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ALCOHOL

1. Alcohol-related discussions in health care— a population view
Pia Mäkelä, Marjaliisa Havio & Kaija Seppä
Addiction 2011:106(7);1239-1248

Abstract
**Aims** The present study aimed to evaluate the frequency and the target group of alcohol screening and brief interventions in health-care settings and how well this level of activity reflects public opinion. **Design** A general population survey. **Setting and participants** A random sample of Finns aged 15–69 years with a 74% response rate (n = 2725). **Measurements** Frequency counts were used to evaluate the level of activity. Logistic regression models were used to examine which groups were asked and advised about alcohol use and which groups considered it useful. **Findings** More than 90% had positive attitudes towards being asked about their alcohol use. Of those who had been in contact with health care (n = 2062) in the 12 months before the survey, 33.3% had been asked about their alcohol use, being most often men, young, heavy drinkers and those of high socio-economic status. Thirty-seven per cent of those who had been asked were given advice, being most often heavy drinkers and those with a normal body mass index. However, 50% of heavy drinkers who had been asked about their alcohol use had not been advised about it. Of those who had been advised, 71.9% considered it useful, especially older subjects, and also including heavy episodic drinkers, although less than others. **Conclusions** In Finland, the frequency of health-care professionals asking and giving advice on alcohol is relatively low. However, public opinion towards these discussions is positive. Our results encourage the support and uptake of systematic screenings and brief interventions in health-care settings. **Keywords** Alcohol use, attitudes, brief intervention, general population.

2. Alcohol consumption and injury risk: A case-crossover study in Sydney, Australia
Mandy Williams, Mohammed Mohsin, Danielle Weber, Bin Jalaludin4 & John Crozier
Drug and Alcohol 2011:30(4);344-354

Abstract
**Introduction and Aims.** Alcohol contributes to traumatic outcomes that kill or disable at a relatively young age, resulting in the loss of many years of life or disability. Harm from alcohol consumption can result from chronic or acute alcohol use. The aims of this study are to determine the prevalence of alcohol-related injury and contextual factors contributing to injury risk in an ethnically diverse population of Sydney. **Design and Methods.** The study was undertaken in emergency departments of six hospitals between 2005 and 2006 and used a case-crossover design. The 1599 attendees surveyed (response rate 64.2%) were aged over 14 years and had presented with an injury to the emergency department. **Results.** Attendees were predominantly male, young, 40% spoke a language other than English at home and 17% had been
drinking in the 6 h prior to their injury. Those born overseas drank at lower levels than their Australian born counterparts. The risk of sustaining an injury was 1.42 times greater in attendees consuming alcohol compared with those who had not. At very high intake levels (>90 g) the risk of injury was statistically significant for both men and women (men odds ratio: 1.88, 95% confidence interval: 1.46–2.42; women odds ratio: 1.89, 95% confidence interval: 1.04–3.43). Drinking at a licensed premise and drinking alone or with a group of people also significantly increased the risk of injury. **Discussion and Conclusions.** The results support current Australian policy concerning alcohol but indicate that further restrictions and increased warnings for the community may be warranted. [Williams M, Mohsin M, Weber D, Jalaludin B, Crozier J. Alcohol consumption and injury risk: a case-crossover study in Sydney, Australia.

**Key words:** alcohol, injury, ethnicity, emergency department, case-crossover design.

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3. Alcohol misuse, sexual risk behaviour and adverse sexual health outcomes: evidence from Britain's national probability sexual behaviour surveys

Catherine R.H. Aicken, Anthony Nardone, Catherine H. Mercer

*Journal of Public Health 2011:33(2);262-271*

**Abstract**

Background Evidence for relationships between alcohol misuse, sexual risk behaviour and adverse sexual health outcomes exists from both population-level data and studies undertaken in specific groups. We examine changes in these associations using representative data from two consecutive surveys.

**Methods** Probability surveys conducted in 1990/91 and again in 2000/01 involving interviews with British residents aged 16–44.

**Results** The proportion reporting being drunk as their main reason for first heterosexual intercourse increased from 2.5% among those born in 1946–49 to 6.4% of those born in 1980–84. These respondents were more likely to report intercourse before 16, that sex had occurred too soon, and contraception non-use. Usual alcohol consumption in excess of recommended limits (‘heavy drinkers’) was more common among those reporting larger partner numbers and unprotected sex with 2þ partners/past year but not with STD clinic attendance/diagnosis. Male heavy drinkers were more likely to report sexual function problems and female heavy drinkers using emergency contraception. The magnitude of these relationships did not significantly increase between 1990/91 and 2000/01.

**Conclusion** In Britain, sexual risk behaviours and some adverse sexual health outcomes continue to be associated with excess alcohol consumption. These findings support addressing the link between alcohol misuse and sexual health in health services and through broader health promotion.

**Keywords:** alcohol consumption, risk behaviour, sexual behaviour, survey
4. Are drinking habits really changing? A cross-generational test of the ‘new’ phenomenon of ‘binge-drinking’
Sarah Louise McCoy, Martin Nicholas Stephen Nieland

Drugs: Education, Prevention, and Policy

Abstract
Aims: To investigate whether ‘binge-drinking’ is new by comparing the behaviour and attitudes of two generations at the same age and of one generation at different ages.

Methods: Fifty-six student/parent pairs completed questionnaires partially based on the Adolescent version of the Alcohol Expectancy Questionnaire (Brown, S.A., Christiansen, B.A., & Goldman, M.S. (1987). The alcohol expectancy questionnaire: An instrument for the assessment of adolescent and adult alcohol expectancies. Journal of Studies on Alcohol, 48, 483–491). Students’ reports of their behaviour and attitudes were compared to their parents’ memories of their behaviour and attitudes at 18. Parents’ memories were compared to their current behaviour and attitudes to explore possible lifespan effects. Data regarding the groups’ attachment to aspects of society were drawn on as a possible explanation of differences between generations.

Findings: Parents recalled consuming more alcohol more frequently, having more favourable attitudes towards alcohol and having fewer ties with their communities when they were 18 than their children. They drank less and had a less favourable attitude towards alcohol at the time of the research than in their youth.

Conclusions: Despite contrary ‘evidence’, it may be that today’s young people are less prone to ‘binge-drinking’ than previous generations. Whilst it is recognized that data may be contaminated by parents’ ‘forgetting’, the study highlights the possibility that the ‘binge-drinking’ crisis is merely media hype, spurious, or both.
ALCOHOL – BURDEN ON SOCIETY

5. Do Community Characteristics Predict Alcohol-Related Crime?
Courtney Breen, Anthony Shakeshaft, Tim Slade, Stephanie Love, Catherine D’Este and Richard P. Mattick
Alcohol and Alcoholism 2011:46(4);464–470

Abstract
Aims: Alcohol-related crime is a substantial community problem. There is evidence to suggest that certain geographic areas experience higher rates of alcohol-related crime and that both individual and community factors are associated with alcohol-related crime. There is limited research at the community level despite communities being the target of interventions designed to reduce alcohol-related harm. This study aims to determine whether there are differences in alcohol-related crime at the community level and examines whether certain community characteristics are associated with increased alcohol-related crime. Methods: Routinely collected police data from 20 rural communities in New South Wales, Australia were analysed. The ratio of alcohol to non-alcohol-related criminal incidents was used as a proxy for alcohol-related crime. Predictor variables were population-adjusted community characteristics, including demographic and resource variables. Results: Regression analyses suggest that there are differences between communities in alcohol-related crime. Less socioeconomic disadvantage and more GPs and licensed premises (pubs and clubs) are associated with greater alcohol-related crime at the community level. Conclusions: Decreasing the socioeconomic well-being of a community is not appropriate; however, introducing additional taxes to increase the cost of alcohol may decrease consumption and therefore alcohol-related crime. Reducing or capping the number of licensed premises, specifically the number of pubs and clubs, may be an appropriate strategy to reduce alcohol-related crime in rural communities.
ALCOHOL EPIDEMIOLOGY AND DEMOGRAPHY

6. Alcohol-related negative consequences among drinkers around the world
Kathryn Graham, Sharon Bernards, Ronald Knibbe, Sylvia Kairouz, Sandra Kuntsche, Sharon C. Wilsnack, Thomas K. Greenfield, Paul Dietze, Isidore Obot & Gerhard Gmel
Addiction 2011:106(8);1391-1405

Abstract
Aims This paper examines (i) gender and country differences in negative consequences related to drinking; (ii) relative rates of different consequences; and (iii) country-level predictors of consequences. Design, setting and participants Multi-level analyses used survey data from the Gender, Alcohol, and Culture: An International Study (GENACIS) collaboration. Measurements Measures included 17 negative consequences grouped into (i) high endorsement acute, (ii) personal and (iii) social. Country-level measures included average frequency and quantity of drinking, percentage who were current drinkers, gross domestic product (GDP) and Human Development Index (HDI). Findings Overall, the three groupings of consequences were reported by 44%, 12% and 7% of men and by 31%, 6% and 3% of women, respectively. More men than women endorsed all consequences, but gender differences were greatest for consequences associated with chronic drinking and social consequences related to male roles. The highest prevalence of consequences was in Uganda and lowest in Uruguay. Personal and social consequences were more likely in countries with higher usual quantity, fewer current drinkers and lower scores on GDP and HDI. However, significant interactions with individual-level quantity indicated a stronger relationship between consequences and usual quantity among drinkers in countries with lower quantity, more current drinkers and higher scores on GDP and HDI. Conclusions Both gender and country need to be taken into consideration when assessing adverse drinking consequences. Individual measures of alcohol consumption and country-level variables are associated with experiencing such consequences. Additionally, country-level variables affect the strength of the relationship between usual quantity consumed by individuals and adverse consequences.
Keywords AUDIT, alcohol dependence, alcohol problems, cross-cultural, drinking pattern, gender differences,

7. The Impact of Alcohol Outlet Density on the Geographic Clustering of Underage Drinking Behaviors within Census Tracts
Beth A. Reboussin, Eun-Young Song, and Mark Wolfson
Alcoholism: Clinical and Experimental Research 2011:35(8);1541-1549

Abstract
Background: The regulation of alcohol outlet density has been considered as a potential means of reducing alcohol consumption and related harms among underage youth. Whereas prior studies have examined whether alcohol outlet density was associated with an individual’s alcohol consumption and related harms, this study examines whether it is related to the co-occurrence, or clustering, of these behaviors within geographic areas, specifically census tracts.
Methods: The Enforcing Underage Drinking Laws Randomized Community Trial provided cross-sectional telephone survey data in 2006 and 2007 from 10,754 youth aged 14 to 20 from 5 states residing in 1,556 census tracts. The alternating logistic regression approach was used to estimate pairwise odds ratios between responses from youth residing in the same census tract and to model them as a function of alcohol outlet density.

Results: Riding with a drinking driver, making an alcohol purchase attempt, and making a successful alcohol purchase attempt clustered significantly within census tracts with the highest off-premise alcohol outlet density while frequent drinking clustered within census tracts with the greatest on-premise density. Driving after drinking and experiencing nonviolent alcohol-related consequences clustered marginally within census tracts with the greatest on-premise and off-premise alcohol outlet density, respectively.

Conclusions: Although youth primarily receive alcohol from social sources, commercial alcohol access is geographically concentrated within census tracts with the greatest off-premise outlet density. A potentially greater concern is the clustering of more frequent drinking and drinking and driving within census tracts with the greatest on-premise outlet density which may necessitate alternative census tract level initiatives to reduce these potentially harmful behaviors.

Key Words: Alcohol Outlet Density, Alternating Logistic Regression, Geographic Clustering, Underage Drinking.

8. The Contribution of Parental Alcohol Use Disorders and Other Psychiatric Illness to the Risk of Alcohol Use Disorders in the Offspring

Holger J. Sørensen, Ann M. Manzardo, Joachim Knop, Elizabeth C. Penick, Wendy Madarasz, Elizabeth J. Nickel, Ulrik Becker, and Erik L. Mortensen

Alcoholism: Clinical and Experimental Research 2011:35(8);1315-1320

Abstract

Background: Few population-based studies have investigated associations between parental history of alcoholism and the risk of alcoholism in offspring. The aim was to investigate in a large cohort the risk of alcohol use disorders (AUD) in the offspring of parents with or without AUD and with or without hospitalization for other psychiatric disorder (OPD).

Methods: Longitudinal birth cohort study included 7,177 men and women born in Copenhagen between October 1959 and December 1961. Cases of AUD were identified in 3 Danish health registers and cases of OPD in the Danish Psychiatric Central Register. Offspring registration with AUD was analyzed in relation to parental registration with AUD and OPD. Covariates were offspring gender and parental social status.

Results: Both maternal and paternal registration with AUD significantly predicted offspring risk of AUD (odds ratios 1.96; 95% CI 1.42 to 2.71 and 1.99; 95% CI 1.54 to 2.68, respectively). The association between maternal, but not paternal, OPD and offspring AUD was also significant (odds ratios 1.46; 95% CI 1.15 to 1.86 and 1.26; 95% CI 0.95 to 1.66, respectively). Other predictors were male gender and parental social
status. A significant interaction was observed between paternal AUD and offspring gender on offspring AUD, and stratified analyses showed particularly strong associations of both paternal and maternal AUD with offspring AUD in female cohort members.

Conclusions: Parental AUD was associated with an increased risk of offspring AUD independent of other significant predictors, such as gender, parental social status, and parental psychiatric hospitalization with other diagnoses. Furthermore, this association appeared to be stronger among female than male offspring. The results suggest that inherited factors related to alcoholism are at least as important in determining the risk of alcoholism among daughters as among sons.

**Key Words:** Alcohol Use Disorders, Alcohol Abuse, Family History, Parental Risk, Cohort Study.

9. Heavy Episodic Drinking in Europe: A Cross Section Study in Primary Care in Six European Countries
Irwin Nazareth, Carl Walker, Antonia Ridolfi, Anu Aluoja, Juan Bellon, Mirijam Geerlings, Igor Svab, Miguel Xavier and Michael King
**Alcohol and Alcoholism** 2011:46(5);600–606

**Abstract**
Aims: We examined the prevalence of heavy episodic drinking in general practice attenders who were non-hazardous drinkers, the associated risk factors and the outcome over 6 months. Methods: Consecutive attenders aged 18–75 were recruited from the UK, Spain, Slovenia, Estonia, the Netherlands and Portugal and followed up after 6 months. Data were collected on alcohol use using the Alcohol Use Disorder Identification test (at recruitment and 6 months) and risk factors for heavy episodic alcohol use at recruitment. Results: The prevalence of heavy episodic drinking in non-hazardous drinkers was 4.5% across Europe [lowest in Portugal (1.5%); highest Netherlands (8.4%)]. It was less frequent in Spain, Slovenia, Estonia and Portugal compared with the UK and Netherlands. It was higher in men [odd ratio (OR) 4.4, 95% confidence interval (CI) 3.3, 5.9], people between 18 and 29 years of age, those employed (OR 1.8, 95% CI 1.3, 2.6) and those using recreational drugs (OR 2.1, 95% CI 1.4, 3.3). It was lower in people with existing DSMIV major depression (OR 0.54, 95% CI 0.31, 0.96). Heavy episodic drinkers were more likely to become hazardous drinkers at 6 months (male: OR 7.2, 95% CI 4.1, 12.7; female: OR 9.4, 95% CI 4.3, 20.6). Conclusion: Women and men in the UK, men in the Netherlands and younger people in all countries are at the greatest risk of exhibiting heavy episodic drinking behaviours even in the absence of hazardous alcohol use. There is hence an urgent need for general practitioners to consider early detection and management of heavy episodic drinking behaviour in this population.
ALOCHOL - LIVER DISEASE

10. Polymorphism of N-acetyltransferase 2 Gene and the Susceptibility to Alcoholic Liver Cirrhosis: Interaction With Smoking
Kai-Chung Yang, Yi-Shin Huang, Chin-Lin Perng, Han-Chieh Lin, and Shou-Dong Lee
Alcoholism: Clinical and Experimental Research 2011:35(8);1204-1208

Abstract
Background: Polymorphism of N-acetyltransferase 2 gene was reported to be associated with the susceptibility of various cancers and liver diseases. However, its relationship to alcoholic liver disease is controversial and open to debate. The aim of this study was to evaluate the relationship of NAT2 genetic polymorphisms and the susceptibility to alcoholic liver cirrhosis (ALC) in Chinese, with special emphasis on the interaction of smoking.
Methods: Peripheral white blood cell DNA from 148 patients with ALC, 104 patients with long-term alcoholic drinking but without cirrhosis (ANC) and 209 healthy controls were genotyped for NAT2 using a polymerase chain reaction–restriction fragment length polymorphism method. The possible confounding factors were included for analysis.
Results: There was no statistical difference in the frequency of NAT2 genotype or NAT2 acetylator status among the 3 groups. However, among the chronic alcoholic drinkers, the rapid acetylators with smoking habits had higher percentage of ALC than those without smoking habit (18.9% vs. 9.5%, p = 0.002). The adjusted odds ratio for rapid acetylator smoker to have ALC was 3.45 (95% CI = 1.53 to 7.76, p = 0.003).
Conclusions: The genetic factor, NAT2 polymorphism, may interact with environmental factor, smoking, to confer different susceptibilities to ALC. NAT2 rapid acetylators with smoking habit may increase the risk of ALC in Chinese.
Key Words: Arylamine Acetyltransferase, Alcoholism, Alcoholic Liver Cirrhosis, Ethanol, Alcoholic Liver Disease.

11. A New Model of Interactive Effects of Alcohol and High-Fat Diet on Hepatic Fibrosis
Erwin Gabele, Karin Dostert, Christoph Dorn, Eleonora Patsenker, Felix Stickel and Claus Hellerbrand
Alcoholism: Clinical and Experimental Research 2011:35(8);1361-1367

Abstract
Background: Alcoholic steatohepatitis (ASH) and nonalcoholic steatohepatitis (NASH) are the most frequent conditions leading to elevated liver enzymes and liver cirrhosis, respectively, in the Western world. However, despite strong epidemiological evidence for combined effects on the progression of liver injury, the mutual interaction of the pathophysiological mechanisms is incompletely understood. The aim of this study was to establish and analyze an experimental murine model,
where we combined chronic alcohol administration with a NASH-inducing high-fat (HF) diet.

Methods: Balb/c mice were randomly allocated into 4 experimental groups receiving (i) standard chow, (ii) an HF diet, (iii) alcohol in drinking water (increasing concentrations up to 5%), or (iv) an HF diet and alcohol ad libitum for 6 weeks.

Results: An HF diet significantly induced hepatic triglyceride accumulation and expression of proinflammatory genes (p47phox and tumor necrosis factor), while the effects of alcohol alone were less pronounced. However, in combination with HF diet, alcohol significantly enhanced proinflammatory gene expression compared to the HF diet alone. Furthermore, alcohol as well as HF diet led to a marked increase in profibrogenic genes (collagen type I and transforming growth factor-b), activation of hepatic stellate cells, and extracellular matrix deposition in the liver tissue, and noteworthy, the combination of both alcohol and HF diet led to a further marked induction of hepatic fibrosis. Moreover, endotoxin levels in the portal circulation were significantly elevated in mice that received alcohol or HF diet and were further significantly increased in those receiving both. Furthermore and surprisingly, HF diet alone and in combination with alcohol led to a markedly increased hepatic expression of the endotoxin receptor Toll-like receptor 4 (TLR4), which is known to play a crucial role in hepatic fibrosis.

Conclusions: In summary, this new model allows the investigation of isolated or joint effects of alcohol and HF diet on hepatic injury, where alcohol and HF diet appear to act synergistically on the development of hepatic fibrosis, potentially via enhanced TLR4 signaling.

Key Words: Alcoholic Liver Disease/Steatohepatitis, Nonalcoholic Liver Disease/Steatohepatitis, Toll-like Receptor, Endotoxin.
countries, which had also experienced increases in liver cirrhosis mortality. However, after the increases, those countries had sudden and persistent falls in death rates. For each country, the dramatic reversal of death rates occurred at a single calendar period and in every age group simultaneously. Conclusion: Prediction of future death rates using information from previous cohorts is not possible due to the occurrence of sudden reversals in death rates. The sudden fall in the death rates of several birth cohorts suggests that reversing the current UK trend of rising liver cirrhosis deaths is possible.
ALCOHOL TREATMENT AND SCREENING

14. A systematic and methodological review of interventions for young people experiencing alcohol-related harm
Bianca Calabria, Anthony P. Shakeshaft & Alys Havard
Addiction 2011:106(8);1406-1418

Abstract
Aims This review identified published studies evaluating interventions delivered outside educational settings, designed for young people with existing alcohol use problems, or who participate in behaviour that places them at high risk of alcohol-related harm, critiqued their methodology and identified opportunities for new interventions. Methods A systematic search of the peer-reviewed literature interrogated 10 electronic databases using specific search strings, limited to 2005–09. No additional studies were found by a librarian searching other collections and clearing-houses, or by hand-searching review paper reference lists. The 1697 articles identified were reviewed against criteria from the Dictionary for the Effective Public Health Practice Project Quality Assessment Tool for Quantitative Studies. Results The methodological quality of existing studies is variable, and needs to be both more rigorous and more consistent. Particular problems include the lack of blinding outcome assessors, a reliance solely on self-report measures, highly variable consent and follow-up rates, infrequent use of intention-to-treat analyses and the absence of any economic or cost analyses. The range of interventions evaluated is currently limited to individually focused approaches, almost exclusively implemented in the United States. Conclusions There is a great need for more intervention trials for young people at high risk of experiencing alcohol-related harm that are both methodologically rigorous and have a broader community focus, to complement the psychological interventions that currently dominate the relevant literature. Such trials would improve outcomes for high-risk young people themselves and would improve the evidence base, both in their own right and by facilitating future meta-analyses.
Keywords Alcohol, harm, intervention, review, risk, young people, youth.

15. Does readiness to change predict in-session motivational language?
Correspondence between two conceptualizations of client motivation
Kevin A. Hallgren & Theresa B. Moyers
Addiction 2011:106(7);1261-1269

Abstract
Aims Client language reflecting motivation for changing substance use (i.e. change talk) has been shown to predict outcomes in motivational interviewing. While previous work has shown that change talk may be elicited by clinician behaviors, little is known about intrapersonal factors that may elicit change talk, including clients’ baseline motivation for change. The present study tested whether in-session change talk differs between clients based on their readiness for change. Design and setting First-session audio recordings from Project MATCH, a large multi-site clinical trial of alcohol treatments. Participants ProjectMATCH out-patients (n = 69) and aftercare patients (n = 48) receiving motivational
enhancement therapy (MET). **Measurements** Client language from first-session MET was coded using the Sequential Code for Observing Process Exchanges. Readiness and stages of change were assessed using both categorical and dimensional variables derived from the University of Rhode Island Change Assessment and the Stages of Change Readiness and Treatment Eagerness Scale, administered prior to first treatment sessions. **Findings** Stage of change scales followed some of the expected correspondence with change talk, although the associations were generally small in magnitude and inconsistent across measures and treatment arms. Higher overall readiness did not predict more overall change talk, contemplation had mixed associations with preparatory change talk, and preparation/action did not predict commitment language. **Conclusions** Motivational language used in initial sessions by people receiving counselling for excessive alcohol consumption does not appear to be associated with readiness to change as construed by the Transtheoretical Model. **Keywords:** Alcohol, client change talk, motivation, motivational interviewing, readiness to change, transtheoretical model.

### 16. Nutritional Evaluation of Alcoholic Inpatients Admitted for Alcohol Detoxification
Joana Teixeira, Teresa Mota and João Cabral Fernandes
**Alcohol and Alcoholism** 2011:46(5);558–560

**Abstract**
Aims: To assess nutritional risk of alcoholic patients admitted for alcohol detoxification. Methods: Screening of nutritional risk of alcoholic patients using the Malnutrition Universal Screening Tool. Results: Fifty-three percentage patients at presentation were rated as being at medium or high risk of malnutrition. Conclusion: Malnutrition should be actively considered and screened for in alcoholic patients admitted for alcohol detoxification due to its high prevalence and benefits obtained from treatment.

### 17. Intervention against Excessive Alcohol Consumption in Primary Health Care: A Survey of GPs’ Attitudes and Practices in England 10 Years On
Graeme B. Wilson, Catherine A. Lock, Nick Heather, Paul Cassidy, Marilyn M. Christie and Eileen F.S. Kaner
**Alcohol and Alcoholism** 2011:46(5);570-577

**Abstract**
Aims: To ascertain the views of general practitioners (GPs) regarding the prevention and management of alcohol-related problems in practice, together with perceived barriers and incentives for this work; to compare our findings with a comparable survey conducted 10 years earlier. Methods: In total, 282 (73%) of 419 GPs surveyed in East Midlands, UK, completed a postal questionnaire, measuring practices and attitudes, including the Shortened Alcohol and Alcohol Problems Perception Questionnaire (SAAPPQ). Results: GPs reported lower levels of post-graduate education or training on alcohol-related issues (<4 h for the majority) than in 1999 but not significantly so (P = 0.031). In the last year, GPs had most commonly requested more than 12 blood tests and managed 1–6 patients for alcohol. Reports of these preventive practices were significantly increased from 1999.
(P < 0.001). Most felt that problem or dependent drinkers’ alcohol issues could be legitimately (88%, 87%) and adequately (78%, 69%) addressed by GPs. However, they had low levels of motivation (42%, 35%), task-related self-esteem (53%, 49%) and job satisfaction (15%, 12%) for this. Busyness (63%) and lack of training (57%) or contractual incentives (48%) were key barriers. Endorsement for government policies on alcohol was very low. Conclusion: Among GPs, there still appears to be a gap between actual practice and potential for preventive work relating to alcohol problems; they report little specific training and a lack of support. Translational work on understanding the evidence-base supporting screening and brief intervention could incentivize intervention against excessive drinking and embedding it into everyday primary care practice.

18. Brief Interventions in Dependent Drinkers: A Comparative Prospective Analysis in Two Hospitals
Kathryn Cobain, Lynn Owens, Ruwanthi Kolamunnage-Dona, Richard Fitzgerald, Ian Gilmore and Munir Pirmohamed
Alcohol and Alcoholism 2011:46(4);434-440

Abstract
Aims: To investigate whether brief interventions (BIs) delivered by a dedicated Alcohol Specialist Nurse (ASN) to nontreatment-seeking alcohol-dependent patients in an acute hospital setting are effective in reducing alcohol consumption and dependence.
Methods: A prospective cohort control study in two acute NHS Hospital Trusts in the North West England, one of which provided BI (university teaching hospital—test site) while the other did not (district general hospital—control site), including followup BIs. Subjects were alcohol-dependent patients aged ≥18 years. Results: A total of 100 patients were recruited at each site. No differences were found between the groups in the baseline demographic parameters or medical co-morbidities. At the test site, further sessions were sometimes offered, and 46 patients received more than one intervention (median 4, mean 6.3 and maximum 20). At 6 months, alcohol consumption (P < 0.0001), Alcohol Use Disorders Identification Tool (AUDIT) score (P < 0.0001) and Severity of Alcohol Dependence Questionnaire score (P = 0.0001) were significantly lower at the test site than the control site. Outcomes were found to be independent of both the baseline level of dependence and medical co-morbidity. Conclusion: BI delivered by a dedicated ASN for non-treatment-seeking alcohol-dependent individuals, who often have significant medical co-morbidities, seem to be effective in an acute hospital setting. This study provides a framework to inform the design of a future randomized controlled trial.

19. Is It My Job? Alcohol Brief Interventions: Knowledge and Attitudes among Future Health-care Professionals in Scotland
Jan S. Gill and Fiona P. O’May
Alcohol and Alcoholism 2011:46(4);441-450

Abstract
Aims: To document knowledge and perceptions relating to the professional role in the area of alcohol misuse within a sample of first year (n = 278) and final year (n = 527) medical, nursing and allied health professional (NAHP) students in Scotland.

Methods: A cross sectional survey design involving self-completed questionnaires administered in autumn 2008 (first year students) and spring 2009 (final year students) through course websites and lectures. Results: Gaps in the knowledge relating to current UK health guidelines were identified but more so among NAHP students than medical students. Exploration of the perceived role in this area of practice identified three broad groups of students: those clear about their role (medical and nursing students), those advocating a role but not identified by fellow students (occupational therapy and pharmacy) and those uncertain of their role (radiographers, speech and language therapists/audiologists and physiotherapy). Conclusions: Higher education institutions should address the gaps in the knowledge around guidance for alcohol consumption. The effectiveness of brief interventions may depend on it. Additionally, through inter-professional teaching and in collaboration with the relevant professional bodies, more could be done to promote the contribution of practitioners other than those traditionally linked (i.e. medical and nursing) to this important clinical role.

20. Barriers and facilitators to implementing screening and brief intervention for alcohol misuse: a systematic review of qualitative evidence
M. Johnson, R. Jackson, L. Guillaume, P. Meier, E. Goyder
Journal of Public Health 2011:33(3);412-421

Abstract
Background This review aimed to synthesize qualitative evidence for barriers and facilitators to effective implementation of screening and brief intervention for alcohol misuse in adults and children over 10 years.
Methods A search of medical and social science databases was carried out and augmented by hand-searching of reference lists and contents of key journals. Qualitative evidence was synthesized thematically.
Results A total of 47 papers varying in design and quality were included in the review. Most evaluated implementation in primary care settings. Implementation was reported to be limited by lack of resources, training and support from management, as well as workload. The appropriateness of context in which discussions take place was reported as an acceptability factor for patients and practitioners. Health professionals require sufficient knowledge about alcohol guidelines and risk in order to implement screening and intervention to those most in need.
Conclusions Whilst brief screening and brief intervention have been shown to be effective in some settings, this review has identified a number of barriers and facilitators to implementation. Adequate resources, training and the identification of those at risk without stereotyping are the main facilitators in primary care. More research is needed to assess implementation in other settings.
Keywords: alcohol consumption, health services, public health
21. Brief intervention for women with risky drinking and medical diagnoses: A randomized controlled trial
Grace Chang, Naomi D.L. Fisher, Mark D. Hornstein, Jennifer A. Jones, Sarah H. Hauke, Nina Niamkey, Christina Briegleb, Endel John Orav
Journal of Substance Abuse Treatment 2011:41(2);105-114

Abstract
This is a randomized controlled trial of 511 eligible women treated for diabetes, hypertension, infertility, or osteoporosis on an outpatient basis to test the hypothesis that those randomized to a brief intervention (BI) will drink less than those in the control condition 12 months later. A secondary goal was to identify the characteristics associated with changes in drinking outcome. All 511 completed the initial alcohol assessment, and 96% completed the 12-month follow-up interview. Those receiving the BI also had 3- and 6-month interviews. Four outcomes were assessed: (a) mean drinks per drinking day, (b) percent drinking days, (c) binge episodes defined as four or more drinks per occasion, and (d) weeks of drinking exceeding the National Institute on Alcohol Abuse and Alcoholism sensible drinking limits. Overall, there were no differences in drinking outcome by treatment group. Characteristics associated with changes in drinking, however, were identified to provide possible direction for future investigation.

Keywords: Women; Alcohol; Brief intervention; Health problems

22. Treating alcohol-related problems within the Irish healthcare system, 1986–2007: An embedded disease model of treatment?
Barry Cullen
Drugs: Education, Prevention, and Policy

Abstract
This article assesses the implementation of the policy on the treatment of alcohol problems in Ireland during the period 1986–2007. At the commencement of this period, a major policy statement in relation to the treatment of alcohol within the mental health care system presaged radical change – in effect it proposed a shift from the then dominant disease model of alcoholism to one that was focused on public health principles. Towards the end of the period, a further statement made the rather sanguine claim that many of the intended changes had taken place. This article adopts a more critical approach. Using epidemiological data from annual reports on the activities of mental health centres and also drawing from a recently conducted action-research project that focused on addiction treatment within a regional health authority, the article highlights that change has been slow and that some of the main tenets of the disease model remain in place.
BLOOD BORNE VIRUSES

23. How many HIV infections are prevented by Vancouver Canada’s supervised injection facility?
Steven D. Pinkerton
International Journal of Drug Policy 2011:22(3);179-183

Abstract
Mathematical modelling analyses of drug injection-related HIV risk reduction interventions can provide policy makers, researchers, and others with important information that would be difficult to obtain through other means. The validity of the results of mathematical modelling analyses that rely on secondary data sources critically depends on the model(s) employed in the analyses and the parameter values used to populate the models. A recent article in the International Journal of Drug Policy by Andresen and Boyd (2010: 70–76) utilised four different mathematical models of injection-related HIV transmission to estimate the number of HIV infections prevented by Vancouver Canada’s Insite supervised injection facility (SIF). The present article reviews and critiques the mathematical models utilised in the Andresen and Boyd article, then describes an alternative—and potentially more accurate—method for estimating the impact of the Insite SIF. This model indicates that the SIF prevents approximately 5–6 infections per year, with a plausible range of 4–8 prevented infections. These estimates are far smaller than suggested by Andresen and Boyd (19–57 prevented infections).

Keywords: Supervised injection facility, Injection drug use, HIV transmission, Mathematical modelling, Cost-effectiveness

Sophie Arnaud, André Jeannin, Francoise Dubois-Arber
International Journal of Drug Policy 2011:22(3);226–232

Abstract
Background: Measuring syringe availability and coverage is essential in the assessment of HIV/AIDS risk reduction policies. Estimates of syringe availability and coverage were produced for the years 1996 and 2006, based on all relevant available national-level aggregated data from published sources.
Methods: We defined availability as the total monthly number of syringes provided by harm reduction system divided by the estimated number of injecting drug users (IDU), and defined coverage as the proportion of injections performed with a new syringe, at national level (total supply over total demand). Estimates of supply of syringes were derived from the national monitoring system, including needle and syringe programmes (NSP), pharmacies, and medically prescribed heroin programmes. Estimates of syringe demand were based on the number of injections performed by IDU derived from surveys of low threshold facilities for drug users (LTF) with NSP combined with the number of IDU. This number was estimated by two methods combining estimates of heroin users (multiple estimation method) and (a) the
number of IDU in methadone treatment (MT) (non-injectors) or (b) the proportion of
injectors amongst LTF attendees. Central estimates and ranges were obtained for
availability and coverage.
Results: The estimated number of IDU decreased markedly according to both
methods. The MT-based method (from 14,818 to 4809) showed a much greater
decrease and smaller size of the IDU population compared to the LTF-based method
(from 24,510 to 12,320). Availability and coverage estimates are higher with the MT-
based method. For 1996, central estimates of syringe availability were 30.5 and 18.4
per IDU per month; for 2006, they were 76.5 and 29.9. There were 4 central estimates
of coverage. For 1996 they ranged from 24.3% to 43.3%, and for 2006, from 50.5% to
134.3%.
Conclusion: Although 2006 estimates overlap 1996 estimates, the results suggest a
shift to improved
Keywords: Syringe availability, Injection coverage, National-level data, Injecting
drug users

25. A randomized trial of viral hepatitis prevention among underprivileged
people in the Lyon area of France
F. Sahajian, F. Bailly, P. Vanhems, B. Fantino, C. Vannier-Nitenberg, J. Fabry, C.
Trepo

Abstract
Background We compared the efficacy of two viral hepatitis B and C (VHBC)
screening strategies, relative to no intervention, among underprivileged people (UP)
living in shelters in the Lyon area.
Methods Eighteen of 37 shelters were randomly sampled after stratification based on
the accommodation capacity and the screening centres/shelters distance. Through
randomization, the S0 strategy (no intervention), the S1 strategy [group information
(GI) and referral for screening] and the S2 strategy (GI and situ screening) were
each applied in six shelters. A standardized questionnaire was offered to each
participant. Follow-up of positive cases was organized via the reference centre of
VHBC of Lyon.
Results The screening completion rate (SCR) among 1276 included subjects in S0, S1
and S2 was 1.5, 42.8 and 59.7%, respectively (P, 1026). This rate was higher in S2
regardless of the sociodemographic variable considered. Odds ratios (OR) of
screening completion (SC)
was significantly higher in S1 versus S0, OR ¼ 49.8 [95% confidence interval (CI):
26.1–102.1], in S2 versus S0, OR ¼ 98.5 (95% CI: 51.9–200.8) and in S2 versus S1,
OR ¼ 2.0 (95% CI: 1.3–2.9). Age, country of birth and professional inactivity were
independently associated with SC.
Conclusions Health authorities must ensure widespread screening of UP, which is
more effective when conducted in shelters than in screening centres.
Keywords: prevention, screening, underprivileged people, viral hepatitis B and C

26. Hepatitis B transmission event in an English prison and the importance of
immunization
Abstract
Immunization against hepatitis B virus (HBV) is recommended for all sentenced prisoners and all new entrants to prison in the UK. In November 2008, acute hepatitis B was confirmed serologically in a 27-year-old man (Case 1) who had been incarcerated since February 2007. The cell mate of Case 1, a 26-year-old man was an established HBV carrier. A home-made tattoo gun was confiscated from their prison cell. In the absence of other clearly identifiable risk behaviours, tattooing was deemed to be a possible route of HBV transmission. Transmission of hepatitis B in a prison setting is a real concern and this report highlights the importance of immunizing prisoners against hepatitis B and should encourage health professionals to communicate the benefits of immunization to inmates to increase vaccine uptake.

Keywords: communicable diseases, epidemiology, prisons

27. Hepatitis C and B testing in English prisons is low but increasing
Patrick Kirwan, Barry Evans, the Sentinel Surveillance of Hepatitis Testing Study Group, Lisa Brant

Abstract
Background Prisons are important settings for blood-borne virus control because of the high prevalence of hepatitis C and B viral infections (HCV and HBV), and behaviours associated with transmission among prisoners.

Methods Data from sentinel laboratories in England were used to identify testing for hepatitis C (anti-HCV) and hepatitis B [hepatitis B surface antigen (HBsAg) and anti-hepatitis B core antigen (HBc)] among male and female prisoners between 2005 and 2008.

Results Between 2005 and 2008, 10 723 prisoners from 39 prisons in England were tested for anti-HCV, anti-HBc and/or HBsAg. Overall, 24.2% prisoners tested positive for anti-HCV. Anti-HCV testing increased 47% over 4 years (P, 0.001), whilst the proportion testing positive decreased significantly from 26% in 2005 to 23% in 2008 (x2¼ 10.0, df¼ 3, P¼ 0.030). In total, 13.9% people tested positive for anti-HBc. Of 5151 people tested for anti-HBc, 4433 were also tested for HBsAg; of these 2.4% were HBsAg positive. HBsAg testing increased 35% between 2005 and 2008, with no significant change in the proportion testing positive. Between 2005 and 2008, 2.4% (CI: 2.32–2.43%) of the prison population (24 prisons) were estimated to have been tested for anti-HCV.

Conclusions Although hepatitis testing has increased, only a small proportion of the prison population were tested. More testing is required to identify infected prisoners and refer them for appropriate treatment.

Keywords: health services, immunization, prisons

28. High prevalence of HIV and hepatitis B and C is found among injecting drug users
No Abstract
BUPRENORPHINE MISUSE

29. The pharmacodynamic and pharmacokinetic profile of intranasal crushed buprenorphine and buprenorphine/naloxone tablets in opioid abusers

Lisa S. Middleton, Paul A. Nuzzo, Michelle R. Lofwall, David E. Moody & Sharon L. Walsh
Addiction 2011:106(8);1460-1473

Abstract
Aims Sublingual buprenorphine and buprenorphine/naloxone are efficacious opioid dependence pharmacotherapies, but there are reports of their diversion and misuse by the intranasal route. The study objectives were to characterize and compare their intranasal pharmacodynamic and pharmacokinetic profiles. Design A randomized, doubleblind, placebo-controlled, cross-over study. Setting An in-patient research unit at the University of Kentucky. Participants Healthy adults (n = 10) abusing, but not physically dependent on, intranasal opioids. Measurements Six sessions (72 hours apart) tested five intranasal doses [0/0, crushed buprenorphine (2, 8 mg), crushed buprenorphine/naloxone (2/0.5, 8/2 mg)] and one intravenous dose (0.8 mg buprenorphine/0.2 mg naloxone for bioavailability assessment). Plasma samples, physiological, subject- and observer-rated measures were collected before and for up to 72 hours after drug administration. Findings Both formulations produced time- and dose-dependent increases on subjective and physiological mu-opioid agonist effects (e.g. ‘liking’, miosis). Subjects reported higher subjective ratings and street values for 8 mg compared to 8/2 mg, but these differences were not statistically significant. No significant formulation differences in peak plasma buprenorphine concentration or time–course were observed. Buprenorphine bioavailability was 38–44% and Tmax was 35–40 minutes after all intranasal doses. Naloxone bioavailability was 24% and 30% following 2/0.5 and 8/2 mg, respectively. Conclusions It is difficult to determine if observed differences in abuse potential between intranasal buprenorphine and buprenorphine/naloxone are clinically relevant at the doses tested. Greater bioavailability and faster onset of pharmacodynamic effects compared to sublingual administration suggests a motivation for intranasal misuse in non-dependent opioid abusers. However, significant naloxone absorption from intranasal buprenorphine/naloxone administration may deter the likelihood of intranasal misuse of buprenorphine/naloxone, but not buprenorphine, in opioid-dependent individuals.
Keywords Abuse liability, buprenorphine, human, intranasal, naloxone, pharmacodynamic, pharmacokinetic.
CO-MORBIDITY

30. Agitated depression in substance dependence
Adam M. Leventhal, Joel Gelernter, David Oslin, Raymond F. Anton, Lindsay A. Farrer, Henry R. Kranzler
Drug and Alcohol Dependence 2011:116(1-3);163-169

Abstract
Background: Depression with psychomotor agitation (PMA; “agitated depression”) is a putative psychiatric phenotype that appears to associate with some forms of substance dependence. However, it is unclear whether such relationships extend across different substances and independent (I-MDE) versus substance-induced (SI-MDE) subtypes of major depressive episodes.
Method: We examined whether lifetime depression with (vs. without) PMA was associated with lifetime substance dependence across individuals with lifetime: (1) I-MDE only (n = 575); and (2) SI-MDE only (n = 1683). Data were pooled from several family and genetic studies of substance dependence in which participants received identical structured interviews to diagnose DSM-IV mental disorders.
Results: In I-MDE, PMA was significantly associated with alcohol, cocaine, opioid, other drug (hallucinogen, inhalant, speed-ball), and sedative dependence. After controlling for demographic and clinical co-factors, PMA’s relationship to dependence on opioids, other drugs, and sedatives remained significant, but not its relationship to alcohol or cocaine. In SI-MDE, PMA was significantly associated with alcohol, cocaine, opioid, and other drug dependence. After adjusting for co-factors, associations remained significant for dependence on cocaine and opioids, but not alcohol or other drugs. Relationships between PMA and opioid dependence were stronger in I-MDE than SI-MDE. Depression subtype (I-MDE vs. SI-MDE) did not moderate relations between PMA and non-opioid forms of substance dependence.
Conclusions: Agitated depression associates with certain forms of substance dependence, particularly opioid dependence. MDE subtype did not alter most PMA-dependence associations, which suggests that the mechanisms underlying this comorbidity are complex and potentially bidirectional.
Keywords: Major depression, Psychomotor agitation, Substance dependence, Agitated depression, Substance-induced depression.

31. Hurt people who hurt people: Violence amongst individuals with comorbid substance use disorder and post traumatic stress disorder
Emma L. Barrett, Katherine L. Mills, Maree Teesson
Addictive Behaviours 2011:36(7);721-728

Abstract
Aims: The association between substance use disorder (SUD) and the perpetration of violence has been well documented. There is some evidence to suggest that the co-occurrence of post traumatic stress disorder (PTSD) may increase the risk for violence. This study aims to determine the prevalence of violence perpetration and examine factors related to violence amongst individuals with comorbid SUD and PTSD.
Design and participants: Data was collected via interview from 102 participants recruited to a randomised controlled trial of an integrated treatment for comorbid SUD and PTSD.

Measurements: The interview addressed demographics, perpetration of violent crime, mental health including aggression, substance use, PTSD, depression, anxiety and borderline personality disorder.

Findings: Over half of participants reported committing violence in their lifetime and 16% had committed violence in the past month. Bivariate associations were found between violence perpetration and trait aggression, higher levels of alcohol and cannabis use, lower levels of other opiate use, and experiencing more severe PTSD symptoms, particularly in relation to hyperarousal. When entered into a backward stepwise logistic regression however, only higher levels of physical aggression and more severe PTSD hyperarousal symptoms remained as independent predictors of violence perpetration.

Conclusions: These findings highlight the importance of assessing for PTSD amongst those with SUD particularly in forensic settings. They also indicate that it is the hyperarousal symptoms of PTSD specifically that need to be targeted by interventions aimed at reducing violence amongst individuals with SUD and PTSD.

Keywords: Substance use disorder, PTSD, Violence

32. Neuropsychological Functioning and Outcomes of Treatment for Co-occurring Depression and Substance Use Disorders
Eric Granholm, Susan R. Tate, Peter C. Link, Katherine P. Lydecker, Kevin M. Cummins, John McQuaid, Chris Shriver and Sandra A. Brown
The American Journal of Drug and Alcohol Abuse 2011:37(4);240-249

Abstract
Background: We previously published findings from our clinical trial comparing treatment outcomes for substance-dependent veterans with co-occurring depression who received Integrated Cognitive Behavioral Therapy (ICBT) or Twelve-Step Facilitation (TSF) Therapy. Objectives: This study is a secondary analysis that examined whether neuropsychological functioning at baseline moderated substance use and depression outcomes in ICBT relative to TSF. Methods: This study was a randomized clinical trial in which 164 veterans with major depressive disorder and comorbid alcohol, cannabinol, and/or stimulant dependence were randomly assigned to either ICBT or TSF group therapy. A comprehensive neuropsychological test battery was administered at baseline. Results: Contrary to our hypothesis, participants with poor neuropsychological functioning had better substance use outcome in ICBT than in TSF, whereas participants with good neuropsychological functioning had comparable substance use outcomes in TSF and ICBT by 18-month follow-up. Depression outcomes, in contrast, were not moderated by neuropsychological functioning by 18-month follow-up. Conclusions and Scientific Significance: The substance use outcomes may suggest that substance-dependent depressed adults with poorer neuropsychological functioning should be offered ICBT over TSF. These individuals may be less able to develop and use novel coping skills for managing substance use and depressive symptoms on their own without formal structured training in cognitive and behavioral skills provided in ICBT.
Keywords: depression, substance use disorders, cognitive behavioral therapy, neuropsychological impairment
Abstract

Objective: To review the existing literature on the psychopharmacological and psychotherapeutic treatment of patients with both schizophrenia and a substance use disorder (SUD).


Results: Patients with psychotic disorders also frequently have SUDs. To attempt to explain their high coexistence there are different hypotheses, such as self-medication or the drug induction theories of chronic psychosis. Pathogenesis mechanisms are unknown. Patients may use substances to control or minimize symptoms such as hallucinations or anxiety, for the management of negative emotional states, to counteract negative symptoms and as a means of integration into a group. The diagnosis is complicated. It is important to correctly identify these patients because they have a more severe psychopathology, a more violent social behavior, and have more comorbidity with other medical diseases (such as human immunodeficiency virus or hepatitis C virus), which worsens the prognosis. The knowledge of the clinical characteristics and needs of these patients should enable suitable treatment programs to be developed.

Conclusions: Substance abuse worsens the course and prognosis of schizophrenia and makes the psychopharmacological treatment and psychotherapeutic approach more difficult. Dual psychotics are characterized by low adherence to treatment and poor linkage to health facilities. Therefore, the integrated treatment model, in which the same therapeutic team jointly addresses schizophrenia and SUD, is offered as a therapeutic option of choice in managing these patients.

Keywords: schizophrenia, dual diagnosis, dual disorder, substance use disorder, treatment, alcohol, cannabis, cocaine, heroin, pharmacotherapy

Abstract

Background: Perceived stigmatization of drug addicts may interact with negative mood states and thus may contribute to the maintenance of addictive behavior.

Methods: Opiate maintenance patients (n = 106) and an unselected comparison group (n = 144) rated self-report questionnaires about perceived stigmatization, quality of life (QoL), depressiveness, anxiety, self-esteem, addiction characteristics, and social support. Results: 63% of opiate maintenance patients felt discriminated in contrast to 16% of the comparison group. Perceived stigmatization was rated higher by opiate maintenance patients, and
all domains of QoL were rated lower, even when statistically controlling depressiveness, anxiety and social factors. Perceived stigmatization was correlated to depressiveness, anxiety, low self-esteem and low QoL, but not addiction characteristics and social support. Structural equation models revealed anxiety and the pathway depressiveness enhancing feelings of being stigmatized resulting in low self-esteem to explain 74% of variance in mental QoL, whereas anxiety and a pathway stigmatization inducing depressiveness leading to low self-esteem explained 49% of variance in physical QoL. **Conclusions:** A vicious circle of stigmatization, negative affective states and low QoL was confirmed. In addition to societal antistigma campaigns, antidepressive and anxiolytic therapy might have the potential to diminish feelings of being stigmatized and to improve QoL. **Keywords:** Anxiety _ Depressiveness _ Low quality of life in heroin addicts _ Opiate maintenance patients _ Perceived stigmatization
35. Risk factors for all-cause, overdose and early deaths after release from prison in Washington state
Ingrid A. Binswanger, Patrick J. Blatchford, Rebecca G. Lindsay, Marc F. Stern
Drug and Alcohol Dependence 2011:117(1);1-6

Abstract
Background: High mortality rates after release from prison have been well-documented, particularly from overdose. However, little is known about the risk factors for death after release from prison. Therefore, the objective of this study was to determine the demographic and incarceration-related risk factors for all-cause, overdose and early mortality after release from prison.
Methods: We conducted a retrospective cohort study of inmates released from a state prison system from 1999 through 2003. The cohort included 30,237 who had a total of 38,809 releases from prison. Potential risk factors included gender, race/ethnicity, age, length of incarceration, and community supervision. Cox proportional hazards regression was used to determine risk factors for all-cause, overdose and early (within 30 days of release) death after release from prison.
Results: Age over 50 was associated with an increased risk for all-cause mortality (hazard ratio [HR] 2.67 for each decade increase, 95% confidence interval [CI] 2.23, 3.20) but not for overdose deaths or early deaths. Latinos were at decreased risk of death compared to Whites only for all-cause mortality (HR 0.61, 95% CI 0.42, 0.87). Increasing years of incarceration were associated with a decreased risk of all-cause mortality (HR 0.95, 95% CI 0.91, 0.99) and overdose deaths (HR 0.80, 95% CI 0.68, 0.95), but not early deaths. Gender and type of release were not significantly associated with all-cause, overdose or early deaths.
Conclusions: Age, ethnicity and length of incarceration were associated with mortality after release from prison. Interventions to reduce mortality among former inmates are needed.
Keywords: Prisoners, Mortality, Substance-related disorders, Re-entry, Community corrections, Epidemiology
36. The Role of Child Sexual Abuse in the Etiology of Substance-Related Disorders
Roberto Maniglio
*Journal of Addictive Diseases* 2011:30:216–228

**Abstract**

To elucidate the role of child sexual abuse in the etiology of substance-related disorders, a systematic review of the several articles on the childhood sexual abuse-related risk for developing substance problems in adolescence or adulthood is provided. Seven databases were searched, supplemented with hand-search of reference lists. Six reviews, including 200 studies, were included. Results indicate that child sexual abuse is a statistically significant, although general and nonspecific, risk factor for substance problems. Other biological and psychosocial variables contribute to substance-related disorders, with sexual abuse conferring additional risk, either as a distal, indirect cause or as a proximal, direct cause. Recommendations for future research are provided.

**Keywords:** Substance-related disorders, drug abuse, alcohol abuse, child sexual abuse, aetiology

37. Social Location, Social Integration, and the Co-occurrence of Substance Abuse and Psychological Distress
Kimberly A. Tenorio, Celia C. Lo
*The American Journal of Drug and Alcohol Abuse* 2011:37(4);218-223

**Abstract**

*Background:* In the United States, social stratification has generally led individuals occupying lower social locations to have more health problems than other individuals, even acknowledging that social groups are distinguished by their particular manifestations of health problems. *Objectives:* This study examined whether two social integration factors, marriage and religiosity, mediate the relationship between social location and co-occurrence of substance abuse and psychological distress and the nature of this relationship. *Methods:* Multinomial logistic regression was conducted on data from a national sample of 34,650 adults mostly between the ages of 18 to 35, collected through the 2007 National Survey on Drug Use and Health. *Results:* White males who were lesser educated and living in poverty were more likely to exhibit co-occurring substance abuse and psychological distress than their demographically similar counterparts. Additionally, being married and religious appeared to be protective factors within the overall study cohort with fewer co-occurring behaviors reported. *Conclusion:* The data generally confirm the hypothesis concerning mediating roles for religiosity and marriage. *Scientific Significance:* Confirmation that marriage and religiosity can protect adults against co-occurring substance abuse and psychological distress potentially provides the information necessary to better target health policy and interventions that serve to further enhance the population’s mental health.

**Keywords:** co-occurring behavior, substance abuse, psychological distress, social location, religiosity, marriage
Abstract

Background: The developmental trajectory of problematic substance use (PSU) with associated risk and compensatory factors in adolescence has not been studied intensively.

Method: PSU over 7 years between adolescence and adulthood was studied. The data of 593 adolescents (mean age at first measurement occasion: 13.6 years, SD = 1.6; 284 males, 309 females) come from the Zurich Psychology and Psychopathology Study (ZAPPS), covering three measurement occasions over seven years. A probit linear effects model of longitudinal change including various psychosocial predictor variables was used to study the probability of becoming a problematic substance user.

Results: The PSU trajectory was nonlinear, rose rapidly through adolescence and flattened out through young adulthood. Age and year of assessment showed the strongest predictive power as risk factors. Among further risk and compensatory predictors, externalizing problem behavior at time one showed a strong increase in PSU.

Conclusions: The present study provides new insight into the development of PSU from adolescence to young adulthood including risk and compensatory factors. Age-specific prevention programs should focus on externalizing behavior problems and avoidant coping.

Keywords: Problematic substance use, binary outcome data, mixed effects models, longitudinal study, adolescence

Abstract

The aim of the study was to examine the time interval from treatment to relapse among patients with substance addiction. Some of the risk factors related to this interval were investigated. The sample (n = 352) was recruited from 16 substance addiction treatment facilities in four Norwegian counties. The respondents replied to a questionnaire either at waiting lists, when starting treatment, upon treatment completion or 3–12 months after treatment. Among these respondents, 160 patients had experienced a relapse after their prior treatment. Cox regression models showed that the relapse risk peaked during the first months after treatment. Older and employed patients had lower probabilities of early relapses. Patients who had an addiction pattern dominated by stimulants or cannabis had lower probabilities of early relapses compared with those who used opiates or alcohol. Inpatient treatment of short and long durability was associated with a longer time interval from treatment to relapse. Aftercare should be intensified during the first months after treatment. Treatment follow-up should be individually differentiated and target patients with
higher risk of relapse. Interventions could aim to target adolescents and facilitate occupational activities for the patients before they leave the facilities.

**Keywords:** Relapse pattern, psychological, Norwegian, substance addiction, patients
FOOD ADDICTIVE

40. Can food be addictive? Public health and policy implications
Ashley N. Gearhardt, Carlos M. Grilo, Ralph J. DiLeone, Kelly D. Brownell & Marc N. Potenza
Addiction 2011:106(7);1208-1212

Abstract
Aims Data suggest that hyperpalatable foods may be capable of triggering an addictive process. Although the addictive potential of foods continues to be debated, important lessons learned in reducing the health and economic consequences of drug addiction may be especially useful in combating food-related problems. Methods In the current paper, we review the potential application of policy and public health approaches that have been effective in reducing the impact of addictive substances to food-related problems. Results Corporate responsibility, public health approaches, environmental change and global efforts all warrant strong consideration in reducing obesity and diet-related disease. Conclusions Although there exist important differences between foods and addictive drugs, ignoring analogous neural and behavioral effects of foods and drugs of abuse may result in increased food-related disease and associated social and economic burdens. Public health interventions that have been effective in reducing the impact of addictive drugs may have a role in targeting obesity and related diseases. Keywords: Addiction, food, obesity, public health.
HEPATITIS C

41. Factors associated with hepatitis C knowledge among a sample of treatment naive people who inject drugs
Carla Treloara, Peter Hull, Joanne Bryant, Max Hopwood, Jason Grebely, Yvonna Lavis
Drug and Alcohol Dependence 2011:116(1-3);52-56

Abstract
Background: Assessment and uptake of treatment for hepatitis C among people who inject drugs (PWID) is low and strategies to enhance hepatitis C care in this group are needed. Knowledge of hepatitis C and its treatment is one precursor to decisions about treatment.
Methods: We conducted a cross-section study designed to evaluate treatment considerations in participants with self-reported hepatitis C infection in New South Wales, Australia. Participants were recruited from needle and syringe programs, opiate substitution clinics, pharmacies that dispensed opiate substitution treatment and from the mailing list of a community-based hepatitis C organisation and completed a self-administered survey. Knowledge of hepatitis C was assessed by a 48-item scale addressing the natural history and treatment of hepatitis C. Factors associated with knowledge were assessed by ordinal regression.
Results: Among the 997 participants recruited, 407 self-reported acquiring hepatitis C through injecting drug use and had never received hepatitis C treatment. Knowledge about hepatitis C was overall poor and the effects of the long term consequences of hepatitis C were over-estimated. Higher knowledge scores were associated with recruitment site, higher education levels and recent contact with a general practitioner. One-third of participants indicated that they did not intend to have treatment and one-fifth did not answer this question.
Conclusion: Knowledge is a precursor to informed decisions about hepatitis C treatment. These results indicate that efforts to support those less engaged with hepatitis C care (and specifically those on opiate substitution treatment) and those with lower literacy are required.
Keywords: Hepatitis C, Treatment, Injecting drug use, Knowledge

42. Treatment for hepatitis C virus genotype 1 infection in HIV-infected individuals on methadone maintenance therapy
Lynn E. Taylor, Sarah E. Bowman, Stacey Chapman, Nickolas Zaller, Michael D. Stein,
Patricia A. Cioe, Michaela A. Maynard, Barbara Hedgis McGovern
Drug and Alcohol Dependence 2011:116(1-3);233-237

Abstract
Background: A minority of HIV/HCV coinfected patients with opiate addiction undergo HCV treatment. HCV therapy for HCV-monoinfected methadone maintenance (MM) recipients is safe and effective. We evaluated treatment efficacy
Methods: HCV treatment-naïve, HIV-infected persons 18–65 years with chronic HCV genotype 1 on MM were prospectively enrolled in an HCV treatment study at two HIV clinics. At weekly visits pegIFN alfa-2a injections were directly administered. Daily MM recipients had morning ribavirin delivered with methadone at off-site methadone clinics. Weekly take-homeMM recipients took ribavirin unsupervised. Target enrollment was 30 participants.

Results: During 18 recruitment months, 11 participants were enrolled, 6 of whom received daily methadone. Mean age was 46, 64% were female, 5 were Caucasian, 4 Black and 2 Hispanic. At baseline, 82% had high HCV RNA and 55% had stage 2 fibrosis or greater. The majority (91%) were on HAART, and 82% had undetectable HIV RNA with a median CD4+ of 508 cells/L. All had polysubstance use history, non-substance-based psychiatric diagnoses and were on psychotropic medications pre-enrollment. Two (18%) participants achieved a Sustained Virologic Response (SVR). Two completed 48 treatment weeks, 5 were withdrawn due to adverse events, 2 dropped out prematurely and 2 had treatment discontinued for virologic non-response. Of on-treatment weeks, adherence to pegIFN was >99%.

Conclusions: SVR rate was comparable to historic controls for coinfected genotype 1 patients, with optimal pegIFN adherence. Adverse effects often prevented therapy completion in this population.

**Keywords:** Hepatitis C virus, Methadone maintenance therapy, HIV/HCV coinfection, Hepatitis C treatment, Integrated care.
43. The influence of co-occurring axis I disorders on treatment utilization and outcome in homeless patients with substance use disorders
Julia Austin, John D. McKellar, Rudolf Moos
Addictive Behaviours 2011:36(9);941-944

Abstract
The current study examined the relationship between co-occurring substance use and Axis I psychiatric disorders and treatment utilization and outcome among homeless individuals (N=365) who participated in an episode of intensive outpatient substance use treatment. Compared to patients without a co-occurring diagnosis, homeless patients with a diagnosis of major depressive disorder or PTSD participated in more substance use treatment. Diagnostic status did not predict 12-month alcohol or drug treatment outcome. Substance use treatment programs appear to successfully engage homeless individuals with major depressive disorder and PTSD in treatment. Such individuals appear to achieve similar benefits from standard substance use treatment as do homeless individuals without such disorders.

Keywords: Homeless, Co-occurring disorders, Substance use, Alcohol, Treatment utilization
INJECTING BEHAVIOUR

44. A mixed methods approach to delineating and understanding injection practices among clientele of a Victoria, British Columbia needle exchange program
Erin K. Gibson, Heidi Exner, Ryan Stone, Jennifer Lindquist, Laura Cowen & Eric A. Roth
Drug and Alcohol 2011:30(4);360-365

Abstract
Introduction and Aims. Systematic reviews and meta-analyses show that needle exchange programs reduce HIV and HCV transmission for injection drug users (IDUs) but far less is known about the injection practices of IDUs enrolled in these programs. This study adopts a mixed methods approach to quantify high-risk injection practice patterns among IDUs enrolled in a needle exchange program in Victoria, British Columbia, Canada and gather qualitative data to understand underlying injection behaviour rationales and patterns. Design and Methods. Survey data collected in 2008 from 105 IDUs registered as clientele of the AIDS Vancouver Island-Street Outreach Services (AVI-SOS) Needle Exchange were analysed via univariate and multivariate statistical methods. Presentation of this analysis to an AVI-SOS needle exchange clientele group generated qualitative data offering an explanation for quantitative results. Results. Univariate analysis showed all respondents reporting at least one high-risk practice within the past month. Multivariate logistic regression analysis using input from AVI-SOS clientele confirmed the importance of housing status as a determinant of injection practices. Discussion and Conclusions. The importance of housing status points to the need to combine harm reduction services, for example needle exchange and appropriate housing and highlights the benefits of including IDUs in data interpretation. [Gibson EK, Exner H, Stone R, Lindquist J, Cowen L, Roth EA. A mixed methods approach to delineating and understanding injection practices among clientele of a Victoria, British Columbia needle exchange program.
Key words: needle exchange program, injection drug user, injection practice, homelessness.

45. Correlates of risky injection practices among past-year injection drug users among the US general population
Lauren R. Ropelewski, Brent E. Mancha, Alicia Hulbert, Abby E. Rudolph, Silvia S. Martins
Drug and Alcohol Dependence 2011:116(1-3);64-71

Abstract
Background: With an estimated 1 million active injection drug users (IDUs), injection drug use continues to be a public health concern in the United States. Risky injection practices have been associated with the transmission of HIV, Hepatitis B and C, as well as other skin and soft tissue infections.
Methods: We used data from 463 respondents, aged 18 and older, who were past-year IDUs in the 2005–2008 National Survey of Drug Use and Health (NSDUH). We investigated correlates of risky injection behavior among these recent IDUs.
Results: Older age (≥35 versus 18–25) was associated with reusing one’s own needle at last injection (aOR = 1.80 [1.02–3.17], as were past year heroin (aOR = 2.59 [1.18–5.66]) and cocaine injection (aOR = 2.17 [1.13–4.15]). Past year crack cocaine use was positively associated with not cleaning needles with bleach (aOR = 2.18 [1.10–4.33]). Past year cocaine injection was associated with obtaining needles in a risky manner (aOR = 2.29 [1.23–4.25]). Methamphetamine injection was associated with obtaining needles in less risky ways (aOR = 0.41 [0.20–0.84]).

Conclusion: Our findings indicate that some IDUs are continuing to engage in high risk injection behaviors. The identification of potential at-risk populations of IDUs may have implications for harm reduction interventions and HIV prevention programs.

Keywords: Injection drug users, Injection risk behaviors, HIV risk behaviors, NSDUH

46. The influence of the perceived consequences of refusing to share injection equipment among injection drug users: Balancing competing risks
Karla D. Wagner, Stephen E. Lankenau, Lawrence A. Palinkas, Jean L. Richardson, Chih-Ping Chou, Jennifer B. Unger
Addictive Behaviours 2011:36(8);835-842

Abstract
Injection drug users (IDUs) are at risk for HIV and other bloodborne pathogens through receptive syringe sharing (RSS) and receptive paraphernalia sharing (RPS). Research into the influence of the perceived risk of HIV infection on injection risk behavior has yielded mixed findings. One explanation may be that consequences other than HIV infection are considered when IDUs are faced with decisions about whether or not to share equipment. We investigated the perceived consequences of refusing to share injection equipment among 187 IDUs recruited from a large syringe exchange program in Los Angeles, California, assessed their influence on RSS and RPS, and evaluated gender differences. Two subscales of perceived consequences were identified: structural/external consequences and social/internal consequences. In multiple linear regression, the perceived social/internal consequences of refusing to share were associated with both RSS and RPS, after controlling for other psychosocial constructs and demographic variables. Few statistically significant gender differences emerged. Assessing the consequences of refusing to share injection equipment may help explain persistent injection risk behavior, and may provide promising targets for comprehensive intervention efforts designed to address both individual and structural risk factors.

Keywords: Injection drug use, HIV, Gender, Perceived consequences, Syringe sharing
OPIATE TREATMENT

47. Physical and mental health in severe opioid-dependent patients within a randomized controlled maintenance treatment trial
Jens Reimer, Uwe Verthein, Anne Karow, Ingo Schäfer, Dieter Naber & Christian Haasen
Addiction 2011:106(9);1647-1655

Abstract
Aims To evaluate physical and mental health and compare treatment outcomes in opioid-dependent patients substituted either with heroin or methadone. Design Twelve-month open-label randomized controlled trial. Setting Out-patient substitution clinics in seven German cities. Participants A total of 1015 opioid-dependent individuals. Measurements Opiate Treatment Index–Health Scale Score (OTI), Body Mass Index (BMI), serology for infectious diseases such as hepatitis B, C and human immunodeficiency virus as well as tuberculosis, Karnofsky Performance Scale (KPS), electrocardiogram (ECG), echocardiogram, Symptom Checklist 90-R (SCL-90-R), Global Assessment of Functioning (GAF), Modular System for Quality of Life and study medication-related serious adverse events (SAE). Findings Improvements were found in both heroin and methadone substituted patients regarding OTI, BMI, KPS, SCL-90-R, and GAF, but they were more pronounced for the heroin group (analysis of variance, all P = 0.000). The frequency of pathological echocardiograms decreased in the heroin group and increased in the methadone 0.05). Markers for infectious diseases and frequencies of group (c2 test, pathological ECGs did not differ between baseline and 12 months, or between treatment groups. Studymedication-related serious adverse events, all of which were treated successfully, occurred 2.5 times more often in the heroin group. The majority of heroin-related SAEs (41 of 58) occurred within a few minutes of the injections. Conclusions The integration of severe injection drug users either in methadone or heroin-assisted maintenance treatment has positive effects on most physical and mental change-sensitive variables, with heroin showing superior results. Due to medication-related adverse events, patients should be observed for 15 minutes after a heroin injection. Keywords Comorbidity, heroin, injection drug use, maintenance treatment, methadone, outcome.

48. Methadone maintenance, QTc and torsade de pointes: Who needs an electrocardiogram and what is the prevalence of QTc prolongation?
Soraya Mayet, Michael Gossop, Nicholas Lintzeris, Vias Markides & John Strang
Drug and Alcohol 2011:30(4);388-396

Abstract
Introduction and Aims. High-dose methadone has been associated with rate-corrected QT (QTc) prolongation and ‘torsade de pointes’. The Medicines and Healthcare products Regulatory Agency (MHRA) advise electrocardiograms (ECGs) for patients on methadone with heart/liver disease, electrolyte abnormalities, concomitant QT prolonging Medications/CYP3A4 inhibitors or prescribed methadone
The percentage of patients fulfilling MHRA criteria for ECG monitoring and prevalence of QT prolongation in patients who had an ECG was assessed. **Design and Methods.** A cross-sectional study of opioid-dependent patients prescribed opioid maintenance that completed a screening questionnaire prior to referral for an ECG. MHRA criteria were assessed in the referred group. The automated QTc score was analysed with methadone dose, substance use and QT risk factors. **Results.** Of 155 patients screened; 57.4% (n = 89) fulfilled MHRA criteria for ECG monitoring (75.5% (n = 117) if cocaine included as QT prolonging drug). Eighty-three (53.5%) had ECGs; 19.3% (n = 16) prescribed QT prolonging medication, 22.9% (n = 19) prescribed >100 mg methadone and 47% (n = 39) used cocaine. Mean QTc interval was 429.0 ms (SD 26.4, 351–489). Eighteen percent exceeded QTc gender-specific thresholds (_450 ms men and _470 ms women). Linear regression found total daily methadone dose (b = 0.318, P = 0.003) and stimulant use (b = -0.213, P = 0.043) predictive of QTc length. **Discussion.** Over half to three-quarters of methadone maintenance patients fulfilled MHRA criteria for ECG monitoring, which has costly implications. QTc prolongation prevalence was 18.1% with no ‘clinically significant’ QTc prolongation ▷500 ms or torsade de pointes known to be present. Methadone dose and stimulant use were associated with longer QTc intervals. Further research on the clinical management of QTc prolongation with methadone is required. [Mayet S, Gossop M, Lintzeris N, Markides V, Strang J. Methadone maintenance, QTc and torsade de pointes: Who needs an electrocardiogram and what is the prevalence of QTc prolongation? **Key words:** methadone maintenance, heroin dependence, QT prolongation, torsade de pointes, cardiac risk.

49. Predictors of methadone treatment retention from a multi-site study: A survival analysis
Sharon M. Kellya, Kevin E. O’Grady, Shannon Gwin Mitchell, Barry S. Brown, Robert P. Schwartz
**Drug and Alcohol Dependence** 2011;117(2-3);170-175

**Abstract**
Background: Longer tenure in methadone treatment has been associated with positive outcomes such as reductions in drug use and crime, HIV seroconversion, and overdose death.
Methods: Retention in treatment was examined for 351 opioid-dependent individuals who had been newly admitted to one of six methadone programs in Baltimore, Maryland. Cox proportional hazards regression was used to predict number of days retained in treatment to 90 days from baseline ASI Composite scores and Treatment Motivation scales. A second analysis predicted days in treatment to 365 days using the same baseline variables plus 3-month Motivation scales, Patient Satisfaction scales, and methadone dose in the 248 individuals who had remained in treatment at least 3 months. Analyses held constant gender, race, age, whether participants had a history of regularly smoking cocaine, whether participants were on parole/probation, and program site.
Results: Retention at 90 days was predicted by female gender, and greater baseline Treatment Readiness (p = .005) but lower Desire for Help (p = .010). Retention at 365 days was predicted by higher baseline ASI Medical Composite scores (p = .037) and
lower Legal Composite scores (p = .039), higher 3-month Treatment Satisfaction scores (p = .008), and higher dose (p = .046).
Conclusions: Greater satisfaction with treatment at 3 months was a significant predictor of retention at 12 months, indicating the importance of understanding the role satisfaction plays in determining retention. Greater severity of legal problems was associated with shorter retention, suggesting that program efforts to increase services to criminal justice patients (e.g., legal counseling) may constitute a useful addition to treatment.

**Keywords:** Opioid addiction, Methadone maintenance, Treatment retention

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**50. The impact of long-term maintenance treatment with buprenorphine on complex psychomotor and cognitive function**

Sergey Shmygalev, Martin Damm, Klaus Weckbecker, Gunter Berghaus, Frank Petzke, Rainer Sabatowska

*Drug and Alcohol Dependence 2011:117(2-3);190-197*

**Abstract**

Introduction: Despite the fact that buprenorphine is effective, well tolerated and due to its pharmacological profile a very safe drug, the impact of long-term buprenorphine substitution therapy on complex psychomotor and cognitive function predicting driving ability is not yet clear. Therefore, a prospective comparison between patients receiving sublingual buprenorphine and a control group of untreated, healthy volunteers was performed.

Methods: Treated and untreated subjects were matched for age and sex, with three control subjects selected for every buprenorphine patient. Patients using unreported drugs were included in the intention-to-treat (ITT) analysis; the remaining patients were analysed as the per-protocol (PP) group. The testbattery comprised the assessment of: performance during stress, visual orientation, concentration, attention, vigilance and reaction time. The primary endpoint was defined as the sum of the relevant scores of the tests after z-transformation of the individual scores.

Results: 30 patients with sublingual buprenorphine treatment (7.7±3.9mg per day) were matched to 90 controls. 19 patients were excluded from the PP-analysis because of additional unreported drug intake. Significant non-inferiority could be demonstrated for the PP-group (p < 0.05) as well as for the ITT-group (p < 0.001).

Conclusion: Patients receiving a stable dose of sublingual buprenorphine showed no significant impairment of complex psychomotor or cognitive performance as compared to healthy controls. However intake of illicit drugs as well as the lack of social reliability are major problems in this specific patients group. Despite of the absence of a relevant impact of the drug on driving ability, those patients do not seem to be qualified for getting their driving license.

**Keywords:** Buprenorphine, Maintenance therapy, Driving ability, Vienna Test System

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**51. Prescription of analgesics to patients in opioid maintenance therapy: A pharmacoepidemiological study**

Olav Magnus S. Fredheim, Petter C. Borchgrevink, Berit Nordstrand, Thomas Clausen,
Svetlana Skurtveit
Drug and Alcohol Dependence 2011:116(1-3);158-162

Abstract
Aims: The primary aim of the present study is to determine the one year periodic prevalence of dispersion of different analgesics to patients in long term opioid maintenance therapy (OMT). The secondary aim is to determine to which extent non-opioid analgesics are used as first line analgesics.
Design: The study is a pharmacoepidemiological study with cross sectional data and cohort data. Data on patients in long term OMT in Norway were obtained from the complete national Norwegian Prescription Database (NorPD).
Findings: The analgesics with the highest one year periodic prevalence were NSAIDs (22%), codeine–paracetamol combinations (9%), paracetamol (7%) and tramadol (2.5%). During both 2007 and 2008 a total of 12% of the study population received at least one dispersion of another opioid in addition to the opioid used for OMT. In 55% of the cases where OMT patients had not received an analgesic the preceding year an NSAID was the first or only dispensed analgesic whereas paracetamol–codeine was the first or only dispensed analgesic in 29% of the cases.
Conclusions: This study has documented an equally high one year periodic prevalence of opioid dispensions in OMT patients as in the general population as well as a high one year periodic prevalence of dispensions of NSAIDs. Dispersion of codeine–paracetamol has a relatively high one-year prevalence and is frequently used as a first line analgesic.

Keywords: Opioid maintenance therapy, Acute pain, Analgesics, Opioids

52. What is the role of harm reduction when drug users say they want abstinence?
Joanne Neale, Sarah Nettleton, Lucy Pickering
International Journal of Drug Policy 2011:22(3);189-193

Abstract
Quantitative survey data indicate that most drug users starting treatment want abstinence rather than harm reduction (McKeganey et al., 2004). This finding has been seized upon by those seeking ‘evidence’ that abstinence is the bedrock of recovery and harm reduction is a negative and oppositional philosophy. However, all research involves questions of meaning, definition and value and an alternative research paradigm and different study design can provide important additional insights into treatment aspirations, including the desire for abstinence. Qualitative interviews conducted with 30 recovering heroin users (15 males and 15 females) in Southern England in 2009 confirm that those starting treatment often report a desire for abstinence. Nonetheless, drug users are frequently uncertain about their ability to achieve this and can have very different and inconsistent understandings of what being abstinent means. We suggest that the work of the critical theorist Habermas (1970, 1991) could improve our understanding of abstinence and is consistent with recent efforts to achieve a working definition of recovery. Importantly, our qualitative data also reveal that drug users have treatment aspirations that extend far beyond their drug consumption. They additionally want to improve relationships, engage in meaningful activities, acquire material possessions, and achieve better mental and physical health. Moreover, these broader life goals are
often inextricably linked to their drug taking. From this, we conclude that both abstinence and harm reduction discourses should more routinely prioritise the many diverse ‘wellness’ goals that so clearly motivate treatment clients. The harm reduction field will then likely find that it has more in common with abstinence-oriented services and the broader recovery agenda than it might otherwise have imagined.

**Keywords:** Abstinence, Harm reduction, Recovery, Evidence, Quantitative methods, Qualitative methods

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**53. Negative Affect Heightens Opiate Withdrawal-Induced Hyperalgesia in Heroin Dependent Individuals**
Luis M. Carcoba, Arturo E. Contreras, Antonio Cepeda-Benito, Mary W. Meagher
*Journal of Addictive Diseases 2011:30;258-270*

**Abstract**
This study examined the effect of emotion on opiate withdrawal induced hyperalgesia to determine whether emotional states modulate the magnitude of hyperalgesia. One hundred Hispanic men were recruited into one of three groups: heroin withdrawal, long-term heroin abstinence, and control. Participants were presented with pictures to induce neutral, positive, and negative emotional states. Affective valence, arousal, pain threshold, and tolerance to ischemic pain were measured. When pain threshold and tolerance were compared, the withdrawal group displayed significant heightened pain sensitivity when negative affect was induced. The authors also found that former heroin addicts showed heightened pain sensitivity following months of abstinence.

**Keywords:** Emotion, hyperalgesia, opiates, pain modulation, withdrawal

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**54. A systematic review of interventions to increase the uptake of opiate substitution therapy in injecting drug users**
Jonathan Roberts, Hugh Annett, Matthew Hickman
*Journal of Public Health 2011:33(3);378-384*

**Abstract**
Background Opiate substitution therapy (OST) has multiple benefits and is a key component of overdose and blood-borne virus prevention in injecting drug users (IDUs). Interventions that can increase the uptake of OST and/or re-engage people in treatment could become an important component of harm reduction. A systematic literature review was conducted for studies of interventions designed to increase the uptake of OST.

**Methods** Searches were conducted using Medline, Embase, PsycInfo and CINHAL. We concentrated on an adult population in a community setting and English language studies.

**Results** Eighty nine studies were identified after filtering search results, of which, 14 met the inclusion criteria. Studies were broadly categorized into motivational interventions (MI), case management (CM) or mixed approaches. Meta-analysis was performed on six studies investigating MI and two studies investigating CM interventions. Individuals exposed to MI were 1.46 times more likely to enter treatment at follow-up (95% CI: 1.14–1.86, P = 0.003) and individuals exposed to CM were 2.95 times more likely to be entering treatment at follow-up (95% CI: 2.08–4.17, P = 0.001).
Conclusions There appears to be a promising effect for the use of both CM and MI approaches to increase the uptake of IDUs into treatment. Further investigation of these interventions is warranted.

Keywords: public health, research, services

55. Participant characteristics and buprenorphine dose.

Abstract
Background: Clinical parameters for determining buprenorphine dose have not been adequately examined in treatment outcome research. Objectives: This study is a secondary analysis of data collected in a recently completed comparison of buprenorphine taper schedules conducted as part of the National Institute on Drug Abuse's Clinical Trials Network to assess whether participant baseline characteristics are associated with buprenorphine dose. Methods: After 3 weeks of flexible dosing, 516 participants were categorized by dose provided in the final dosing week (9.3% received a final week dose of 8 mg buprenorphine, 27.3% received 16 mg, and 63.4% received 24 mg). Results: Findings show that final week dose groups differed in baseline demographic and drug use characteristics including education, heroin use, route of drug administration, withdrawal symptoms, and craving. These groups also differed in opioid use during the four dosing weeks, with the lowest use in the 8 mg group and highest use in the 24 mg group (p < .0001). Additional analyses address withdrawal symptoms and craving. Conclusions and Scientific Significance: Final week dose groups differed in demographic and drug use characteristics, and the group receiving the largest final week dose had the highest rate of continued opioid use. These findings may contribute to the development of clinical guidelines regarding buprenorphine dose in the treatment of opioid dependence; however, further investigations that include random assignment to dose by baseline characteristics are needed.

56. Safety and Efficacy of Long-term Buprenorphine Maintenance Treatment
Ayman Fareed, Sreedevi Vayalapalli, Johnita Byrd-Sellers, Jennifer Casarella and Karen Drexler
Addictive Disorders & Their Treatment 2011:10(3);131-154

Abstract
Background: There are limited data about postmarketing safety profile of buprenorphine for long-term maintenance treatment. In this observational study, we wanted to address the safety and efficacy of long-term buprenorphine maintenance treatment (BMT) for patients enrolled in Atlanta Veterans Administration Medical Center buprenorphine clinic from 2006 to 2010.
Methods: Records from all patients who are currently or had earlier been maintained on buprenorphine in the BMT program at the Atlanta Veterans Administration Medical Center during the years 2006 to 2010 were evaluated.
Results: The mortality rate in our cohort is 4%(3 of 77). None of them was drug related. The retention rate is 61% (47 of 77). There was significant improvement in
opiate and cocaine illicit drug use from admission to most recent urine drug screen performed for the retained group (30% vs. 9%, P=0.0008 for opiate and 15% vs. 0%, P=0.007 for cocaine). The dropped out group did not show any statistically significant improvement for any illicit drug use. Length of time in treatment (v2=21 and P<0.0001), recent opiate (v2=5.7 and P=0.016), and recent cocaine use (v2=5.7 and P=0.016) were the only individual variables that showed statistically significant correlation with dropping out of treatment. Recent cocaine use (v2=9.5 and P=0.002) was the only individual variable that showed statistically significant correlation with recent opiate use. The dropped out group did not show any statistically significant improvement for any illicit drug use. Length of time in treatment (v2=21 and P<0.0001), recent opiate (v2=5.7 and P=0.016), and recent cocaine use (v2=5.7 and P=0.016) were the only individual variables that showed statistically significant correlation with dropping out of treatment. Recent cocaine use (v2=9.5 and P=0.002) was the only individual variable that showed statistically significant correlation with recent opiate use.

Conclusions: Patient’s retention in treatment is associated with significant reduction in illicit opiate and cocaine use. Therefore, this study supports long-term BMT, especially for opiate dependent patients who fail abstinent-based treatment. Patients receiving office-based buprenorphine treatment with comorbid cocaine and opiate dependence may have poor treatment outcome compared with patients without comorbid cocaine dependence. Therefore, it is important to address the cocaine comorbidity early in treatment. Our study confirms the safety and efficacy of BMT for long-term opiate maintenance treatment.

Keywords: safety, efficacy, long-term, outcome, buprenorphine maintenance

57. Service user involvement in methadone maintenance programmes: The ‘philosophy, the ideal and the reality’
Aoibhinn King
Drugs: Education, Prevention, and Policy 2011:18(4);276-284

Abstract
Internationally, service user involvement has become a common feature of public policy and more specifically public health policy in the recent decades. In a general context, the involvement of service users in health services has been well documented; however, less evidence is available within the area of drug treatment service provision. This study, which was conducted in Ireland, sought to address this gap in the knowledge and understanding of service user involvement within this setting. Qualitative in-depth interviews were undertaken with a broad range of participants. The sample, which totalled 20 individuals, comprised both service users and service providers. Meanings, and mechanisms of and limits to user involvement were explored. This study highlights the ambiguity that exists between policy recommendations on service user involvement and actual practice within treatment services. Although, participants acknowledged that services could and should learn from the individual and collective experiences of service users, they were found to be passive players in planning, developing, evaluating and delivering the services they received. The study suggests that in order to change the rhetoric of policy recommendations into a reality within this context, a much more committed approach which includes the education and training of all involved in drug treatment services is required.
OVER THE COUNTER / PRESCRIPTION MISUSE

58. Prevalence of Prescription Opioid-Use Disorder Among Chronic Pain Patients: Comparison of the DSM-5 vs. DSM-4 Diagnostic Criteria
Joseph A. Boscarino, Margaret R. Rukstalis, Stuart N. Hoffman, John J. Han, Porat M. Erlich, Stephen Ross, Glenn S. Gerhard, Walter F. Stewart
Journal of Addictive Diseases 2011:30;185–194

Abstract
The authors estimated the prevalence of lifetime prescription opioid-use disorder among outpatients on opioid therapy using criteria from both versions 4 and 5 of the Diagnostic and Statistical Manual of Mental Disorders (DSM). Using electronic records from a large health care system, a random sample of outpatients undergoing long-term opioid therapy for non-cancer pain was identified and 705 participants completed diagnostic interviews. The prevalence of lifetime DSM-5 opioid-use disorder among these patients was 34.9% (95% confidence interval [CI] = 30.5–39.5), similar to the prevalence of DSM-4 opioid dependence (35.5%, 95% CI = 31.1–40.2). The Kappa value between DSM-5 and DSM-4 criteria was high (Kappa = 0.873, p < 0.0001). Logistic regressions suggested DSM-5 opioid-use disorder was associated with age younger than 65 (odds ratio [OR] = 2.25, p = 0.009), history of opioid abuse (OR = 4.94, p < 0.001), higher opioid withdrawal symptoms (OR = 3.01, p = 0.008), and history of substance abuse treatment (OR = 1.62, p = 0.015), similar to DSM-4. Based on DSM-5, 21.7% of patients met criteria for moderate and 13.2% for severe opioid-use disorder, respectively. Given the changes proposed, the finding that the prevalence of and risk factors for DSM-5 opioid-use disorders were similar to DSM-4 were unexpected. Further research is advised.
Keywords: Opioids, drug-use disorder, DSM-5, DSM-4, prescription drugs, pain, outpatients

59. Prevalence and correlates of nonmedical use of prescription opioids in patients seen in a residential drug and alcohol treatment program
Amanda M. Price, Mark A. Ilgen, Amy S.B. Bohnert
Journal of Substance Abuse Treatment 2011:41(2);208-214

Abstract
Population-based data indicate that rates of nonmedical use of prescription opioids (POs) have increased dramatically over the past decade. However, data are lacking on nonmedical use of POs in individuals seeking treatment for substance use disorders. Patients (N = 351) seeking treatment from a residential drug and alcohol treatment program were assessed for nonmedical use of POs prior to treatment entry. Approximately 68% (65% men and 78% women) of patients reported at least some nonmedical PO use in the 30 days prior to treatment. Our results indicate that nonmedical PO use was more common in those with higher levels of depressive symptoms and pain intensity and in those with lower physical functioning. Treatment programs should consider actively screening participants for nonmedical PO use and consider how nonmedical use of pain medications might influence their treatment planning for patients. Published by Elsevier Inc.
Keywords: Opioid dependence; Nonmedical prescription opioid use; Pain medications

60. Tampering with Prescription Opioids: Nature and Extent of the Problem, Health Consequences, and Solutions
Nathaniel Katz, Richard C. Dart, Elise Bailey, Jeremiah Trudeau, Eric Osgood and Florence Paillard
The American Journal of Drug and Alcohol Abuse 2011:37(4);205-217

Abstract
Background: Transdermal and solid oral prescription opioid (PO) formulations can be abused by ingesting (with or without tampering), snorting, or injection (both requiring tampering). Objective: To determine the patterns of tampering with POs for abuse. Methods: Information was collected from published studies and databases. Results: Tampering with POs for abuse is common practice. Ingestion is the most prevalent method of abuse, followed by snorting and injection. From 1992 to 2002, injecting POs has decreased in favor of ingesting and snorting. Methods of abuse vary widely by product. Abuse methods with the highest morbidity are injection and inhalation. Conclusions: The seriousness of health outcomes associated with tampering with POs warrants the development of PO formulations that prevent or deter tampering.
Keywords: analgesics, opioid, tampering, opioid abuse, prescription opioid, public health
61. Rhetoric, reality and research: What they mean for achieving the best possible treatment system for addiction-related problems
Peter Miller, Adrian Dunlop
*International Journal of Drug Policy* 2011:22(3);196–197

No Abstract

62. Improving Health and Social Outcomes with Targeted Services in Comprehensive Substance Abuse Treatment
Dingcai Cao, Jeanne C. Marsh, Hee-Choon Shin and Christina M. Andrews

**Abstract**

*Background:* Improved life functioning along with substance use reduction is increasingly recognized as the definition of effective addiction treatment. *Objectives:* To assess whether targeted health and social services contribute to improved physical/mental health and employment. *Methods:* This study used data from the National Treatment Improvement Evaluation Study (N = 3027) and modeled the improvement in physical/mental health and employment at discharge or 12 months after discharge compared with intake measures as a function of receipts of matched services. *Results:* Receiving matched medical service improves physical health only at treatment discharge; receiving matched mental health services improves mental health at discharge and 12 months after discharge; receiving matched vocational services improves employment only 12 months after discharge. *Conclusions:* Need–service matching contributes to improved health and social outcomes when longitudinal assessments of treatment outcomes are used to evaluate treatment effectiveness. *Scientific Significance:* Study findings document the value of targeted services for achieving success in health and social functioning in comprehensive substance abuse treatment.

**Keywords:** need–service matching, targeted services, physical health, mental health, employment, substance abuse treatment

63. Influences on the provision of drug services in England: the experiences and views of front line treatment workers
Janie Sheridan, Matt Barnard and Stephen Webster
*Health and Social Care* 2011:19(4);403-411

**Abstract**

Whilst service users’ views of treatment have been explored, little research exists that has examined front line treatment workers’ views on what they perceive are the facilitators and barriers to service provision. This study aimed to fill that gap using a qualitative methodology to explore the experiences of treatment workers. A purposive sample of four Drugs Action Teams or Drug and Alcohol Teams was selected and, in total, 32 front line treatment workers were interviewed across a range of services. Participants indicated that the influences on treatment delivery occurred at three levels. The first
level was structural impacts. These included the degree to which services were resourced, the role of targets and a competitive tendering environment, and challenges to partnership working between criminal justice services and community-based services. At the second level, participants identified the influence of the local organisation of services, in particular, the importance of co-ordination in care planning and streamlining for complex cases. The final level was the impact of specific working practices. Good communication was seen as facilitating information sharing; however, a lack of support by management could undermine the benefits of both supervision and peer-support. Unmet training needs were identified by staff across a range of services and particular issues in the relationship between drug treatment and mental health services were identified. Overall, the participants indicated that drug treatment in England was delivered within a complex structure by services that had varied treatment philosophies and that sometimes competed for funding. Despite this, the system was seen as functioning due to the high level of commitment of the people who work within it. 

**Keywords:** drug services, drug use, drugs drug treatment, Drug Treatment Outcomes Research Study, interviews, qualitative