation summarizes key principles of treating traumatized clients in the context of addiction treatment, including universal screening, training of all staff on trauma, and stage-based approaches to treatment. In addition, highlights of the Seeking Safety model will be described. Seeking Safety is a public health oriented model for trauma problems and/or addiction and is the most evidence-based and widely adopted model for the combination of trauma and addiction. We will also identify the current state of the broader field of co-occurring trauma/addiction interventions.

About the author

Lisa M. Najavits, PhD, is professor of psychiatry, Boston University School of Medicine; and adjunct professor, University of Massachusetts Medical School. She is a research psychologist at Veterans Affairs (VA) Boston Healthcare System and the Bedford VA; and director of Treatment Innovations. Her major clinical and research interests are substance abuse, trauma, co-morbidity, behavioral addictions, veterans' mental health, community-based care, development of new psychotherapies, and outcome research. She is author of over 180 professional publications, as well as the books *Seeking Safety: A Treatment Manual for PTSD and Substance Abuse*; *A Woman's Addiction Workbook*; and the upcoming book *Creating Change: A Past-Focused Treatment Manual for Trauma and Addiction*. She has served as president of the Society of Addiction Psychology of the American Psychological Association; and is on various advisory boards including the *Journal of Traumatic Stress*; the *Journal of Gambling Studies*; and *Addiction Research and Theory*. She has received various awards, including the 1997 Young Professional Award of the International Society for Traumatic Stress Studies; the 1998 Early Career Contribution Award of the Society for Psychotherapy Research; the 2004 Emerging Leadership Award of the American Psychological Association Committee on Women; and the 2009 Betty Ford Award of the Addiction Medical Education and Research Association. She is a licensed psychologist in Massachusetts; and conducts a psychotherapy practice. She received her PhD in clinical psychology from Vanderbilt University and her bachelor's degree with honors from Barnard College of Columbia University.

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MOTIVATIONAL INTERVIEWING TRAINING. MOTIVATIONAL INTERVIEWING – UNLOCKING INTRINSIC MOTIVATION TO CHANGE

**Rhonda McKillip
Psychotherapist, Private Practice**

Change is not easy for human beings...even when life is going relatively smooth. Add an illness and the change process is even more challenging. As a result, individuals come through our doors in varying degrees of pain – physical, mental, emotional, spiritual.

Each person possesses the strengths and skills developed – but perhaps not identified – in coping with these challenges and adversities. Each has a strong desire to be well, even though their symptoms may say something else in their behaviors.

Motivational Interviewing (MI) has been widely accepted and utilized over the past 30 years. It continues to grow and evolve through research and listening to our clients as to what helps and what doesn't. In fact, MI-3rd Edition (2012) is more than 90% new text and is based on 25,000 articles and 200 randomized clinical trials since the 2nd Edition (2002).

MI remains a client-centered, evidence-based method for enhancing intrinsic motivation to change. MI is not something that one does to people. Rather, it is a fundamental way of being with and for people – a facilitative, partnership approach of communication that evokes natural change.

Individuals have an inherent potential for change. How do we – the professional – unlock this intrinsic motivation and facilitate change rather than hinder it? How do we help a person acknowledge strengths and identify how these may be used in working toward current and future goals?

About the author

Rhonda McKillip, M.Ed., LMHC, MAC, CCDCIII, CDP is a psychotherapist, international trainer, consultant, and program developer. She specializes in the treatment of individuals with co-occurring disorders and has over twenty-five years of direct service experience. Ms. McKillip is a member of the Motivational Interviewing Network of Trainers and a NAADAC, The Association for Addiction Professionals, Approved Education Provider.

Ms. McKillip is the author of "THE BASICS, SECOND EDITION: A Curriculum for Co-Occurring Psychiatric and Substance Disorders" with a Foreword by Kenneth Minkoff, MD. THE BASICS is endorsed by the IC&RC (International Certification & Reciprocity Consortium) as "a Must Have for Co-Occurring Disorders Professionals" and is the official Study Guide for their internationally-recognized AADC (Advanced Alcohol and Drug Counselor) credential and co-occurring CCDP and CCDPD certifications.

Ms. McKillip's goal is to assist service providers in being highly successful in the implementation of consistent, evidence-based integrated treatment throughout the direct service continuum of care.

RECENT SCIENCE ON THE RESIDENTIAL TREATMENT OF DRUG USE DISORDERS

Phaedon Kaloterakis
Assistant Director, KETHEA;
Member, Board of Directors,
International Certification and Reciprocity Consortium;
Member, Board of European Federation of Therapeutic Communities;
International Consultant

As the substance abuse service system shifts from primarily residential to primarily non-residential settings (mainly for economic reasons), it becomes important to understand how substance abuse treatment processes and outcomes may vary across service settings.

Taking also into account that drug dependence is considered a multi-functional health disorder that often follows the course of a relapsing and remitting chronic disease, the treatment setting is of paramount importance and significance. Thus the presentation elaborates on the following issues:

- the origins of the residential treatment/therapeutic community (TC) model
- active components of treatment in residential settings
- types and most recent modifications of residential treatment services
- evaluating residential treatment settings
- strengths and weaknesses of residential treatment
- the future of the residential treatment of drug use disorders
- the latest example of a TC in a Greek prison (October 2015)

About the author

Phaedon Kaloterakis is the Assistant Director of KETHEA and has been involved with the drug addiction field since 1981. KETHEA with 110 units nationwide is the oldest NGO of its kind in Greece, one of the largest in Europe and a Special Consultant to the ECOSOC of the UN.

He is a member of the Board of Directors of the International Certification and Reciprocity Consortium (ICRC) for Greece, Cyprus, Malta and Bulgaria, member of the Board of the European Federation of Therapeutic Communities (EFTC) and member of the Therapeutic Communities Journal's International Editorial Advisory Group.

Mr. Kaloterakis is a much sought after speaker in international conferences on Addiction, assigned by the UNODC for various trainings globally and has published many articles and scientific papers, his most recent publication for Edizioni Erickson in Italy.

He has lectured at UCSD (Department of Psychiatry) and is often invited to teach at Democritus University (Social Administration and Law), the National School of Judges and the National Police Academy in Greece.

He is the coordinator of the Addictions Course for the Open University of Thessaloniki, the Chairman of the Municipal Committee for Addictions and Juvenile Delinquency and also serves as an external supervisor of the National Centre for Addictions in Bulgaria.

Session 5

CURRENT SCIENCE IN PHARMACOLOGICAL TREATMENT INTERVENTIONS

Moderators: Adam Bisaga and Maree Teesson

OPIATE SUBSTITUTION TREATMENT IN THE 21ST CENTURY

John Strang
Director, National Addiction Centre
Head, Addictions Department, King's College London
Leader, Addictions Clinical Academic Group of Kings Health Partners Academic
Health Science Centre

Opiate substitution treatments (OST) such as methadone maintenance and buprenorphine maintenance are amongst the most strongly evidence-based treatments in medicine today, and yet they remain controversial in many cultures and countries and are often delivered sub-optimally with only partial benefit to the individual patient and to society. The pervasive acceptance of stigmatisation alongside institutional inertia allow this incomplete benefit to continue – we have a responsibility to address this and to correct it.

Benefits from OST include improved individual health (treatment of the addiction and also of related health conditions), improved public health (especially preventing illness from viral transmission of HIV, HCV, HBV) and improved public security (by breaking the power of the drug-crime link).

Evidence from clinical trials are extensively summarised in Cochrane reviews and other technology appraisals, which also examine and report on the importance of distinctive elements of the treatment (attention to dose, medication adherence, duration of treatment). Treatment is more than just medication. The provision of OST in the context of wider attention to recovery also increases the extent of benefits and recovery achieved.

A substantial minority of patients fail to benefit properly from the OST treatment provided and often drop out of treatment programs – this failure of treatment provision requires full attention. Other agonist maintenance medications are potential new contributors, such as slow-release oral morphine as used in several European countries. The development of ultra-long-acting implant forms of buprenorphine and of long-acting depot injections of buprenorphine opens up new possibilities for different ways of providing treatment. In recent years several trials have identified benefit from supervised heroin injectable maintenance for entrenched heroin addicts who have previously failed to benefit from existing treatments, and this challenging form of treatment needs to be considered seriously as an intensive treatment for the most severely affected.

OST treatments represent important tools in the armamentarium in helping opiate addicts break the damaging patterns of behaviour which are characteristics of their addictive disorders. Despite the robust evidence of major benefit from OST treatments, we need greater attention to the proper availability and effective delivery of OST treatment, alongside exploration of synergy between medication and psychosocial components of care as well as investigation to identify integration of recovery-orientated psychosocial interventions alongside medication interventions, as well as trial studies of other potential new medications alongside the long-established methadone and buprenorphine OST treatment.

About the author

Professor John Strang is a medic and an academic. He is Director of the National Addiction Centre (NAC) and Head of the Addictions Department at King's College London from where diverse research studies are conducted and educational activity provided. He is Leader of the Addictions Clinical Academic Group of Kings Health Partners AHSC (Academic Health Science Centre). He has also been an addictions psychiatrist for over 30 years, and has led the group at the Maudsley/Institute for many years. Professor Strang has published over 400 scientific papers in the addiction field and has contributed to national and international policy including the chairing of policy-informing committees and expert groups for Department of Health, NICE and Public Health England. He has worked with, and he and his employer have received project grant support and/or honoraria and/or consultancy payments and/or travelling and/or accommodation and/or conference expenses from, a range of governmental and non-governmental organisations and from various pharmaceutical companies concerning identification and study of medicinal products potentially applicable in the treatment of addictions and related problems and has argued for the development of improved formulations. His employer (the university) has registered intellectual property on a novel buccal naloxone formulation with which JS is involved, and JS has been named in a patent registration by a Pharma company as inventor of a concentrated nasal naloxone formulation. For updated information see John Strang's info on Departmental website at <http://www.kcl.ac.uk/ioppn/depts/addictions/people/hod.aspx>

LONG ACTING OPIOID ANTAGONISTS IN THE TREATMENT OF OPIOID USE DISORDERS

Evgeny M. Krupitsky

St. Petersburg Bekhterev Research Psychoneurological Institute and St.-Petersburg Pavlov State Medical University

Aims: The presentation will review results of five randomized double blind placebo controlled randomized clinical trials of different drug formulations of naltrexone we have been doing within the last 15 years: Oral, implantable and injectable.

Methods: 1st study: Double blind placebo controlled randomized clinical trial of oral naltrexone vs placebo. 2nd study: Four cell double blind double dummy placebo controlled randomized clinical trial of combination of naltrexone with fluoxetine vs. naltrexone, fluoxetine, and double placebo. 3rd study: Four cell double blind double dummy placebo controlled randomized clinical trial of combination of naltrexone with guanfacine vs. naltrexone, guanfacine, and double placebo. 4th study: Three cell double blind double dummy placebo controlled randomized clinical trial of naltrexone implant vs. oral naltrexone and double placebo (oral and implantable). 5th study: Double blind placebo controlled randomized clinical trial of injectable naltrexone vs. placebo.

Results: Oral naltrexone in Russia is more effective for relapse prevention and abstinence stabilization than placebo – basically due to family involvement in the control of compliance. Combining naltrexone with antidepressants or guanfacine does not improve outcome significantly. Long acting sustained release naltrexone formulations (injectable and implantable) are substantially more effective than oral naltrexone or placebo for relapse prevention in opiate addicts as they make control of compliance easier.

Injectable long acting sustained release formulation of naltrexone has fewer adverse events than naltrexone implant and is easier to use (does not require surgical procedures).

Conclusions: Long acting extended release formulations of naltrexone are the most effective non-agonist pharmacotherapy formulations for opiate dependence.

About the author

Prof. Evgeny Krupitsky, MD, PhD, is a Chief of the Department of Addictions at St. Petersburg Bekhterev Research Psychoneurological Institute and a Chief of the Laboratory of Clinical Psychopharmacology of Addictions at St. Petersburg State Pavlov Medical University, Russia. Since 2006 he also holds a position of Adjunct Professor of Psychiatry at the Department of Psychiatry, University of Pennsylvania. Dr. Krupitsky received several national and international awards including European College of Neuropsychopharmacology Fellowship Award (1997), Heffter Research Institute Award for Outstanding Research in Hallucinogens (2000), Award of the Government of Russian Federation for Outstanding Research in Medicine (2005), and National Institute Drug Abuse (NIDA) Award for Excellence in International Leadership. Dr. Krupitsky published

many papers in the international psychiatric journals and he is also an author of several chapters in the international manuals and two books on the treatment of alcoholism and addictions published in Russian. Dr. Krupitsky has been a Co-PI on several NIDA and NIAAA grants.

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LONG-TERM MORTALITY, REMISSION, CRIMINALITY AND PSYCHIATRIC COMORBIDITY OF HEROIN DEPENDENCE: 11 YEAR FINDINGS FROM THE AUSTRALIAN TREATMENT OUTCOME STUDY

Maree Teesson
Director

NHMRC Centre of Research Excellence in Mental Health and Substance Use (CREMS);
Visiting Professor
Black Dog Institute;
NHMRC Principal Research Fellow
National Drug and Alcohol Research Centre

Aims: To determine the long-term mortality, remission, criminality and psychiatric comorbidity over 11 years among heroin dependent Australians and to examine long-term trajectories of heroin use.

Design: Longitudinal cohort study.

Participants and measurements: 615 participants were recruited and completed baseline interviews between 2001-2002. Participants completed follow-up interviews at 3-, 12-, 24- and 36 months post baseline, and again at 11 years post-baseline. 431 (70.1%) of the original 615 participants completed the 11 year follow-up. Participants were administered the Australian Treatment Outcome Study (ATOS) structured interview, addressing demographics, treatment history, drug use, heroin overdose, criminality, health and mental health at all interviews. Overall, 96.1% of the cohort completed at least one follow-up interview.

Findings: At 11-years 63 participants (10.2%) were deceased. The proportion who reported using heroin in the preceding month decreased significantly from baseline (98.7%) to 36-month follow-up (34.0%) with further reductions evident between 36-months and 11-years (24.7%). However, one-in-four, continued to use heroin at 11-years, and close to one-half (46.6%) were in current treatment. The reduction in current heroin use was accompanied by reductions in risk-taking, crime, and injection-related health problems, and improvements in general physical and mental health. The relationship with treatment exposure was varied. Major depression was consistently associated with poorer outcome. Six distinct patterns of heroin use were seen over the 11 years: i) rapid decrease to maintained abstinence; ii) rapid decrease with rapid relapse; iii) rapid decrease with late relapse; iv) gradual decrease to near abstinence; v) gradual decrease; and vi) no decrease.

Conclusions: At 11 years, there were reductions in heroin use and other drug use, criminality and injection-related health problems. The findings provide evidence for early and sustained intervention, a need to treat both mental health and substance use disorders in people with heroin dependence, and indicate periods of time where people in particular groups may be especially vulnerable to relapse, and may therefore benefit from additional support.

About the author

Professor Maree Teesson is the Director of the NHMRC Centre of Research Excellence in Mental Health and Substance Use (CREMS), Visiting Professor Black Dog Institute, NHMRC Principal Research Fellow at the National Drug and Alcohol Research Centre (NDARC), Fellow Australian Academy of Health and Medical Sciences and Fellow Australian Academy of Social Sciences. She has made a major contribution to health and medical research in the field of mental health and substance use. In particular, she is known nationally and internationally for her research on the comorbidity between mental health and substance use disorders.

Maree was recently awarded Australian Museum Eureka Prize for Outstanding Mentor of Young Researchers and named one of the Australian Financial Review/Westpac's 100 women of influence in the category of innovation. She has developed 7 interactive online psychological interventions and prevention programs and published over 280 research articles, reviews, book chapters, consumer books and invited contributions.

NEW FRONTIERS IN THE TREATMENT AND CARE OF PATIENTS WITH PSYCHOSTIMULANT DEPENDENCE

Adam Bisaga
Professor of Psychiatry, Columbia University Medical Center
New York State Psychiatric Institute

Problematic use of cocaine and amphetamine-type stimulants remains a significant health concern in many parts of the world. However, only a small number of affected individuals is receiving treatment with large regional disparities. Psychostimulant use disorder is best understood and managed as a chronic medical problem treated over an extended period of time with a combination of therapy and medications. Available behavioral treatments such as Cognitive Behavioral Therapy and Contingency Management Therapy help reduce drug use and treatment dropout. At present there is no commonly accepted pharmacotherapies to improve treatment outcomes but there is a body of evidence showing that medications can decrease craving and drug withdrawal and lead to reduction of psychostimulant use. Medications such as d-amphetamine and methylphenidate are the most promising however there are practical and safety concerns to be considered before wide implementation. Medications and behavioral strategies can work in synergy to improve outcomes by improving retention in treatment, adherence to medications, and effectiveness of therapy.

It is likely that a medical approach to treating psychostimulant use disorder that involve outreach strategies, pharmacotherapy, and a range of medical and psychological services will help patients to achieve abstinence from drugs and have significant health and economic benefits. However, further research is needed to establish most effective approach for specific patient populations and global regions.

About the author

Dr. Adam Bisaga is a Professor of Psychiatry at Columbia University Medical Center and a Research Scientist at the New York State Psychiatric Institute. Dr. Bisaga received his medical degree from Jagiellonian University Medical College in Krakow, Poland. He trained in addiction psychiatry at Columbia University under the mentorship of Dr. Herbert Kleber and he has been a faculty at the Columbia University Department of Psychiatry since 1999. Dr. Bisaga received grants funded by the National Institute of Drug Abuse to conduct research in the area of addiction pharmacotherapy development. He has been involved in teaching medical students and healthcare practitioners and he is a Director of the Research Fellowship in Addictions at Columbia University. Recently, Dr. Bisaga has been involved in several initiatives to combat the epidemic of opioid abuse in the US. He has participated in congressional hearings and is currently chairing a national mentoring program and a panel of experts at a national Clinical Support System for Providers to implement Medication-Assisted Treatments (PCSS-MAT) for opioid use disorders. Dr. Bisaga has been working with the UN ODC on the development of substance abuse treatment standards and conducted trainings for addiction practitioners internationally.

Session 6

TREATMENT AND REHABILITATION INTERVENTIONS IN CLINICALLY SPECIFIC POPULATIONS AND SETTINGS

Moderators: Marta Torrens and John Strang

GENDER SENSITIVE DRUG DEPENDENCE TREATMENT

Gabriele Fischer
Professor

**Center for Public Health, Department for Psychiatry & Psychotherapy
Medical University of Vienna**

Historically, participants in substance abuse research were mainly male but predictors and progression of substance use disorder are gender-specific and gender-sensitive.

Since the number of female substance users is increasing in the last years, it is highly relevant to address implications for development of treatment interventions.

The aim of the presentation is to discuss how women and men with substance use disorders differ from each other. Women are more likely to be in relationships with drug-abusing partners, which increases the risk for HCV and HIV infections enormously. The presentation will discuss a long-term prospective observational cohort study with young people who inject drugs in respect to sex differences. The aim of the study was to see if risk behavior differs in men and women and if these differences account for a higher risk for HCV incidence (Tracy et al., 2014)¹.

Beyond that, women with substance use disorders report various violence experiences in their families during childhood and adolescence and that these experiences proceed into adulthood. Intimate partner violence and substance abuse often occur together and it is highly relevant to address this complex interaction (Shand et al., 2011)².

Furthermore, the presentation covers differences in psychiatric comorbidities. Research has shown that women suffer more often from affective disorders (especially depression) while men show more antisocial behavior. It is important to consider these differences between men and women in substance abuse treatment (Shand et al. 2011; Grella & Lovinger, 2012)³.

¹ Tracy, D. et al. (2014). *BMJ open*, 4(5), e004988.

² Shand, F. L. et al. (2011). *Addictive Behaviors*, 36(1), 27–36.

³ Grella, C. E., & Lovinger, K. (2012). *Addictive Behaviors*, 37(3), 306–312.

About the author

Univ. Prof. Dr. Gabriele Fischer studied human medicine at the Medical University of Vienna. She received her doctor's degree in 1984, when she started to specialize in the field of psychiatry and neurology. From 1986 – 1989, Gabriele Fischer did a research - fellowship & psychiatric residency training at Washington University Medical School, St. Louis, Missouri USA. In 1994, she became the Medical Director of the Addiction Clinic, and in 2000, Professor of Psychiatry and Neurology at the Medical University of Vienna. Gabriele Fischer is involved in many epidemiological clinical and psychopharmacological studies in the field of substance use disorder and non – substance related addictions including the topic of co-morbidities; her special research focus includes the aspect of sex/gender differences in psychiatry.

Besides, Gabriele Fischer has been a consultant for several international and national groups, including the United Nations Office on Drug and Crime, the World Health Organisation and the European Parliament. She is member of the Scientific Board for Quality Control and Quality Management in Medicine and of the European Monitoring Center for Drugs and Drug addiction (EMCDDA), Member of General Medical Council in Austria, founding board member of: Women for women: health policy in focus. Recently she became the commission director of the Austrian Ombudsman Board.

To date, Gabriele Fischer has given over 400 scientific presentations and has over 150 peer-reviewed publications and is involved in editorial & reviewing work in many international journals.

SUBSTANCE USE DISORDERS AND CO-OCCURRING ATTENTION DEFICIT

Wim van den Brink
Professor
University of Amsterdam

About 15-20% of all treatment seeking substance use disorder (SUD) patients meet criteria for adult attention deficit/hyperactive disorder (ADHD). This does not come as a surprise since we know that about 50% of all youngsters with ADHD develop SUD.

In this presentation, I will show that this high phenotypic overlap between ADHD and SUD is mainly due to genetic overlap. This genetic overlap is also manifested in a clear overlap in cognitive and other neurobiological risk factors. The latter may (partly) explain why early stimulant treatment of ADHD may prevent the development of SUD in youngsters with ADHD.

Treatment of SUD patients with comorbid adult ADHD often fails, whereas the treatment of ADHD in patients with a comorbid SUD is equally unsuccessful. A possible explanation for the latter finding is that dopamine transporter occupancy by methylphenidate (MPH) in patients with ADHD and cocaine dependence is lower than in patients with ADHD alone and that dopamine release after a MPH challenge is lower in cocaine dependent patients than in healthy controls. It therefore does not as a surprise that recent trials with a high dose of extended release MPH (up to 180 mg/day) and robust doses of extended release dexamphetamine (60-80 mg/day) have been successful in terms of both reduction of ADHD symptoms and drug use.

The presentation concludes that SUD and ADHD are highly comorbid and share genetic and other neurobiological risk factors, that youngsters with ADHD should be treated as early as possible to prevent the development of SUD, and that patients with comorbid SUD and ADHD are likely to benefit most from treatments with a high dose of extended-release stimulants.

About the author

Wim van den Brink, MD PhD. Wim van den Brink (1952) received his medical degree in 1981 from the Free University in Amsterdam. After his psychiatric residency in Groningen (1981-1986), he was a fellow at the Psychiatric Epidemiology Training program at Columbia University in New York. In 1989 he received his PhD degree from the State University of Groningen, the Netherlands. Since 1992 he is full professor of Psychiatry and Addiction at the Academic Medical Center of the University of Amsterdam. He is also the director of the Amsterdam Institute for Addiction Research (AIAR). In 2014 he received the life time achievement award for science from the Netherlands Association of Psychiatry and in 2015 he was granted the status of honorable member of the Spanish Society for Dual disorders. He is a (co)author of more than 500 peer reviewed scientific papers (HI=53) and has been a thesis advisor of more than 60 PhD students. He is currently one of the chief-editors of European Addiction Research. He has been the chair of the Workgroups that developed the Dutch Interdisciplinary Treatment Guideline on Alcohol Use Disorders and the Dutch Interdisciplinary Guideline on Opiate

Addiction. He is one of the founders and the president of the International Collaboration of ADHD and Substance Abuse (ICASA). Until 2015 he was the chair of the Scientific Program Committee of the European College of Neuropsychopharmacology (ECNP). His main scientific interest are related to the neurobiology of substance use disorders and behavioral addictions, the pharmacological treatment of addiction and related comorbidities, and the reduction of stigma regarding patients with an addiction.

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CO-OCCURRING MENTAL HEALTH AND DRUG USE DISORDERS

Marta Torrens
Psychiatrist, Head of Addiction Program
Institute of Neuropsychiatry and Addictions, Parc de Salut Mar;
Professor of Psychiatry
Universitat Autònoma de Barcelona

In recent decades, the relevance of mental disorders associated with substance use has become a matter of great concern. The importance of the comorbidity of mental disorders in substance users is related to its high prevalence (approximately 50 %), its clinical severity (i.e. more emergency admissions) and social (i.e. higher homelessness rates) gravity, its difficult management and its association with poor outcomes for both disorders in the subjects affected. That is, for people with comorbid substance use and mental disorders, there are increased risks of chronicity and criminality, treatment is difficult and costly, and chances of recovery are reduced. Taking into account the burden on health and legal systems, comorbid mental disorders among drug users result in high costs for society and lead to challenges not only for clinicians but also for policymakers.

The adequate detection and treatment of comorbid mental and substance use disorders is one of the biggest challenges that policymakers, professionals and clinicians working in the drugs field must face in the coming years. Despite the relevance of providing effective treatments for comorbid mental disorders among patients with substance use disorder, there is still a lack of consensus regarding not only the most appropriate pharmacological and psychosocial strategies but also the most appropriate setting for treatment. Patients often have difficulties not only in identifying, but also in accessing and coordinating, the required mental health and substance use services. In this presentation a review of the state of the art of the association between mental disorders and substance use disorders will be done.

About the author

Marta Torrens, MD, PhD, Psychiatrist, Head of Addiction program at the Institute of Neuropsychiatry and Addictions-Parc de Salut Mar and Professor of Psychiatry in the Universitat Autònoma de Barcelona, Barcelona. She has developed her work in drug abuse in clinical, teaching and research. Her main clinical experience is the assessment and treatment of drug dependence, mainly in opioid dependence (detoxification, substitution treatment), in psychiatric comorbidity among substance users (dual diagnosis) and new psychoactive substances. She has participated in many conferences and courses regarding good practices in the clinical treatment of drug abuse. Her research has been published in the main journals' of the field. She has collaborated with international organizations including: EMCDDA, WHO, UNOD&C in the field of addiction. Also she has been invited as an expert to present at scientific congress and meetings.

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RESPONDING TO POOR RESPONSE

John Strang
Director, National Addiction Centre
Head, Addictions Department, King's College London
Leader, Addictions Clinical Academic Group of Kings Health Partners Academic
Health Science Centre

We have robust evidence of effective treatments in some areas of the addictions field, but a large proportion of patients derive either poor benefit or only partial benefit. Even when some benefit is achieved, we need to find ways of making the good better. We are often distracted by passionate rhetoric and we need instead to move to application of science to use more constructively the potential levers and healthy influence. The proper objective should be the public good, as summarised in the book by Babor et al (2010) and subsequent Lancet series of papers on 'Drug Policy and the Public Good' (2012).

Treatment retention is not recovery; nor is mere abstinence. Aspirations must be realistic and relevant to the individual's personal circumstances, and the individual must be helped and empowered to make incremental gains which enable them to achieve more progress in their personally-defined recovery.

When benefit observed is less than benefit expected, we must avoid moralising and must look to develop a better therapeutic alliance, and jointly pay attention to optimisation of medication components, psychosocial components and wider societal aspects of recovery.

The greatest benefit is often achieved by blending benefit from medications and from psychosocial interventions. For each of these, we know that they are often delivered sub-optimally – this needs joint attention for it to be corrected.

Medication-assisted recovery requires attention and effort to gather positives in life, as well as reducing damage and deterioration. The achievement of good response will itself generate empowerment and ability to achieve further recovery, and it will be important for this to be maintained, alongside constant vigilance and intervention in the event of difficulties encountered or progress stalled or lost.

About the author

Professor John Strang is a medic and an academic. He is Director of the National Addiction Centre (NAC) and Head of the Addictions Department at King's College London from where diverse research studies are conducted and educational activity provided. He is Leader of the Addictions Clinical Academic Group of Kings Health Partners AHSC (Academic Health Science Centre). He has also been an addictions psychiatrist for over 30 years, and has led the group at the Maudsley/Institute for many years. Professor Strang has published over 400 scientific papers in the addiction field and has contributed to national and international policy including the chairing of policy-informing committees and expert groups for Department of Health, NICE and Public Health England. He has worked with, and he and his employer have received project grant support and/or honoraria and/or consultancy payments and/or travelling

and/or accommodation and/or conference expenses from, a range of governmental and non-governmental organisations and from various pharmaceutical companies concerning identification and study of medicinal products potentially applicable in the treatment of addictions and related problems and has argued for the development of improved formulations. His employer (the university) has registered intellectual property on a novel buccal naloxone formulation with which JS is involved, and JS has been named in a patent registration by a Pharma company as inventor of a concentrated nasal naloxone formulation. For updated information see John Strang's info on Departmental website at <http://www.kcl.ac.uk/ioppn/depts/addictions/people/hod.aspx>

TREATMENT OF DRUG INVOLVED OFFENDERS

Igor Koutsenok
Chief
Prevention, Treatment and Rehabilitation Section
United Nations Office on Drugs and Crime

The presentation is focused on a continuum of treatment interventions for drug-involved offenders in the context of criminal-justice system. Special attention is paid to risk and needs assessment of various sub-types of these individuals in order to make appropriate treatment matching decision. The presentation also provides a review of the current treatment outcome evaluation data that strongly supports the notion of health-focused approach as significantly more effective as compared to punishment and prosecution strategies.

About the author

Igor Koutsenok, MD is an addiction psychiatrist. He is Chief of Prevention, Treatment and Rehabilitation Section of the UNODC and a Professor of Psychiatry at the University of California San Diego, School of Medicine. For the last 20 years he was involved in developing, implementing and researching treatment programs for individuals with drug use disorders under criminal-justice supervision.

Session 7

GLOBAL EXPERIENCES – SUCCESSES AND CHALLENGES

Moderators: Brian Morales and Zhimin Liu

GOOD PRACTICE IN LOW AND MIDDLE INCOME COUNTRIES.

THE CASE OF UGANDA

David K. Basangwa
Government Senior Consultant Psychiatrist,
Executive Director
Butabika National Referral Mental Hospital, Uganda

The burden of disease due to alcohol and drug abuse is on the increase all over the world. The situation is even worse in Africa, especially in the Sub-Saharan region which for a long time have had been having alcohol and drug relate problems, but with limited capacity to fight the problem due to lack of financial resources.

While alcohol continues to be the leading substance of abuse on the continent, there is evidence of a growing problem of illicit drug abuse which not only includes traditionally known and available types, but also hard drugs like heroin, cocaine and methamphetamine.

Amidst other existing needs, many countries in Africa lack effective policy frameworks to adequately address the growing problem of drug dependence by way of prevention and treatment of drug use disorders.

Policy and programs in management of drug abuse encompass all strategies developed by a country to provide a comprehensive service including early identification, treatment and rehabilitation of people affected by drug use disorders. A successful strategy also includes systematic research, training and information dissemination in order to minimize harm from use of drugs.

Drug abuse in the Eastern Africa region, Uganda inclusive is on the increase. The situation is made worse by the many demand factors that include civil deprivation. Supply factors include the multiple porous borders, illegal production and weak laws that are not well enforced.

The presentation discusses an attempt to offer acceptable practice in light of the above and challenges so far faced by the process.

About the author

David K. Basangwa MD, M.MED, is a Government Senior Consultant Psychiatrist and Executive Director for Butabika National referral Mental hospital situated in Kampala, Uganda. He is also a honorary Lecturer in Psychiatry at the College of Health Sciences, Makerere University and a National focal person for substance abuse management in Uganda.

Dr. Basangwa is a researcher and writer. He has contributed chapters in books mainly in the area of addiction Psychiatry. He has further supported many studies in mental health and has supervised many students undertaking studies in this field.

As a medical Manager, Dr. Basangwa is currently concentrating on advocacy for mental health and improved quality of care for people with substance misuse and mental health in general.

Dr. Basangwa has also participated in many UNODC projects particularly those in the Eastern Africa region.

CURRENT SITUATION OF DRUG ABUSE AND THE MODELS OF TREATMENT IN CHINA

Zhimin Liu
Professor

National Institute on Drug Dependence, Peking University

According to the national-scale drug abuse surveys and statistics of office of National Narcotic Control Commission (NNCC), the number of registered problematic drug users increased from 70,000 in 1990 to 3.23 million by the end of June 2015 in the mainland China.

Heroin is still one of the major abused substances in China. However, the data on the scope of epidemic and regions of heroin abuse has been limited. The number of registered heroin user declined gradually and made about 46.7% among the drug abuse population in the end of June 2015.

Aside from the opiates, drugs such as methamphetamine ("ice"), MDMA ("ecstasy") and ketamine which were called "new emerging synthetic drugs" have spread quickly during the past decade. The proportion of new type synthetic drug users among the registered drug users increased from 6.7% in 2005 to 52.2% by the end of June 2015. Our study indicated that new synthetic drug abuse caused multiple serious social, public health and individual consequences.

The Chinese government takes effective measures towards drug control, drug abuse prevention and treatment. Policies support and promote multi-way and comprehensive treatment of detoxification and rehabilitation for drug users and relapse prevention after detoxification. The main strategy of harm reduction included community-based methadone maintenance treatment programs (MMTP), and clean needle-exchange programs. By the end of Nov. 2015, cumulative number of treated patients reached 169,302 in 770 MMT clinics in 29 provinces, autonomous regions and cities. The measures, strategies and interventions of harm reduction are producing good results in HIV/AIDS and HCV prevention and transmission among heroin users.

About the author

Liu Zhimin graduated from the Department of Clinical Medicine of Beijing Medical University in 1978, and got the Diploma of Addictive Behavior in St George's Hospital Medical School, University of London in 1995. He is a professor of public health from 2000, the director of Department of Drug Epidemiology from 1996, and vice-director of National Institute on Drug Dependence, Peking University from 2000. Prof. Liu is responsible for drug survey and surveillance and hold concurrent the director of National Surveillance Center for Drug Abuse. He also provides the government service of technical consultation on drug prevention and treatment. He is the member of National Working Group of MMTP from 2003, the vice chair of Chinese Association of Drug Abuse Prevention and Treatment from 2005 and the Associate Editor-in-Chief of Chinese Journal of Drug Dependence from 2000. Prof. Liu's research fields are drug abuse survey, surveillance and evaluation, drug prevention and drug related public

health and harm reduction. He published 170 scientific papers and more than ten books.

GOOD PRACTICE IN LOW AND MIDDLE INCOME COUNTRIES, LATIN AMERICA. THE PERSPECTIVE OF BRAZIL

Ronaldo Laranjeira
Professor of Psychiatry,
Federal University of São Paulo

The II Brazilian National Drug and Alcohol Survey released in 2013 showed that there are 3,5 million people using cannabis and 2,8 million using cocaine in several forms, with at least 1 million people using crack cocaine, the largest number in one country found in the literature. 42% of cannabis users also use cocaine. This epidemiological data shows that the Brazilian drug consumption is complex:

- a) the number of cocaine users is close to the cannabis users;
- b) the use of the combination of cannabis and cocaine by the population is very high;
- c) 57% of the cocaine users were involved in some forms of violence in the previous months.

The challenge to organize a good practice to this clinical population is huge. Moreover in many parts of Brazil, in particular in the city of São Paulo, there exists an Open Market Scene where hundreds of users are consuming crack on the streets. We recently published an editorial in ADDICTION: "The Brazilian 'Cracolândia' open drug scene and the challenge of implementing a comprehensive and effective drug policy" where the main aspects of this experience is discussed.

In the second part of the presentation, we discuss the treatment system created and funded by the State of São Paulo (population 40 million) in May 2013. The Project Recomeço (translated as "New Beginning") installed tents and mobile offices inside Cracolândia with a team of nurses, social workers and 80 community health agents. A family advice program was also established. Inside the drug zone, an 11-floor building was renovated offering shower, bathroom, barber-shop and a sports center, as well a variety of work-shops and training opportunities. A detoxification unit and housing facilities will also be available soon.

All these services are organized by the Reference Center for Alcohol, Tobacco and Other Drugs (CRATOD) - an addiction treatment centre located not far from Cracolândia, which offers two services: an out-patient unit, with a capacity to treat 400 users and offers 3500 monthly appointments; and an emergency care facility with 40 beds. Patients can be transferred to detoxification clinics (1173 beds), or to therapeutic communities (1703 places) if required. In order to facilitate drug users' access to justice, a judge, a public prosecutor, a public defender and volunteer lawyers are all based within its facilities. The presentation discusses the development and the results of this drug service organization strategy.

About the author

Professor Ronaldo Laranjeira. Full Professor of Psychiatry at Federal University of São Paulo, Brazil. Medical doctor with PhD at the National Addiction Center, Maudsley Hospital, London University. Principal Investigator of the National Institute of Alcohol and Drug Policies, which is the leading research group in Brazil. Two main lines of research of this group are epidemiological studies (has produced two national surveys on alcohol and drug use patterns), and services organization for alcohol and drug users (the team coordinates the state of São Paulo response in terms of range of services, from outreach work in an open market of crack use to psychiatric wards for comorbid). All services are evidence based and produce information to guide the state policy. The most recent paper that summarizes the work of our institute is an editorial of *Addiction*: The Brazilian 'Cracolândia' open drug scene and the challenge of implementing a comprehensive and effective drug policy.

KHALIFA EMPOWERMENT PROGRAM FOR STUDENTS

Ibrahim Mohamed Jasim Aldabal
Director of International Training Programme, Community Service, Dubai Police;
General Coordinator, Security Education Program;
General Coordinator, Khalifa Student Empowerment Program

Idea of the program

The idea of Khalifa Empowerment Program for Students came with an initiative of the court of the Deputy Prime Minister, Minister of Interior to prepare a national program to raise the students' awareness and capacities that covers all stages of education.

In addition, this program addresses the problems experienced by the students with the participation of all of the state's governmental, non-governmental and private institutions through coordination with their current existing prevention and awareness programs.

Philosophy of the program

- Involvement of all ministries and concerned bodies
- Police and security aspect should not exceed 10%
- Diversity in presentation and usage of the cutting-edge techniques and methods
- Familiarization with global and regional experiences in this aspect
- Program should be unique in its presentation and implementation

Program's Functions

- Developing mechanisms and plans to unify all the national governmental and private efforts related to educating students in public education and University education, in the public and private sector.
- Developing policies and mechanisms for establishing a national, ethical, healthy, and security value system that guarantee protection and the ability to deal with current and future risks and challenges to the targeted group.
- Inviting all bodies of mutual interest in order to cooperate and coordinate with them in achieving the State's higher policy, vision and mission through student generations.

After more than two years of hard work, the program finished the first prevention and awareness curriculum, which covers:

- Personal skills
- National awareness
- Health and safety
- Crime Prevention

Expected outcomes of implementing the program:

- Unification of all national efforts within one frame and according to one strategic system, which supports programs and activities of these ministries and bodies, expands their geographical scope, and guarantees their positive impacts.
- Relieving the pressure on the student by unifying the organizing and supervising bodies through the proposed program

- Introducing students to all of the state institutions and their efforts, and consolidating their relationship with them.
- Unifying the preventive awareness mission addressed to the student so that he does not feel that it is incompatible or inconsistent.
- Supporting the efforts of the United Arab Emirates at the international organizations and in international reports
- Identifying the most important students' problems and their impact on the general status of the State, and trying to limit them or reduce their impacts on the short and long run.

About the author

Ibrahim Mohamed Jasim Aldabal

Qualification

- PHD of Philosophy from University of Wales.
- Diploma in Police science and Law.

Responsibilities and Experience

- Director of international Training Programme in the overall management of Community Service at Dubai Police.
- General Coordinator for the Security Education Programme implemented in all Dubai schools.
- General Coordinator of the international protection Programme to raise awareness about drug issues and implemented by Dubai Police in cooperation with the United Nations.
- General Coordinator for Khalifa Student Empowerment Programme.

Local and International Memberships

- Member of the National Committee of "The National and Reserve Service".
- Member of the Advisory Committee of the International Narcotics Control Board of the United Nations INCB.
- International consultant with the United Nations in the field of youth programs and the prevention of crime and drugs.
- A member of the World Assembly of toxins experts.
- Local and international lecturer in the field of human development.

Publications

- "Precursors and Essential Chemicals" - risks and challenges - Control mechanisms Arab and international efforts to prevent their diversion to drug manufacturing.
- "Social Leader", preparing influential people in the community skills.
- "The Role of Islamic Shari`a in Preventing Drug Abuse and Its Impact on the Citizens of the United Arab Emirates".

Honors and Awards

- Outstanding Administrative Officer at the level of Dubai government departments in 2002 - the program of Dubai Government Excellence.
- Rashid Award for Academic Excellence for the year 2012 for Ph.D holder.
- More than 160 local and international certificate of thanks and appreciation.

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THE VCU HUBERT H. HUMPHREY FELLOWSHIP PROGRAM IN SUBSTANCE ABUSE EDUCATION, TREATMENT AND PREVENTION

**J. Randy Koch
Associate professor**

Department of Psychology at Virginia Commonwealth University

The Hubert H. Humphrey Fellowship Program, a Fulbright exchange activity sponsored by the U.S. Department of State and administered by the Institute of International Education, brings accomplished young and mid-career professionals from selected developing and emerging countries to the United States for 10 months of non-degree study and professional development. Nominated by U.S. Embassies or Fulbright Commissions, Fellows are selected through a competitive process based on their potential for leadership, commitment to public service, and professional expertise.

Virginia Commonwealth University was selected as a site for the Hubert H. Humphrey Fellowship Program in 2006. The focus of VCU's program is on substance abuse education, treatment, and prevention, and related areas of public health. In addition to the funding provided by the U.S. Department of State, support is provided by the National Institute on Drug Abuse and Virginia Commonwealth University. The primary purpose of the program is to enhance fellows' skills so that they can assume a greater leadership role in substance abuse policy, practice and/or research upon their return home. The program emphasizes addressing the complex problems of addiction through the implementation of culturally appropriate, science-based prevention, treatment, and policy interventions.

While in the program, the fellows participate in a variety of educational and training experiences including academic coursework, a specially designed Humphrey Seminar, field trips to local and national organizations, conferences and workshops, and professional affiliations with a community- or university-based organization. Thus, the program combines formal academic training with opportunities for experiential learning in real world settings, and it fosters the development of extensive professional networks to facilitate future collaborations. Fellows return home with a concrete plan to implement a project that is intended to address the complex problems of addiction or related health problems in their country.

About the author

Dr. J. Randy Koch is an associate professor in the Department of Psychology at Virginia Commonwealth University. Dr. Koch earned his doctorate in community psychology from Michigan State University in 1985. Prior to joining VCU in 2003, he was the Director of Research and Evaluation for the Virginia Department of Behavioral Health and Developmental Services, a position he held since 1989. In this position, he was responsible for evaluating publicly-funded behavioral healthcare services in Virginia as well as conducting a wide range of policy studies. Since joining VCU, his research interests have focused primarily on the prevention of youth tobacco use and methods for improving the quality of substance abuse services, especially program performance and outcome measurement. Among his current responsibilities, he is a co-investigator for the Center for the Study of Tobacco Products, an FDA-funded tobacco center of

regulatory science; he is a Co-PI for the Virginia Youth Tobacco Projects, a statewide, multi-university research program on the causes and prevention of youth tobacco use; and he is the director of the VCU Humphrey Fellowship Program on Substance Abuse Prevention, Treatment and Policy that brings mid-career professionals from low and middle-income countries to VCU for advanced leadership and technical training.

Session 8

NEW FRONTIERS IN SUBSTANCE USE DISORDERS

Moderator: Wayne Hall

COGNITIVE BEHAVIORAL THERAPIES

Kathleen Carroll
Albert E Kent Professor of Psychiatry
Yale University School of Medicine, Psychotherapy Development Center, US.

Cognitive Behavioral Therapies are among those with the highest level of empirical support across the spectrum of mental health and substance use disorders. At the most basic level, CBT attempts to help individuals recognize, avoid, and cope. That is, recognize the situations in which they're most likely to use drugs, avoid those situations when possible or appropriate, and learn to cope more effectively with a range of problems and problematic behaviors associated with substance use. CBT has two critical components and defining features: First, a thorough functional analysis of the role drugs/alcohol play in the individual's life. The second critical component of CBT is skills training. In CBT, this consists of a highly individualized training program that helps substance users change old habits associated with their drug use and learn or relearn more adaptive cognitive and behavioral control skills. Dr. Carroll will review the theoretical background and level of empirical support for CBT, including factors that may be associated with the durability of its effects (the 'sleeper effect'). She will then describe some of the challenges faced when disseminating CBT to clinical settings and then focus on novel strategies for moving CBT and other empirically evaluated therapies into the clinical practice.

About the author

Kathleen Carroll Ph.D., is the Albert E. Kent Professor of Psychiatry at Yale University School of Medicine. Her work focuses on the development, dissemination and validation of evidence-based treatments for addiction. A summa cum laude graduate of Duke University, she is Principal Investigator of the Center for Psychotherapy Development at Yale, NIDA's only Center focusing on behavioral therapies development. She is also Co-PI of the New England Consortium Node of the NIDA Clinical Trials Network, now entering its 16th year. The author of over 300 peer reviewed articles, chapters and books, her contributions include (1) documenting the efficacy and delayed emergence of effects of CBT, (2) highlighting the importance of behavioral platforms for pharmacotherapy trials, and (3) establishing the efficacy, durability, and specificity of computer-assisted training in CBT.

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WHAT ARE THE ADVERSE HEALTH EFFECTS OF CANNABIS?

Wayne Hall
Professor and Director,
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This paper describes the changing evidence on the adverse health effects of cannabis over the 20 years since WHO last addressed the issue. Epidemiological research has shown that driving while cannabis-impaired approximately doubles car crash risk. Around one in 10 cannabis users develop dependence and as many as one in six who start using in adolescence. Regular adolescent cannabis use is associated with approximately double the risks of: early school leaving, cognitive impairment; and developing psychoses in adulthood. It is also strongly associated with an increased risk of using other illicit drugs. In longitudinal studies these associations have persisted after controlling for plausible confounding variables, suggesting that cannabis use is a contributory cause of these outcomes. Some researchers argue that these relationships are better explained by shared causes and risk factors. Cannabis smoking probably increases cardiovascular disease risk in middle aged adults (and possibly in young adults) but its effects on respiratory function and respiratory cancer remain unclear because most cannabis smokers have smoked or still smoke tobacco.

More research is needed to understand the effects that increases in the THC content of cannabis products and changes in routes of administration may have on their adverse health effects. The associations between regular cannabis use and poor psychosocial outcomes and mental health in adulthood warrant efforts to discourage adolescent cannabis use.

About the author

Wayne Hall is a Professor and Director of the Centre for Youth Substance Abuse Research at the University of Queensland and a Professor of Addiction Policy at the National Addiction Centre, Kings College London. He also has Visiting Professorial appointments at the London School of Hygiene and Tropical Medicine and at the National Drug and Alcohol Research Centre, UNSW. He was formerly: an NHMRC Australia Fellow in addiction neuroethics at the University of Queensland Centre for Clinical Research and the University of Queensland Brain Institute (2009-2014); Professor of Public Health Policy, School of Population Health, UQ (2005-2009); Director of the Office of Public Policy and Ethics at the Institute for Molecular Bioscience (2001-2005) at the University of Queensland; and Director of the National Drug and Alcohol Research Centre, UNSW (1994-2001). He has advised the World Health Organization on: the health effects of cannabis use; the effectiveness of drug substitution treatment; the scientific quality of the Swiss heroin trials; the contribution of illicit drug use to the global burden of disease; and the ethical implications of genetic and neuroscience research on addiction.

NEW PSYCHOACTIVE SUBSTANCES

Fabrizio Schifano
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School of Life and Medical Sciences, University of Hertfordshire;
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The speed with which NPS emerge onto the drug market(s) has been accelerating over the last few years and one could argue that this situation of increasing availability of new/novel psychoactive substances (NPS) may not change in the immediate future. According to both the UN (2015) global SMART programme and the EU Early Warning System/EWS, by December 2015 an excess of 500 NPS has been reported by a large number of countries.

The purpose of this presentation is to provide health professionals/policy makers with updated information relating to the background, clinical pharmacology and, when possible, clinical management for each of the NPS categories. The world of NPS is complex and diverse, including a range of different molecules such as: psychedelic phenethylamines; synthetic cannabimimetics; cathinone derivatives; novel stimulants; synthetic opiates/opioids; tryptamine derivatives; phencyclidine-like dissociative; piperazines; GABA-A/GABA-B receptor agonists; a range of prescribing medications; psychoactive plants/herbs; and a large group of performance and image-enhancing drugs. Users are typically attracted by these substances due to their intense psychoactive effects and likely lack of detection in routine drug screenings. Indeed, these drugs act on a range of neurotransmitter pathways/receptors whose imbalance has been associated with medical and psychopathological conditions, including dopamine; cannabinoid/CB1; GABA-A/B; 5-HT_{2A}; glutamate; and κ opioid receptors. Since it is crucial to be aware of the effects and toxicity of NPS, both the EU-MADNESS and EPS/NPS projects, coordinated by our research group, aim at better understand the pharmacology of the available/forthcoming NPS and to disseminate the most current NPS-related information to health professionals; drug enforcement officers; and policy makers.

About the author

Professor Schifano is one of the very few European physicians with training and specialist qualifications in both psychiatry and clinical pharmacology. Outstanding contribution has been made to several areas, including:

- Novel psychoactive substances/NPS: Professor Schifano is the Principal Investigator of the 5th consecutive EU Commission-funded, multi-centre, NPS-based, research programme (since 2002). Results from the main of these studies have provided a comprehensive/multilingual analysis of the NPS-related online available information. Unprecedented knowledge has been further provided on the psychopathological and overdose issues related to the misuse of these compounds.

- Mortality studies: Professor Schifano has previously supervised and led the National Programme on Substance Abuse Deaths (npSAD), which regularly collects all

of the information on drug-related deaths from the UK. Results from some of these studies have informed the National Institute of Clinical Excellence (NICE) guidelines on antidepressant prescriptions and others had an impact on influencing successful drug-related deaths prevention policies and initiatives.

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FROM A UNIFIED VISION OF ADDICTION TO THE DEVELOPMENT OF A NEW TREATMENT

Pier Vincenzo Piazza
Director
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Recently we have proposed a general theory of transition to addiction that synthesizes knowledge generated in the field of addiction into a unitary explanatory frame. Transition to addiction results from a sequential three-step interaction between: (1) individual vulnerabilities; (2) the degree/amount of drug exposure. The first step, sporadic drug use is a learning process mediated by over-activation of the neurobiological substrates of natural rewards that allows most individuals to perceive drugs as highly rewarding stimuli. The second, intensified, sustained, escalated drug use occurs in some vulnerable individuals who have a hyperactive dopaminergic system and impaired prefrontal cortex function. The last step, loss of control of drug intake and full addiction, is due to a second independent vulnerable phenotype. This loss-of-control prone phenotype is triggered by long-term drug exposure and is characterized by long-lasting loss of synaptic plasticity in reward areas in the brain. These studies also underpin the existence of a drug resilient phenotype, shown by the majority of subjects, that allow an individual to be exposed for long periods to drugs without developing addiction. Studying the biological basis of resilience to drugs we have identified a hormone, pregnenolone, which secretion in the brain is induced by very high concentration of cannabis active principle THC and that is able to block most of the addiction related effect of cannabis. A family of molecules derived by pregnenolone is now being developed as a new treatment of cannabis abuse.

About the author

Dr. Pier Vincenzo Piazza, 54 years old, is a renowned and awarded scientist. He has provided groundbreaking contributions to the understanding of behavioral pathologies and in particular addiction, introducing new visions of the disease, new approaches to study it and uncovered several of its molecular mechanisms. Many influential papers have been published in high profile journals and currently ranks within the 1 % most cited scientists in the fields of "Neuroscience and Behavior" and "All Science". Among his awards he obtained: 2003 – First recipient of the Jacob Wallesky Award – attributed by the American Society of Neuroscience for innovative research of drug addiction and alcoholism. 2011 – The Camille Woringer Award from the French Foundation for Medical Research for his work on brain diseases. 2015 – the Lamonica de Neurologie Award – from the French Science Academy; the Grand Prix Inserm Award from the INSERM – for medical research.

Dr. Piazza is also the founder and director of the Neurocentre Magendie in Bordeaux, a research center of the INSERM (the French equivalent of NIH). The Neurocentre Magendie with its 12000 m² and 200 scientists is among the best Neuroscience Institute in Europe.

Session 9

SCIENCE AT THE SERVICE OF POLICY MAKING

Moderators: Louisa Degenhardt and Gilberto Gerra

USING DATA LINKAGE TO EXAMINE THE EFFECTIVENESS OF DRUG DEPENDENCE TREATMENT: AN ANALYSIS OF THE IMPACT OF OPIOID SUBSTITUTION THERAPY ON MORTALITY AND CRIME

Louisa Degenhardt
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Aims: The use of linked administrative datasets represents a novel and extremely cost-efficient way to examine potential impacts of drug treatment on outcomes. Here, results analyses of potential impacts of opioid substitution therapy (OST) on mortality in prison and post release, differences in mortality risk between OST medications, and impacts upon crime are presented using linked datasets.

Design: we used various linkages of datasets of all opioid dependent people who entered OST 1985-2010 in New South Wales (NSW), Australia. We linked data on OST history, court and prison records, and deaths. Multivariable Cox regressions for post-release periods undertaken to examine the association between OST exposure and mortality post-release, for which covariates were updated per-release.

Findings: Clear impacts of OST retention on mortality and crime risk were documented. For example, 16,453 people were released from prison N=60,161 times; 1,050 deaths occurred. Individuals were receiving OST in 51% of releases. Lowest post-release mortality was among those continuously retained in OST post-release (CMR 4-weeks post-release: 6.4 per 1,000PY; 95% CI: 5.2, 7.8), highest among those with no OST (CMR: 36.7 per 1,000PY; 95% CI: 28.8, 45.9). Multifactorial models showed OST exposure in the four weeks post-release reduced hazard of death by 75% (adjusted hazard ratio 0.25; 95%CI: 0.15, 0.52); OST receipt in prison had a short-term protective effect that decayed quickly across time.

Conclusion: We found that OST in prison and post-release reduces mortality risk during imprisonment and in the immediate post-release period. OST in prison should be scaled up, and post-release OST continuation maximised.

Funding: Australian National Health and Medical Research Council; Australian Institute of Criminology (AIC) through the Criminology Research Grants Program; Australian Government Department of Health and Ageing.

About the author

Louisa Degenhardt is Professor of Epidemiology and NHMRC Principal Research Fellow at the National Drug and Alcohol Research Centre (NDARC) at UNSW. She was awarded her PhD in 2003, examining the comorbidity of drug use and mental disorders in the Australian population. She has honorary Professorial appointments at University of Melbourne's School of Population and Global Health, Murdoch Children's Research Institute, and University of Washington's Department of Global Health in the School of Public Health. Louisa conducts diverse epidemiological studies including analysis of large-scale community and clinical population surveys, data linkage studies focusing

upon people with a history of drug dependence, pharmacoepidemiological studies of pharmaceutical opioid utilisation, post-marketing surveillance of new opioid medications, cohort studies of young people and of people using opioids.

Louisa's work documenting what is and is not known about the epidemiology and health effects of illicit drugs has shaped discourse at a global level, and she is regularly sought by researchers, NGOs, and UN agencies to collaborate and provide advice. Her work on illicit drug market surveillance, which continues today, is regularly used to inform policy and planning on health and law enforcement responses. Her data linkage work on opioid dependence, treatment and mortality is used by health and corrective services departments in Australia and internationally to evaluate the benefits and risks of treatment.

TREATMENT EFFECTIVENESS – WHY AND HOW DO EVIDENCE BASED APPROACHES MATTER IN THE TREATMENT OF DRUG USE DISORDERS?

Marica Ferri
Head of the Sector Best Practice
European Monitoring Centre for Drugs and Drug Addiction (EMCDDA)

Treatment effectiveness is proved through the methods of the evidence-based medicine which was first conceptualised by David Sackett (November 17, 1934 – May 13, 2015) a medical who founded the first Department of clinical epidemiology at McMaster University in Canada; and Archibald Cochrane after whom name was set up the Cochrane Collaboration, an international organization aimed at helping individuals to take informed decisions about health.

Thanks to the Cochrane Systematic reviews it was possible to close the bridge between research results and clinical practice. A dramatic example was the provision of corticosteroids to pre-term babies whose effectiveness was proved in the 70s but entered into wide clinical practice only twenty years later. In the treatment of drug addiction the provision of methadone to people dependent on heroin also took time to be widely provided and in some countries there are still barriers to its full implementation.

As the body of evidence around effectiveness of treatment and interventions in general is consolidating the next frontiers that international organizations have to conquer are related to effective dissemination and appropriate communication.

Along the last few decades we passed from the problem of accessing evidence to the problem of excess of evidence. Some still believe that evidence base means to find articles in support of their pre-conceived convictions but this is not true. To be based on evidence means to identify a knowledge need and to find a sound answer to it by the mean of all the available evidence, irrespectively of one's wishes and preferences.

The EMCDDA developed the Best Practice Portal that contains synthesis of evidence, example of practice and tools for implementation. The collaboration with UNODC and WHO is key to assure both the quality and the reach of wide audiences, and to provide instruments to recognize good quality evidence for action.

About the author

Marica Ferri is currently the Head of the Sector Best Practice, knowledge exchange and economic issues. She begun to work as a researcher epidemiologist in 1995 organizing the 6th International Conference on Harm Reduction in Florence, Italy. After that she worked at the Epidemiological Observatory of the Latium Region in Rome. She coordinated the Cochrane Drugs and Alcohol group during 5 years (1999-2004). Between 2004 and 2009 year in which she joined the EMCDDA, she worked as methodologist for the development and implementation of regional and national Guidelines for the treatment of various health problems. She holds a Master degree in Epidemiology (Catholic University of Rome, A. Gemelli) and a Master degree in Systematic Reviewing of Scientific Literature in the Biomedical Field (University of Milan/University of Oxford) and she is completing a PhD on International Health Policies

at the Lisbon Institute of Hygiene and Tropical Medicine. She has been involved in the development of Quality Standards for drug demand reduction at European and International level. She is author of several scientific papers among which the majority are systematic reviews of evidence.

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