

# centre lines

A bi-monthly newsletter published alternately by the National Drug Research Institute (NDRI), Perth and the National Drug and Alcohol Research Centre (NDARC), Sydney

NDRI (29)

December 2009

## issuing **forth**

Starting early: prevention, early intervention and inequality



Funded by the  
National Drug Strategy

Registered by Australia Post –  
Print Post Publication No  
PP236697/00013  
ISSN 1034-7259

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## edspace

Welcome to the final issue of *CentreLines* for 2009, which focuses on a relatively new area of research within NDRI - the social contexts of substance misuse. Headed by Professor Sherry Siggers, this research builds upon international work exploring the social and economic benefits of prevention and early intervention, particularly among marginalised populations, in terms of more equal health outcomes, reduced substance misuse, safer children, and more cohesive communities.

*Project Notes* includes information about the National Alcohol Indicators Project, specifically the latest NAIP Bulletin 12 on *Trends in estimated alcohol attributable deaths and hospitalisations in Australia 1996-2005*, which was recently launched. Also included are the results of a video experiment to improve recall of television advertising graphic health warnings.

As previously advised, NDRI is endeavouring to move away from the distribution of printed copy towards predominantly electronic circulation of *CentreLines*. If you have not yet provided NDRI with your email address we encourage you to do so as soon as possible. For further information, please see the back page of this issue.

We hope that you enjoy this issue of *CentreLines*, and offer you our best wishes for the festive season. For more information about NDRI's research and other activities, please visit [ndri.curtin.edu.au](http://ndri.curtin.edu.au).

**Rachael Lobo**  
Editor

**NDRI**  
national drug research institute

# headspace

## Build connections, build resilience

The Preventative Health Task Force Report has sparked much debate and contention around the most effective strategies to secure and advance access to good health for the whole Australian population. The evidence base around the adoption of effective and enduring prevention of alcohol and drug problems is somewhat limited with the exception, perhaps, of tobacco. This is not surprising as it is probable that effective prevention requires multifaceted approaches that are sustained over time, making research and implementation challenging and expensive. Multifaceted approaches are not always popular. For example, some communities and politicians appear to favour approaches that focus on individual weakness rather than addressing more universal contributors to poor health and harm.

Professor Sherry Siggers outlines many of the indicated directions that ensure access to good health, and highlights the potential of taking an approach that focuses more on the social determinants. What is evident is that

much effective prevention is not alcohol or drug specific. Rather than simply relying on a few well-meant education sessions warning of the dangers of straying into risky drug use, the evidence consistently indicates that broad and more general factors such as connection to adults, to communities and to schools (and social and academic competence in school) are important preventives, not just of risky alcohol and other drug use but of a range of other adverse health and social outcomes. That means that our drug prevention research and investment should include close connections to broader educational, community and social effort.

While it is not the only driver of alcohol and other drug use and harm, inequality in society is an important predictor of health and wellbeing. Recently we have seen this illustrated in some sectors of the Australian community. For example, as rates of some drug use and related harm have declined significantly in Australia, things are probably getting worse for some Indigenous



communities. Thus, while it is evident that we need to consider controls on alcohol and drug availability, and while we need to continue to enhance access to evidence-based treatment, it is also critically important that we address inequalities in economic, social and educational opportunities. It is likely that such preventive effort will also have benefit for those engaged in our treatment services. Social capital and access to improved quality of life are important predictors of enduring treatment impact. Indeed, some of our more effective treatments have directly attempted to enrich the social and economic environment of people affected by alcohol and other drug dependence. **cl**

**Steve Allsop**  
**Director**

# issuing forth

## Starting early: prevention, early intervention and inequality

Australians born today can expect to live 81.4 years, a life expectancy second only to Japan. Also good news is the fact that the death rates of children and young people have more than halved in the two decades to 2005, as a result of fewer injury-related deaths<sup>1</sup>. Fewer Australians smoke than those in most OECD countries, older children are smoking less and children are less likely to experience passive smoking at home<sup>1,2</sup>. The number of young people aged 12-17 years who describe themselves as current drinkers declined from almost 30% in 2002 to around 22% in 2005<sup>3</sup>. Most parents consider their children healthy and safe and their households well supported socially<sup>2</sup>. On average, Australians living today experience positive health and wellbeing not imagined by their parents and grandparents. If we've never had it so good, why are we constantly bombarded with public comment about the dangers of drinking, drug taking and unhealthy eating? This is a simple question with a complex answer, addressed only partially below. One reason is the concern

that our hard fought health gains may be in jeopardy with predictions that life expectancy for Australian children will fall because of the threats posed by obesity-related diseases<sup>4</sup>.

A related reason, and the focus of this discussion, is the inequality of the health gains over the past decades for Australians.

Socio-economically disadvantaged people, Indigenous Australians, people living in rural and remote areas, and prisoners have shorter lives, experience more disease risk factors like smoking, drinking, unhealthy eating, and little exercise, and they are less likely to have access to or use preventive health services<sup>1</sup>. The impact of these risk factors on their health status is considerable. In Australian capital cities and major urban centres, the overall avoidable mortality rate<sup>5</sup> for the 'worst off' fifth of the population was 60% higher than for the 'best off' fifth. In a city like Melbourne, this may mean that people living only a few kilometres apart may have a difference in life expectancies of up to six years<sup>4</sup>. Indigenous Australians experience all of the socio-economic disadvantages of the least well off



Australians, but this alone cannot explain a gap in life expectancy of 17 years between this group and other Australians<sup>1</sup>. For those of us working in alcohol and other drug prevention, such inequality matters, as much of the health disadvantage can be attributed to tobacco and alcohol use, as well as obesity<sup>4</sup>.

This work must be contextualised by international research demonstrating the impact of social factors on health, building on the classic British study documenting the way in which civil servants in the highest occupational grades experienced the best health, whilst those in the lowest grades experienced the worst health<sup>6</sup>. This social gradient in health<sup>7</sup> - which illustrated that it was not simply poverty but inequality that is associated with poor health - has been observed also in Australia and is apparent at all ages<sup>8,9</sup>. One of the most talked about

books recently has been *The spirit level: why more equal societies almost always do better* by Richard Wilkinson and Kate Pickett<sup>10</sup>. Their thesis is quite simple – the most unequal societies do worse on most indicators of quality of life, from life expectancy to crime rates. A dramatic example they cite of this is a comparison of infant mortality rates for England and Wales as against Sweden. In England and Wales, a child's chance of surviving rises with the father's social class, whereas in Sweden - where income equality is much greater - a child from the lowest social class has a better chance of survival than children from three of the five social classes above them within Sweden. Children in the highest social group in England and Wales are more likely to die than children from any class in Sweden. Consequently, Wilkins and Pickett argue, if any society wishes to really 'close the gap', decreasing inequality in income and wealth should be the central focus of public policy.

So far so good. But advocating such redistributive policy has proved very difficult in all but a few countries. How then to tackle entrenched disadvantage when the cure is not politically palatable? Influential bodies at both the international and national level have advocated a life course approach to prevention and intervention which starts before birth<sup>1,4</sup>. Interventions in the early years have captured the attention of researchers and policy makers for a number of reasons. For many years research has demonstrated how experiences in the early years shape the child's developing brain and thus impact on lifelong outcomes. Stress in early childhood places the child on a negative trajectory affecting health and wellbeing, schooling and employment, substance use and other risky behaviours. High quality, community-based early childhood programs can alter the developmental trajectory and these programs include a focus on secure attachments between children and caregivers, and offer holistic services including parent support<sup>12</sup>. Based on strong international evidence among similar populations, investment in quality child and family services will result in better health and wellbeing, a smoother transition to school and more positive economic and social futures for disadvantaged children and their families<sup>13</sup>.

In 2008, with strategic research capacity funding from Curtin University of Technology, we established the *Prevention, early intervention and inequality program* within NDRI. Our focus is the primary prevention of harmful substance use; that is, what are the factors which prevent the early and problematic use of alcohol and other drugs – particularly during childhood and adolescence? Both internationally and here in Australia researchers have begun to establish a rigorous evidence base to guide funding<sup>4,14</sup>. Our conceptual framework unites three theoretical approaches to the study of drug

and alcohol prevention and early intervention: the 'new' social studies of childhood; social determinants of health and substance use; and the impact of environmental experiences on early brain development.

This multi-dimensional approach highlights: how the ways in which children and young people are conceptualised influences responses to and treatment of them<sup>15</sup>; the factors which contribute towards resilience, and the strengths and deficiencies of the concept of 'resilience' in children and young people<sup>16</sup>; and how the associations between early life experiences and adverse outcomes are mediated by experiential and environmental impacts on early brain development<sup>17</sup>.

One question for researchers in this program is what combination of qualitative and quantitative indicators are both rigorous and appropriate for evaluations of interventions amongst diverse populations of children and families. For instance, in the socio-economically disadvantaged East Kimberley region of Western Australia - one of the most disadvantaged regions for Indigenous Australians in the country - and in central Australia among Warlpiri speakers, we have been evaluating a diverse range of early interventions among children 0-5 years and their families. We have assessed qualitatively measures such as children's readiness for school through observations of children in early learning and care settings and interviews with their families, school staff and other external stakeholders. Rigorous evaluation, however, requires a mixed-method approach including quantitative measures of children's health, development and wellbeing in priority areas such as infant mortality, family economic situation, child abuse and neglect, and transition to primary school<sup>2</sup>. To this end, we are interested in the extent to which measures such as the Australian Early Development Index (AEDI), a school-based assessment of a child's physical health and wellbeing, social competence, emotional maturity, language and cognitive skills, and communication skills and general knowledge, will be useful in determining the effectiveness of early intervention programs in low socioeconomic status and Indigenous communities<sup>18</sup>.

It is not simply the early years that are important. Transitions such as those to secondary school and post-school options are crucial periods in the lives of vulnerable young people, and targeted support at these times important. Also of interest to researchers is the impact of 'second chance' education and training options for marginalised groups. We are currently conducting research which explores the social and economic impact of community-based, humanities university education on those people excluded from tertiary study because of alcohol and other

drug issues, mental illness, and homelessness. This research collaboration with other universities and the NGO sector is funded by an Australian Research Council linkage grant, and employs a combination of quantitative assessments of the costs and benefits of higher education to these students, and in-depth interviews which allow us to explore the complex, nuanced personal stories of each individual. To influence policy, in our experience, we need both the figures and the stories. We are hoping this research will build upon national and international work exploring the social and economic benefits of prevention and early intervention - particularly among marginalised populations - in terms of more equal health outcomes, reduced substance misuse, safer children, and more cohesive communities<sup>19,20</sup>. **cl**

**Sherry Sagers**  
**Professor**

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Continued page 4...

project **notes**

## National Alcohol Indicators Project (NAIP)

**Richard Pascal and Tanya Chikritzhs**

The National Alcohol Indicators Project (NAIP), now in its eleventh year running, has succeeded in identifying and applying a set of reliable indicators of alcohol related harm suitable for monitoring throughout Australia: alcohol-attributable mortality and morbidity, alcohol related road crashes, alcohol-related violence, self-reported patterns of drinking, and per capita alcohol consumption. Trends and levels of each indicator have previously been reported for each state and territory in separate statistical bulletins (bulletins 1 to 5) as well as in one major report providing state and territory trends for the last decade. Five more bulletins have since been disseminated which describe alcohol-attributable harms for young people (Bulletin 6), under-aged drinkers (Bulletin 7), older Australians (Bulletins 8-10) and Indigenous Australians (Bulletin 11).

Published in September 2009, the latest NAIP Bulletin 12 (*Trends in estimated alcohol-attributable deaths and hospitalisations in Australia, 1996-2005*) documents trends in male and female harms attributable to risky/high risk drinking among Australians aged 15 years and over. Trends between 1996 and 2005 are shown separately for all jurisdictions. Overall, an estimated 32,696 Australians (aged 15+ years) died from preventable injuries and illnesses caused by risky/high risk drinking, and over 800,000 were hospitalised for similar reasons. While the death rate due to alcohol had declined in most regions, the rate of hospitalisations from alcohol-attributable injury and disease rose substantially in every state and territory.

In 2005, estimated alcohol-attributable death rates in the NT, Tas, ACT, SA and Qld exceeded the national average. The NT, Qld and NSW also exceeded the national average rate for alcohol-attributable hospitalisations. Alcohol dependence, falls, assaults and alcohol abuse were common causes of alcohol-attributable hospitalisation, and alcoholic liver cirrhosis, non-pedestrian road injury, haemorrhagic stroke, suicide and colon cancer were common causes of alcohol-attributable death. NAIP Bulletin 12 also presents a comparison between harms due to alcohol-attributable conditions and those due to non-alcohol-attributable conditions such as pancreatic cancer, unspecified dementia, and cataracts.

Copies of all NAIP Bulletins are available on the NDRI website ([ndri.curtin.edu.au](http://ndri.curtin.edu.au)) and hard copies can be obtained on request.

## Video experiment to improve recall of television advertising graphic health warnings

**Brennen Mills and Owen Carter, (Centre for Behavioural Research in Cancer Control)**

Smoking cessation advertisements with shocking health warning imagery that evoke visceral responses have been found to maximise emotional arousal in viewers, increase their risk perceptions, and consequently be more recalled by smokers. However not all depictions of gruesome imagery have proven equally effective. It has been suggested, yet never empirically tested, that gruesome imagery with a clear figure/ground execution may aid recall. There is also a case to be made that gruesome imagery incorporating a physical insult enhances recall.

We conducted an online experiment where 300 participants viewed a series of 36 four-second video clips of damaged body organs. Half of the clips depicted an insult condition, where the organ is subject to physical harm, such as dissection or puncture, resulting in it oozing slurry as appropriate. The other half depicted a passive condition, where only the damaged organ leaking fluids was shown. Organs were filmed with both clear and merged backgrounds (eg on a surgical tray vs within the body) inserted via CGI. Participants were asked to rate how 'confronting' they considered the footage in order to assess relative visceral responses. One week later participants viewed a second series of 72 videos, including the 36 previously viewed, plus an additional 36 similar videos not seen before. Participants were asked to nominate in a two alternative forced choice (2AFC) format if they had previously viewed each exact video.

The results suggested participants were more likely to correctly recall images with a clear figure/ground than a merged figure/ground execution by 4% ( $p < 0.001$ ). Images incorporating an insult action were more likely to be correctly recalled than those only incorporating a passive depiction by 7% ( $p < 0.001$ ). We were able to conclude that smoking cessation advertisements using shocking health warning imagery should incorporate images undergoing a physical assault on a clear figure/ground to maximise recall. The difference in accurate recall between the best remembered execution in our experiment (clear/insult) and the least remembered (merged/passive) was 11% (64% vs. 53%). Extrapolated to an entire target audience, such a difference would equate to

a substantial number of people. For example, such an improvement in recall of a national anti-smoking advertisement targeted at current Australian smokers ( $n=2.8$  million) could equate to an additional 308,000 smokers recalling the advertisement and potentially being motivated to make a quit attempt. **cl**

**Issuing Forth References (continued...)**

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## NDRI researcher wins prestigious fellowship

NDRI researcher Associate Professor Tony Butler was recently announced the recipient of an inaugural Australian Research Council (ARC) Future Fellowship, one of only 200 fellowships awarded nationally this year.

The ARC Future Fellowships scheme, established by the Australian Government earlier this year, aims to address the problem of highly qualified mid-career researchers choosing to work overseas to further their careers due to lack of opportunities in Australia, and also aims to significantly boost Australia's research and innovation capacity in areas of national importance.

Prof Butler's four-year fellowship will assist him to continue his ground-breaking work exploring the causes of violent criminal behaviour and the health and drug-related problems experienced by prison populations. His research has the potential to bring major social and economic benefits for Australia by helping to stop people committing criminal acts or re-offending, thus reducing the costs of imprisonment. It could also be used to help treat health problems in prisons, reducing the transmission of disease when prisoners are released and helping to ease the burden on the health system.

Specifically, Prof Butler's program of Future Fellowship research includes studies of:

- Undertaking an intervention to reduce impulsive behaviour in repeat violent offenders;
- a possible relationship between head injuries and subsequent criminal behaviour;
- health and drug related problems suffered by Indigenous prisoner populations; and
- blood-borne virus infections among Australian prisoners.

"These are all areas where science can help us find out why people offend, and help to stop them re-offending," said Prof Butler.

"Our findings can help reduce the huge amounts of money spent on imprisoning offenders by stopping some of them from offending in the first place."

Prof Butler was also recently successful in winning a major NHMRC Partnership for Better Health Grant of \$1.291 million for a project aimed at reducing impulsive behaviour in repeat violent offenders. Working in partnership with forensic health groups in NSW, the research will investigate whether using selective serotonin re-uptake inhibitors (SSRIs) can reduce repeat violent offending by reducing impulsive aggression.



Winning an ARC Future Fellowship secured Tony Butler and wife Tong Wan an invitation to the National Science Awards Ceremony in Canberra in October, where they rubbed shoulders with Prime Minister Kevin Rudd.

"Impulsivity has been linked to reduced levels of a brain neurotransmitter called serotonin," said Prof Butler. "This is potentially treatable using a class of anti-depressants called selective serotonin re-uptake inhibitors."

A recent pilot study undertaken with violent re-offenders showed reductions in impulsivity, irritability, anger, and assaultive behaviour when they were provided with this anti-depressant.

"By using this medication in a monitored way, we may be able to show that, in certain cases, impulsive and sometimes dangerous behaviour can be reduced." **cl**

## abstracts

### Evidence-based practice or imperfect seduction? Developing capacity to respond effectively to drug-related problems

**Steve Allsop and Clare Stevens**

*Drug and Alcohol Review*, 2009, 28, (5), 541-549

Issues: The last two or three decades have seen some valuable investment in workforce development. However, significant challenges remain in developing effective practice across various systems. Despite the relevance alcohol, tobacco and other drug use have for a range of staff across diverse organisations, adoption of cross-sector and collaborative effective practice is not widespread. The most common response involves a rather singular focus on strategies that develop practitioner knowledge and skills, with much less consideration given to the complex nature of the work environment and the belief systems of people who work in these environments.

Approach: This paper explores the barriers to and facilitators of effective practice, extending beyond the common focus on education and training initiatives. A model of capacity building is explored as a template to inform workforce and organisational development strategies.

Key Findings: Numerous barriers, outside education and training, must be considered in order to develop and maintain effective practice across various systems of prevention and treatment. The paper culminates with recommendations on how to overcome such challenges. Implications. Workforce and organisational development must extend beyond education and training initiatives. Along with a focus on organisational and system factors, we must also attend to the marginalisation of people affected by drug use and associated pejorative attitudes.

Conclusion: Developing effective practice in the drug field involves changing the structures, and expected outcomes of these structures, in which people work, not just encouraging a few to use new ways of working in spite of the system.

### A healthy dose of scepticism: four good reasons to think again about protective effects of alcohol on Coronary Heart Disease

**Tanya Chikritzhs, Kaye Fillmore and Tim Stockwell**

*Drug and Alcohol Review*, 2009, 28, (4), 441-444

Issues: Alcohol has been implicated in both the popular press and scientific literature as having a protective effect for at least a dozen conditions including coronary heart disease (CHD).

Approach: Epidemiological evidence for an apparent protective effect of alcohol on CHD is now being challenged on a number of fronts. This paper is a synopsis of those various challenges as they currently stand.

Key Findings: The argument that systematic misclassification of ex-drinkers and occasional drinkers to 'abstainer' categories among epidemiological studies might explain

**abstracts**

apparent protective effects of moderate alcohol consumption on CHD has recently been supported by new meta-analyses and independent research. The influence of uncontrolled or unknown factors on the relationship between alcohol and disease cannot be ruled out. Exclusion of participants on the basis of ill-health severely reduces study sample size and new analyses suggest that doing so might artificially create the appearance of protective effects. The ability of respondents to accurately recall their own alcohol consumption is in serious doubt and very few individuals maintain one single drinking level or style throughout life. The relationship between alcohol and some conditions might be a function of drinking patterns but few studies have addressed the issue. Implications. Popular perceptions regarding the strength of evidence for alcohol's protective effect on a growing number of conditions might be misguided.

Conclusion: It is time for the wider research, health and medical community to seriously reflect on the quality of current evidence for apparent protective effects of alcohol on human disease.

### Extending drug ethno-epidemiology using agent-based modelling

**David Moore, Anne Dray, Rachael Green, Susan Hudson, Rebecca Jenkinson, Christine Siokou, Pascal Perez, Gabriele Bammer, Lisa Maher and Paul Dietze**

*Addiction*, 2009, 104, (12), 1991-1997

Aims: To show how the inclusion of agent-based modelling improved the integration of ethno-epidemiological data in a study of psychostimulant use and related harms amongst young Australians.

Methods: Agent-based modelling, ethnographic fieldwork, in-depth interviews and epidemiological surveys.

Setting: Melbourne, Perth and Sydney.

Participants: Club drug users in Melbourne, recreational drug users in Perth and street-based injecting drug users in Sydney. Participants were aged 18-30 years old and reported monthly or more frequent psychostimulant use.

Findings: Agent-based modelling provided a specific focus for structured discussion about integrating ethnographic and epidemiological methods and data. The modelling process was underpinned by collective and incremental design principles, and produced 'SimAmph', a

data-driven model of social and environmental agents and the relationships between them. Using SimAmph, we were able to test the likely impact of ecstasy pill testing on the prevalence of harms – a potentially important tool for policy development. The study also navigated a range of challenges including the need to manage epistemological differences, changes in the collective design process and modelling focus, the differences between injecting and non-injecting samples, and concerns over the dissemination of modelling outcomes.

Conclusions: Agent-based modelling was used to integrate ethno-epidemiological data on psychostimulant use, and to test the likely impact of a specific intervention on the prevalence of drug-related harms. It also established a framework for collaboration between research disciplines that emphasises the synthesis of diverse data types in order to generate new knowledge relevant to the reduction of drug-related harms.

### Do relaxed trading hours for bars and clubs mean more relaxed drinking? A review of international research on the impacts of changes to permitted hours of drinking

**Tanya Chikritzhs and Tim Stockwell**

*Crime Prevention and Community Safety*, 2009, 11, (3), 153-170

Trading hours of licensed premises have been progressively relaxed since World War II across much of the English-speaking world as part of a global trend towards liquor deregulation. This review was informed by a systematic search of studies published in the English language since 1965 which sought to evaluate the public health and safety impacts of changes to liquor trading hours for on premise consumption – namely 'pubs' and clubs in the United Kingdom, 'hotels' and 'taverns' in Australia and New Zealand and 'bars' in North America. The systematic search was supplemented by materials identified from the 'grey literature', mostly government reports. A total of 49 unique studies met the inclusion criteria of which only 14 included baseline and control measures and were peer-reviewed. Among these, 11 reported at least one significant outcome indicating adverse effects of increased hours or benefits from reduced hours. Controlled studies with fewer methodological problems were also most likely to report such effects. It is suggested that differences between findings from Australia and the United Kingdom following the Licensing Act 2003 are most likely due to differences

in methodological approach. It is concluded that the balance of reliable evidence from the available international literature suggests that extended late-night trading hours lead to increased consumption and related harms. Further well-controlled studies are required to confirm this conclusion.

### Tobacco in prisons: a focus group study

**Robyn Richmond, Tony Butler, Kay Wilhelm, Alex Wodak, Margaret Cunningham, Ian Anderson**

*Tobacco Control*, 2009, 18, (3), 176-182

Objective: To examine the role of tobacco use in prison and possible influences of the prison environment on smoking among inmates in the context of developing inmate smoking cessation programmes.

Method: Qualitative study based on seven focus groups with prisoners and ex-prisoners.

Settings: A maximum security prison in rural New South Wales (NSW), Australia, and a community justice restorative centre and accommodation service for ex-prisoners in Sydney, NSW, Australia.

Participants: 40 participants (28 men and 12 women) comprising nine prisoners (including four Indigenous inmates) and 31 ex-prisoners.

Results: Prisoners reported that tobacco serves as a de facto currency in correctional settings and can be exchanged for goods, used to pay debts and for gambling. Smoking helps manage the stressful situations such as transfers, court appearances and prison visits. Inmate smoking cessation programmes need to address the enmeshment of tobacco in prison life, improve availability of pharmacotherapies (for example, nicotine patches, bupropion) and the quitline (a free telephone helpline providing information on stopping smoking), provide non-smoking cells and areas within prisons, encourage physical activity for inmates and maintain monitoring of smoking cessation status after release.

Conclusions: Tobacco is integrally bound up in the prison "culture". Our findings are relevant to inform prison health authorities concerned with improving the health of prisoners, and for support organisations attempting to facilitate smoking cessation both in prison and after release. Smoking cessation programmes in prisons should be tailored to the unique stresses of the prison environment. Programmes need to acknowledge the difficulties of quitting smoking in prison arising from the stresses posed by this setting. **cl**

# recent publications

## Monographs and Technical Reports

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Rob Donovan	Professor
Peter Howat	Professor
Andy Lee	Professor
Sherry Saggars	Professor
Tony Butler	Associate Professor
Tanya Chikritzhs	Associate Professor
Bruce Maycock	Associate Professor
Richard Midford	Associate Professor
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Ted Wilkes	Associate Professor
Julia Butt	Senior Research Fellow
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Owen Carter	Research Fellow
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Jocelyn Grace	Research Fellow
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Michael Doyle	Research Associate
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Lynn Roarty	Research Associate
Anna Stearne	Research Associate
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Maggie Halls	Resource Officer
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Jillian Evans	Clerical Officer
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Beatriz Cuesta Briand	PhD Student
James Fetherston	PhD Student
Rachael Green	PhD Student
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Amy Pennay	PhD Student
Christine Siokou	PhD Student
Nicola Thomson	PhD Student

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David Hawks	Professorial Fellow
Kaye Fillmore	Professor
Kate Graham	Professor
Tim Stockwell	Professor
Nicole Lee	Associate Professor
Wendy Loxley	Associate Professor
Neil Donnelly	Senior Research Fellow
Celia Wilkinson	Senior Research Fellow
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