Welcome to the June edition of *Addiction Research Bulletin* (*ARB*). Matua Ra ki brings you this resource, in conjunction with dapaanz, to offer insights into recent addiction research activities that have relevance to New Zealand.

In contrast to our usual structure, this edition will focus on some of the amazing and insightful research summaries from the recent Addiction Research Symposium – an annual national forum showcasing addiction-related research. I encourage you to consider the implications of this work for practice. Please feel free to share this Bulletin with others.

If you would like to publicise an event, piece of research, award or activity, or contribute to this publication in any way, contact: klare.braye@matuaraki.org.nz.

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The National Addiction Research Symposium has been held since 2010 as a collaborative venture between the Universities of Auckland, Otago, Massey and Victoria, supported by Matua Raki.

This year Victoria University of Wellington hosted presenters and participants, and an impressive line-up of oral and poster presentations exemplified the diversity of addiction research.

A supportive networking environment was created, facilitating opportunities to share ideas and initiatives amongst senior researchers, clinicians, students and policy makers involved in the addiction field.

Professor Piri Sciascia, (Ngāti Kahungunu, Kāi Tahu) and Deputy Vice Chancellor (Māori) opened the day for us. Acknowledging the challenges and ‘te ‘po’ (the darkness) that may be synonymous with addiction, he also affirmed the work done by those working in the sector with tangata whai ora and whānau that lifts some out of that darkness. His korero paved the way for a day of sharing, learning and understanding.

The breaks offered opportunities for networking and discussion. They also provided the opportunity to view poster presentations that crossed a spectrum of topics including: opioid trends and access, electronic nicotine delivery systems, family access to methamphetamine treatment information, cocaine inhibitors, non-addictive pain medication, therapeutic community training evaluation and the drug interactions between alcohol and pharmaceutical medications.

Many of the presentations are summarised below and I would encourage you to read some of the incredible work that is being carried out in the research arena.

More information can be sourced by contacting authors directly or by viewing abstracts and presentations at the Matua Raki website: www.matuaraki.org.nz/workforce-groups/addiction-research-symposia/163
The science and potential public health impact of reducing nicotine in cigarettes

Prof Eric Donny (University of Pittsburgh)
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Decades of research demonstrate that nicotine establishes and sustains chronic dependence on cigarettes. New Zealand has in place tools that could break this link by mandating a reduction in the nicotine content of tobacco.

My research focuses on establishing the empirical basis of the potential benefits and harms of this regulatory action. Data suggests cigarettes with only 3 percent of the nicotine in a typical cigarette reduce the number of cigarettes people smoke, how deeply they inhale, how much nicotine they are exposed to and nicotine dependence.

These effects are in contrast to so-called “light” cigarettes which are just ventilated cigarettes that do not contain reduced levels of nicotine and lead to more smoking, not less. Furthermore, research suggests the reduced reinforcing efficacy of low nicotine cigarettes is likely also to reduce smoking acquisition in adolescents. Finally, surveys show most New Zealanders, including smokers, support regulations that reduce nicotine to reduce addictiveness.

This evidence suggests a possible path for moving closer to the 2025 smokefree goal which includes a mandated reduction of nicotine in all combusted tobacco. This path may be consistent with the growing availability of and interest in e-cigarettes which provide an alternative and likely less harmful source of nicotine.

Conversely, reducing nicotine in cigarettes could mitigate some of the key concerns about e-cigarettes, including that they will lead to smoking in some adolescents and that most smokers may not quit smoking even if they use them. Mandated reduction nicotine in all combusted tobacco products sold in New Zealand is worthy of public debate.

Tobacco dependence: more than just the devil we think we know

Dr Penelope Truman (Massey University, Wellington)
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Nicotine is tobacco’s main addictive agent; however conflicts in the literature between the addictiveness of nicotine and of tobacco encouraged us to test our hypothesis that tobacco dependence and nicotine dependence differed chemically.

We tested the addictiveness of a preparation from tobacco particulate matter in the rat self-administration model resulting in responses that were very similar to those from nicotine alone, demonstrating the importance of nicotine in maintaining tobacco dependence.

However, the responses were significantly less attenuated by mecamylamine or by ketanserin pretreatment, and gave a higher “breakpoint” than the responses from equivalent nicotine preparations. The combined evidence showed nicotine had a chemical helper or helpers.

Seeking the biochemical foundation of these behavioural differences, we have recently focussed on monoamine oxidase inhibitors in tobacco smoke, the most widely accepted as being responsible being harman and norharman.

However, our work has clarified that immediate inhibition of less than 10 percent is expected from smoking, but only 5-10 percent of that total inhibitory activity comes from harman and norharman.

The other 90 percent is not well characterised and deserves a fresh look. Is there an irreversible monoamine oxidase inhibitor, or one with a long life that can build up in the body among the chemicals in tobacco smoke? Finding the chemical(s) that help nicotine be more addictive may help us find better ways of helping smokers quit.
Causal models of the associations between unemployment, cannabis use, and alcohol misuse

Associate Prof Joseph Boden (Christchurch Health and Development Study, University of Otago)  

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There has been considerable interest in the extent to which substance use and unemployment may be related, although the direction of causality is unclear. Longitudinal data were examined over 18 to 35 years to explore the extent to which cannabis and alcohol use predicted unemployment, and to the extent to which unemployment predicted use of each substance.

We controlled for non-observed fixed sources of confounding; time-dynamic covariate factors and time-lagged measures of unemployment; and alcohol and cannabis use.

Results suggested reverse causal processes in which higher levels of unemployment increased the risk of cannabis dependence, and vice versa, although there was less evidence for this association between alcohol use and unemployment.

While unemployment was a significant (p < .05) predictor of alcohol use disorder, alcohol misuse was only a marginal (p < .10) predictor of unemployment. There was evidence of a causal process in which cannabis use significantly increased the risk of alcohol use disorder (p < .0001), but no evidence that alcohol misuse increased the risk of cannabis dependence (p > .10).

The findings suggest the linkages between unemployment and the use and misuse of cannabis and alcohol adhere to a complex pattern of causality. Unemployment appears to be a consistent predictor of substance misuse, but only cannabis use appeared to increase the risk of unemployment. While it is clear unemployment is an acute stressor, the present findings suggest the experience of unemployment specifically increases the risk of cannabis dependence and alcohol use disorder. Furthermore, cannabis dependent individuals are more at risk of becoming unemployed.

Women who inject drugs: barriers to their access of needle exchange services, and gendered experiences

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Stigma is a pervasive factor in the lives of women who inject drugs (WWID). They experience marginalisation more than men; are stigmatised due to violating society’s norms around substance use; and for violating society’s norms of femininity.

The Needle Exchange Programme (NEP) in New Zealand takes a harm reduction approach to people who inject drugs by providing sterile syringes, needles and kits. Despite the literature within an injecting drug context that suggests facilitators and barriers in accessing NEP differ for women, there are few gender sensitive NEPs.

This paper examines the experiences of women who have injected drugs and their access of NEP. Key questions focused on whether participants experienced gendered barriers and how they
responded to these. Three key themes were identified: stigma and its effects; barriers other than stigma; and gendered experiences. Analysis of these highlights the pervasiveness of stigma in the lives of WWID but, additionally, challenges stereotypical notions of WWID as passive victims coerced into injecting drug use. Stigma was found to be a significant harm to WWID in both their access to NEPs and in their day-to-day lives. The research also identified other barriers that hindered NEP access and how gender norms affected women’s navigation of their world.

Is intimacy-focused therapy an effective treatment for out-of-control sexual behaviour? A treatment outcome study

Dr Karen Faisandier (Massey University/The Integrative Practice) drk@theintegrativepractice.com

‘Out of control’ sexual behaviour (OCSB) involves loss of control, associated distress and impairment regarding sexual behaviour, and is frequently referred to as sexual addiction, although no formal diagnostic criteria exist. Behaviours may include pornography use, multiple affairs, masturbation, paid sex, internet sex, and paraphilias.

Amount, duration, and type of sexual behaviour are poor markers of the problem (excluding sexual offending) compounded by the subjective, value-laden, and culturally bound perception of what comprises normal or abnormal sexual behaviour. Estimates suggest 3-6 percent of the population may be affected.

The etiology of OCSB involves multiple interacting factors including: compulsive thoughts and feelings; impulse control and affect regulation difficulties; and intimacy and attachment deficits. Existing treatments are varied with no gold-standard or best practice.

This study reports on the effectiveness of intimacy-focused therapy (IFT) for OCSB used by Sex Therapy New Zealand (STNZ). Therapy guidelines were used with 10 volunteer men with sexual behaviour concerns. Compared to baseline, there were improvements in control over sexual behaviour, reductions in negative consequences and reduced distress regarding sexual behaviour.

There was minimal change in adult attachment, fear of intimacy and self-reported sexual behaviour. Changes were largely maintained at three months post-therapy. These outcomes support the effectiveness of IFT in reducing OCSB for men and offer potential in the treatment of OCSB, although they do not support the notion that improvements to attachment and intimacy occurred. Future research is required.

The experience of alcohol use amongst individuals with an intellectual disability in Aotearoa/New Zealand

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There is little literature on alcohol use among those with intellectual and developmental disability, although international research indicates that alcohol use is associated with co-existing problems and negative social and health outcomes for this group. Within New Zealand, alcohol use is normative and the recent movement to community living by people with an intellectual disability potentially places them at increased risk of the adverse effects of alcohol misuse.

Semi-structured interviews were undertaken to investigate the experience of alcohol use among 10 individuals with an intellectual disability in New Zealand. Alcohol use was found to take place in highly complex social structures across a number of sub-systems. Critical sub-systems influencing participants’ drinking behaviour were the formal support provided by NGOs, whānau, peer groups and spiritual community.

Alcohol consumption levels among participants were generally low, with limited binge drinking or long-term adverse effects. Protective factors mitigated the risk of pathological alcohol consumption and included: the power of family, social, spiritual, and support networks; learning from negative personal experience; internalisation of rules; and risk aversion.
Readiness and recovery: citizens’ perspectives of switching from methadone to Suboxone for the treatment of an opioid use disorder: improving treatment quality

Blair Bishop (Capital & Coast DHB)
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This project explores citizens’ perspectives of receiving Suboxone for the treatment of opioid use disorder. It employs qualitative interviews with service users who started on Suboxone, or who switched to it from methadone to better understand what they saw as its beneficial or detrimental impacts on their opioid use disorder.

Since July 2013 Suboxone has been a fully funded option for the treatment of opioid dependence, and services and service users have learned more about it. Current evidence suggests Suboxone is better than no treatment; that methadone is marginally better than Suboxone for retention in treatment; that those on Suboxone are less likely to use illicit opiates while in treatment; and that it is easier to come off. As yet there is little research asking service users about their experiences.

Four themes were extracted: drivers for opioid substitution treatment change; readiness for Suboxone substitution treatment; absence of effect from Suboxone; and increased sense of citizenship on Suboxone. Participants had very different pathways into treatment but shared some very similar perceptions and experiences with regards to switching between methadone and Suboxone. The experience of internalised stigma about being on methadone contributes to a helpful switch to Suboxone. The absence of noticeable sedative effects from Suboxone is beneficial for those seeking cognitive clarity and sustained energy. Methadone was seen as unhelpful and ‘another drug’ that reinforced opioid use disorder.

Readiness to change can be explained as readiness to deal with lived trauma and a desire to shift away from a lifestyle focused on seeking sedation and substance induced euphoria. Switching from methadone and/or Suboxone was most beneficial when participants made recovery goals that included accessing psycho-social therapies, contributing to their community, and reconnecting with family. Participants also said switching from methadone and/or Suboxone made these recovery goals easier to achieve as they had more drive and could think more clearly.

Discussing these conclusions during initial consultations, either prior to the commencement of treatment or if a medication switch is being considered, will improve treatment quality.

SPGeTTI: developing a smartphone-based problem gambling relapse prevention app

Prof Chris Bullen, Gayl Humphrey, Nikhil Magan, Dr David Newcombe, Dr Fiona Rossen, Varsha Parag, Dr Robyn Whittaker. (National Institute for Health Innovation and Centre for Addiction Research, The University of Auckland) c.bullen@nihi.auckland.ac.nz

Use of electronic gambling machines (‘pokies’) is the gambling activity most frequently associated with problem gambling and harm. People moving out of dependence on pokies are exposed to pervasive cues in their daily lives, making abstinence difficult. We investigated how smartphone technology designed to deliver theoretically-based, personalised ‘anywhere, just in time’ support could help people enrolled in existing support services.

Our research was undertaken in two parts: technical ‘proof of concept’ assessment, for which we developed and tested a prototype app; and acceptability testing involving focus groups of problem gambling practitioners and service users. We found the prototype app to be robust and sufficiently accurate at locating individuals in relation to gambling venues.

We also found high levels of acceptability of the idea, with some concerns identified (such as using the technology to locate, not avoid, gambling venues) although it was considered these could be mitigated.

Further content development and refining the technology underpinning the intervention among a larger group is ongoing. A randomised controlled trial will commence recruitment in June 2016.
The epidemiology of gambling and gambling harm in New Zealand: implications for policy and practice

Professor Max Abbot (Auckland University of Technology, Gambling and Addictions Research Centre) max.abbott@aut.ac.nz

New Zealand has a strong history (since 1985) of conducting national gambling and problem gambling surveys with much now known about changes in prevalence and risk factors. Recently a large-scale, high quality prospective study was undertaken (Abbott et al., 2015) with linked studies underway in Sweden and Victoria. The National Gambling Study commenced in 2012 with a baseline prevalence survey (n=6251) and re-interviews in 2013, 2014 and 2015. These studies provide jurisdiction-wide estimates of: problem gambling incidence (problem onset), duration and remission; information on transitions between other gambling states; the identification of risk and protective factors for problem onset, development, remission and relapse; and advance understanding of temporal relationships between problem gambling, other addictions and mental health disorders.

It has long been maintained that increased gambling availability leads to increased participation and harm (availability hypothesis). Others have proposed that when populations are first exposed, over time these relationships break down and both participation and harm decrease, even when availability continues to increase or levels out (adaptation). The New Zealand survey findings are consistent with both availability and adaptation. The highest problem gambling prevalence rates in New Zealand were obtained in 1990, a few years following the introduction of electronic gaming machines (EGMs), Lotto and Instant Kiwi. During the 1990s both regular participation in continuous forms of gambling and problem gambling prevalence reduced significantly. Since 2000 however, at variance with both the availability and adaptation hypotheses, there have been no further reductions in problem gambling prevalence. Participation has continued to fall but problems have plateaued. Findings highlight the importance of factors other than gambling exposure per se in determining problem gambling and other gambling-related harm.

Māori and Pacific people have substantially higher problem gambling rates than other New Zealanders. Other groups with high rates include males, young adults and people who lack formal qualifications, are employed, live in deprived neighbourhoods, have a non-Christian religion or belong to non-traditional Christian churches. However, Pacific people, and a number of the other high-risk groups, have low participation rates. Economic and other factors appear to be the major determinants of persistent and growing disparities between social and cultural groups.

Effective prevention programmes will need to address both exposure to EGMs and other forms of continuous gambling, and other risk and vulnerability factors, some of which are common to substance misuse/dependence and a number of other mental health disorders. Furthermore, of those who developed a problem during the past year, over half are people who had a problem in the past and are relapsing. Given these high rates of relapse, programmes will need to target first time onset and problem recurrence, and give increased attention to relapse prevention.

Findings from a three-year follow-up of participants in a randomised controlled trial of brief telephone interventions for problem gambling

Dr Maria Bellringer, Prof Max Abbott, Katie Palmer du Preez, Janet Pearson, Associate Prof Alain Vandal, Prof David Hodgins (AUT, Gambling and Addictions Research Centre)

International studies suggest very brief treatment can reduce gambling problems, although it is unknown how long the improvements might last. This study compared the effectiveness of three brief telephone-based treatments for problem gambling to the standard gambling helpline treatment. A pragmatic randomised controlled trial was conducted in the real-life setting of the gambling helpline. Four-hundred and sixty-two first-time helpline callers were randomly assigned to one of four treatment groups. Follow-up data were collected at three, six, 12 and 36 months. The four treatments were: Helpline standard care; Single motivational interview (MI); Single MI plus cognitive behavioural self-help workbook; and Single MI, plus workbook, plus four follow-up motivational telephone interviews.

At 12 months, participants in all groups evidenced statistically and clinically significant, sustained improvement on primary outcome measures, as well as on a number of secondary measures including...
depression and quality of life. Contrary to prediction, there was no difference in primary outcomes between the treatment groups. The improvements in gambling behaviour achieved at 12 months continued over time (36 months later). While the outcomes were similar between the four treatment groups, the most intensive treatment (MI+W+B) achieved greater reductions in problem gambling severity and quitting or reduced gambling. The results indicate that stepped care service provision and the matching of clients and therapies could be beneficial.

Cutting Edge 2016 – Celebrating Transformation

Cutting Edge is the national addiction treatment conference. This, the 21st Cutting Edge conference, will be held 7-10 September at the Energy Event Centre, Rotorua.

This year, the theme is Celebrating Transformation. Every day the addiction workforce empowers transformation in individuals, their whānau, their communities, and transforms their services to adapt to our changing world. This conference will celebrate and showcase what enables the addiction workforce to facilitate these transformations.

You are warmly invited to submit abstracts, details of which can be found at: www.cmnzl.co.nz/cutting-edge-2016/call-for-abstracts-1/

Please note the two available awards for presentations:

• The New and Emerging Researchers Award awarded by Matua Raki for an oral or poster presentation of a research initiative
• The 2016 dapaanz award for best presentation on a matter of treatment awarded to a poster.

Have your say

We hope you find the Addiction Research Bulletin useful. We look forward to receiving your articles, feedback or suggestions for future editions. Is there something we’ve missed? Your views are important to us.

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