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SYMPOSIUM ABSTRACTS

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Ecstasy: will it contribute to co-morbidity

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The UK and the Netherlands are the two countries in the European Union with the highest consumption of ecstasy.[1] For many years, MDMA has been the main component of most ecstasy pills in the Netherlands and probably also in most other countries.[2] Animal studies have shown that MDMA can cause serious serotonergic and possibly also dopaminergic brain damage, in rodents and in non-human primates[3,4] In humans, the use of ecstasy has been associated with memory problems and with increased levels of depression, anxiety and possibly impulsivity. The objective of the current study is to test the hypothesis that ecstasy use is related to (irreversible) serotonergic abnormalities in the human brain and that these abnormalities are related to memory problems and depressed mood.[5–7] A total of 69 subjects were enrolled in the study: 15 ecstasy naive subjects, 15 moderate ecstasy users (life-time use <55 pills; mean 29 pills), 23 heavy ecstasy users (life-time use >55 pills; mean 530 pills) and 16 ex-ecstasy users (life-time use >55 pills, last use >12 months prior to the study; mean 268 pills). The effects of ecstasy on brain serotonergic neurones was studied in all subjects using [^{123}I]β-CIT Photon Emission Computed Tomography (SPECT) and in a subgroup of seven ecstasy naive subjects and eight heavy ecstasy users with Proton Magnetic Resonance Spectroscopy ([^{1}H] MRS). Verbal memory performance was assessed with the Rey Auditory Verbal Learning Test (RAVLT). The presence of depressed mood and DSM-IV major depression was assessed with the Beck Depression Inventory (BDI) and the Composite International Diagnostic Interview (CIDI). In female (but not in male) heavy ecstasy users, significant decreases in overall [^{123}I]β-CIT binding ratios were observed. In female (but not in male) ex-ecstasy users also significantly decreased serotonine transporter binding was observed in the parieto-occipital and occipital cortex. Heavy ecstasy users and ex-ecstasy users recalled significantly fewer words than ecstasy naive controls on the immediate and delayed recall tests of the RAVLT. The magnitude of the memory impairment was associated with the number of pills, but not with the duration of abstinence and not with the [^{123}I]β-CIT binding to cortical serotonine transporters. Using [^{1}H] MRS in a subgroup of heavy ecstasy users, delayed memory scores on the RAVLT were significantly associated with lower NAA/Cr levels in the prefrontal cortex. Depression scores on the BDI were significantly higher in heavy ecstasy users and ex-ecstasy users compared to ecstasy naïve subjects, and the number of ecstasy pills was significantly associated with the BDI score. However, no significant associations were observed between the BDI and [^{123}I]β-CIT binding ratios. No significant differences were observed in the frequency of life-time and current major depression between the different groups. In females, heavy ecstasy use seems to be related to

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long-lasting neurotoxic abnormalities in the serotonergic system, and these abnormalities may be related to functional problems in terms of memory impairments and affective problems. Prospective neuroimaging studies are needed to investigate the causal nature of the current findings. Meanwhile, realistic warnings should be issued to the drug using community and harm reduction measures should be taken to prevent future damage and comorbidity among drug-using youngsters.

References

1. European Monitoring Centre for Drugs and Drug Abuse (EMCDDA), Lisbon, 2001.
2. Planije MP, Niesink RJM, Spruit JJ, Drugs Informatie en Monitoring Systeem (DIMS), Trimbos Instituut, Utrecht, 2002.
3. Ricuarte GA, Yuan J, McCann UD. 3,4-Methylenedioxymethhamphetamine (Ecstasy) induced serotonine neurotoxicity studies in animals. Neuropsychobiology 2000;42:5–10.
4. Ricuarte GA, Yuan J, Cord BJ, McCann UD. Severe dopaminergic neurotoxicity in primates after a common recreational dose regimen of MDMA (Ecstasy). Science 2002;297:2260–3.
5. Reneman L, Lavalaye J, Schmannd B, *et al.* Cortical serotonine transporter density and verbal memory in individuals who stopped using 3,4-methylenedioxymethhamphetamine (MDMA or ''Ecstasy''). Arch Gen Psychiatry 2001;5:901–6.
6. Reneman L, Booij J, Bruin K. *et al.* Partial reversibility and gender differences in the toxic effects of MDMA (''Ecstasy'') on brain serotonin neurones in humans: a [^{123}I]β-CIT SPECT study. Lancet 2001;358:1864–9.
7. Reneman L, Booij J, Lavalaye J, *et al.* Use of amphetamine by recreational users of ecstacy (MDMA) is associated with reduced striatal dopamine transporter densities: a a [^{123}I]β-CIT SPECT study. Psychopharmacology 2002;159:335–40.

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Review of inpatient Young Persons programme, 1998/99

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Of the 24 adolescents admitted in 1998/99, 15 continue in treatment. All are currently being followed up to determine the naturalistic outcome of these patients. However it will be difficult to trace those not in treatment. It is hoped to include the results of this when presenting the following abstract: (i) profile of adolescents admitted to an inpatient programme over a 2-year period, 1998/99; and (ii) differences in that profile between those retained in treatment in 2002 to those that are not. All adolescents at the time of admission to the inpatient Young Persons programme based in a specialist unit in a general hospital located in Dublin were surveyed. The programme lasts 6 weeks, consists of group work and individual counselling, and runs alongside the adult programme. Detoxification is carried out during the first 3 weeks. During 1998/99 there were 31 admissions to the inpatient Young Persons programme by 24 patients. The average age was 16.5, 65% being male; 16% were homeless and mean age leaving school was 14.3. The age of first heroin use ranged from 10 to 15 years, a mean of 14.4. 90% had injected, 77% had shared equipment and 68% had contracted hepatitis C. The most likely other substances to be used were benzodiazepines and ecstasy, both 74%. Fifty-two per cent had used cocaine, 45% had a past forensic history and 39% a past psychiatric history. Eighty-seven per cent were on a maintenance methadone programme, 61% completed methadone detoxification and 19% required a benzodiazepine detoxification. Seventy-four per cent had an unplanned discharge, 20% had a planned discharge and 6% completed the full programme. Currently (in 2002), 65% remain in treatment. A comparison showed no significant difference in the above profile between these patients and those not in treatment. Besides substance misuse, the adolescents admitted had a range of other social and physical problems. If the aim of the programme is full completion, then the Young Persons programme at 6% is not effective. In the adult programme more patients complete methadone detoxification, 70.5%, and the full programme, 18%. However, 4 years later the majority have been retained in treatment. No specific factor was identified as being associated with treatment retention.

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Driving under the influence of cannabis and alcohol—can doctors reliably detect impairment?

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The aim of this research was to see whether any of the suggested standard ''impairment'' tests currently used to assess fitness to drive were of value in assessing an individual's ability to drive a motor vehicle while under the influence of cannabis and/or alcohol. In the United Kingdom a police officer may arrest a person if he has reasonable grounds to suspect that the person has been driving or attempting to drive while unfit through drink or drugs. At the police station following such an arrest a forensic physician will be called to examine the detained person.[1] The purpose of this examination is to determine whether a person's ability to drive is impaired and/or whether there is a condition that might be due to drink or drugs. However, at present there are no formal legal or medical definitions of a ''condition'' or ''impairment''. This was a double-blind, placebo-controlled, randomied, cross-over study. The research was carried out using experienced cannabis and alcohol users under four separate conditions: placebo; placebo and low THC (using a herbal cannabis cigarette); placebo and alcohol (to a dose to give a BAC of 50 mg per 100 ml); and alcohol and low THC. Seventy-nine examinations were performed and on six occasions participants were found to be impaired, a further 24 were found to have a condition that could be due to a drug and/or alcohol, but were not impaired and 49 were normal. The general medical examination and standardized impairment testing applied by the police surgeons were generally effective in determining impairment.[2] However, hard and fast quantitative assessments which clearly define impairment as previously proposed are not possible on the basis of subjects in these trials alone.[3]

References

1. Stark MM, Tunbridge RJ, Rowe D, Fleming P, Stewart D. Drugs, driving and sobriety tests – a review of recent developments. J Clin Forens Med 2002;9:126 – 32.
2. Sexton BF, Tunbridge RJ, Board A, Jackson PG, Wright K, Stark MM, Englehart K. The influence of cannabis and alcohol on driving. TRL Report 543, TRL Ltd for the Road Safety Division Department of Transport, 2002.
3. Sexton BF, Tunbridge RJ, Brook-Carter N, Jackson PG, Wright K, Stark MM, Englehart K. The influence of cannabis on driving. TRL Report 477, TRL Ltd for the Road Safety Division, DETR, 2000.

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Routine evaluation of the substance use ladder of treatments—RESULT

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The *Routine Evaluation of the Substance Use Ladder of Treatments* (RESULT) is an evidence-based information system designed to describe treatment activity, outcome and cost-effectiveness. The software required to manage data capture and output is available as freeware. RESULT is intended for use in routine practice, including audit, and is also suitable as a core package for research projects. The full package includes some administrative tools including a prescription writing module, a module to estimate service costs, and a clinical governance module. RESULT is a flexible, modular package which allows users to select those measures which best suit their particular agency or purpose. Measures included in RESULT were selected using the following criteria: (i) compatibility with statutory requirements, (ii) measures are universal, (iii) easy readability and neutral language of questionnaires, (iv) brevity of completion time, (v) key outcome domains measured in self-completion format, (vi) measures have proven validity and reliability and (vii) measures are sensitive to change. Data are collected in the following areas: (a) demographic and referral data (including waiting times), (b) substance use, (c) substance dependence, (d) psychological health, (e) social satisfaction, (f) physical health, (g) criminal activity and (h) agency activity (including costs). RESULT meets the clinical or practice needs of

agencies as well as their organizational needs. It is also designed to produce the type of data required for national reporting, for example to the National Treatment Agency, the Home Office and the Department of Health. It will provide those nuggets of information about your service that politicians and the press are constantly requesting. RESULT has extensive capacity for customization and has been used in statutory, non-statutory and primary care services.

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Exploration of adolescent drug users in treatment

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This paper describes a retrospective study of problem, drug-using adolescents admitted to a predominately adult, inpatient detoxification unit. The aim was to identify the characteristics and factors leading to problematic drug use in young people aged between 14 years and under 18 years, admitted for the first occasion to a predominantly adult regional substance misuse service between April 1995 and January 2000. Documentary analysis of case records utilizing both qualitative and quantitative methods were used. There has been a recent influx of adolescent referrals to an adult, regional, drug-dependency inpatient unit. All the patients admitted were addicted to opiates. A high percentage of the subjects had been exposed to the generally agreed risk factors, for example, co-morbidity, criminality, family disruption, school exclusion, peer influence, etc. The gender ratios of the sample are incongruent to those found in adult treatment services. The geographical area of residence appears significant in the referral process. A high percentage completed detoxification, but very few experienced a planned discharge. Adolescent males are perhaps more likely to be involved in the Criminal Justice System and adolescent females in treatment services. Referral to inpatient detoxification can depend upon geographical area of residence. These are problems admitting adolescent to a predominantly adult inpatient detoxification unit. Specialist adolescent inpatient facilities could meet their needs more appropriately and improve outcome and follow-up with community services. Further research is needed on effective treatment approaches and post detoxification planning and support.

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Differentiating social and problem gambling

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Our aim was to test proposals from an earlier grounded theory study of problem gamblers regarding differences between social and problem gamblers.[1] A grounded theory approach was utilized within a post-positivist perspective.[2,3] The coding framework developed within the earlier study was used initially, with additional categories being developed as necessary. A set of systematic analytical procedures was used to develop and provisionally verify an inductively derived theory about the differences between the problem and social gamblers' experiences. The sample comprised seven male high-frequency social gamblers. All gambled in off-course bookmakers at least weekly, with three also gambling on slot machines. All the informants were interviewed within a health service setting. The focus was on the informants' recent experience of gambling. Specific issues were derived from the earlier study and included the emotional aspects of gambling, the experience of control and loss of control, and the positive and negative aspects of gambling. Common aspects of gambling associated with arousal and a sense of achievement were identified. The use of gambling to manage negative emotional states differentiated social and problem gambling. Perceived self-efficacy, emotion management skills and perceived likelihood of winning money back were intervening variables differentiating social from problem gamblers. A modified grounded theory has been developed incorporating these findings that clearly differentiates between social and problem gambling in terms of process. Understanding social gambling can assist in identifying features of problem gambling that could be addressed within treatment. Implications for treatment include the benefits of enhancing skills to manage negative emotions, enhance self-efficacy and targeting perceived likelihood of winning money back. The use of sequential grounded theory studies

can enable the further elaboration of theory in the addictions.

References
1. Dickerson M, Baron E. Contemporary issues and future directions for research into pathological gambling. Addiction 2000;95:1145–59.
2. Ricketts T, Macaskill A. Gambling as emotion management: developing a grounded theory of problem gambling. Addict Res Theory, in press.
3. Strauss A, Corbin J. Basics of qualitative research: grounded theory procedures and techniques. Thousand Oaks: Sage Publications, 1990.

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The life-course of the drug treatment and testing orders: engagement with drug treatment and testing orders

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The aim of the study was to develop a theoretical framework, grounded in the reports of informants regarding the processes supporting successful engagement with the DTTO programmes across South Yorkshire, and how those processes differ in unsuccessful engagement. Grounded theory method utilizing semi-structured interviews was employed to identify the factors predicting successful engagement with the programmes. A sample of 15 individuals at varied stages of the programmes and in different settings were recruited and interviewed. Analysis of data gathered overlapped with and informed both the sampling of individuals and the structure of the interviews. Results from the study highlighted a process of progression through the DTTO, identifying a simple, early, mid and late classification of different periods on the order, with variation in the importance of reported programme elements at different stages. There are a number of implications for the organization of the DTTO programmes. First, it is clear that the participants are not a homogeneous group. There are different responses to similar interventions, dependent on the individual's prior experiences and current situation. The level of co-ordination between different elements of the programme appears critical to participants' perceptions of the DTTO. Staff communicating expectations consistently and responding rapidly to practical difficulties were reported to be significant factors. Medical interventions were the central focus for the majority of informants in the early stage of the order.

Activity was an important aspect of the order, supporting the relevance of the guidelines on 5 days a week attendance. The nature of relationships with staff varied throughout the order. While initially staff were expected to be structuring and business-like, evidence of personal interest and caring were valued throughout. For a number of informants interaction with magistrates and judges during the reviews was significant. In particular, acknowledgement of changes in criminal behaviour despite continuing positive drug tests were regarded as indicating realistic expectations. The issue of self-definition on the order provides some indications regarding approaches that enhance personal responsibility for change. Finally, it is clear that many of the factors identified as supporting enhanced engagement with the orders are under the control of staff and services emphasizing the importance of inter service communication and the establishment of effective relationships between staff and offenders undertaking the orders.

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Children attending addiction treatment services in Dublin, 1990–99

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We sought to describe the socio-demographic profile of children presenting to addiction treatment services in Dublin. We also sought to identify temporal trends and to describe the

subgroup of children who use heroin. The Health Research Board gathers data on all patients presenting to addiction treatment services in Dublin. From this database, individuals were included if making their first ever treatment contact to addiction services between 1990 and 1999. Consistent with the Children Act 2001 (Ireland), a child was defined as a person under the age of 18 years. Of the 9874 individuals who sought addiction treatment during the decade, 1953 (20%) were children. The number of children attending services rose sharply after 1993. The main drug of abuse was an opiate in 48% of cases, while cannabis accounted for 33%. Compared to adults, the children were more likely to be female [odds ratio (OR) 1.4, $p < 0.001$] and less likely to be injecting (OR 0.3, $p < 0.001$). The decade witnessed an increase in the proportion of girls ($p = 0.003$) and a dramatic rise in the proportion of children reporting heroin misuse ($p < 0.001$). Child heroin users differed from their adult counterparts in that there were more likely to be female (OR 1.6, $p < 0.001$) and to be homeless (OR 3.1, $p < 0.001$). They were more likely to be smoking heroin (OR 2.3, $p < 0.001$) and reported less frequent use (OR 0.8, $p = 0.005$). The end of the decade witnessed a significant increase in injecting of heroin ($p < 0.001$). A very large number of children sought addiction treatment in Dublin during the 1990s. Child drug users are different to their adult counterparts and the rising numbers of young female heroin users is particularly alarming. This study highlights the need for the provision of a dedicated service for young drug users in Dublin.

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Exploring the brain circuits of opiate craving

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Using positron emission tomography (PET) imaging of regional cerebral blood flow (rCBF) and statistical parametric mapping (SPM) analysis, we investigated the neural circuits associated with brain regions activated during opiate craving. In a previous study we reported activation of the left anterior cingulate (AC) and orbito-frontal cortices (OFC) in response to recorded autobiographical scripts and opiate craving respectively, in 12 abstinent opiate dependent subjects. SPM99 was used to analyse the PET images to examine the regions of neural activation that were associated with these primary brain activations. The AC region was associated with activity in the left temporal region. The left OFC region activity correlated with activity in the right OFC, left parietal and posterior insular regions. There was also a positive association of activity in the OFC with activity in both the hippocampus and brainstem. Both the AC and OFC regions showed a negative association with posterior visual areas. These results suggest that the patterns of cerebral activation reflect the ability of drug-related stimuli to activate attentional and memory circuits. This argues that neural circuits of dependence and craving are circuits that mediate the general functions of memory and attention rather than dependence *per se*.

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Substance misuse and mentally disordered offenders in a high secure setting: what is the problem and how do we treat it?

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It is widely recognized by mainstream mental health services that the use of substances by clients with mental health problems is a major risk factor with regard to mental health relapse and read-

mission to services. Local forensic services are also starting to acknowledge that a relationship exists between substance misuse, mental health relapse and offending behaviour. However, it can be suggested that within highly secure services there is still a belief among clinical teams that substance misuse interventions are not necessarily a treatment priority. In part it can be suggested that one of the main reasons for this is the lack of any problematic behaviour associated with substance use, something which is common in many mental health-care settings. In contrast to these services the security systems which are presently available in highly secure care mean that seepage of both licit and illicit substances is extremely rare. This in turn, it can be argued, creates a false picture both to the patient concerned and their clinical team that any problems which may have existed no longer do so. One could also hypothesise that this is also one further reason why treatments to address substance misuse within these services have been slow to take off. The writer has been involved in developing treatments in the area of substance misuse with forensic clients for the last 13 years and is keen to present his work to date. This will include the results of a full substance misuse audit of all patients within the four clinical directorates which comprise the hospital population. This will include a male mental health service, a personality disorder service, a learning disability service and the women's service. Findings presented will include types of substances used, prevalence of substance use at time of index offence and identification of other offending associated with substance use. It is then hoped to describe a range of the surrogate behaviours which evidence continued substance usage by patients within a predominantly drug-free and alcohol-free environment. To conclude the presentation there will be a review of the treatment programme which has been developed at Rampton Hospital by the writer and a colleague. The programme, which comprises some 65 sessions delivered in a module structure, lasts 15 months and aims to address substance use, mental health problems and offending behaviour. The aims of the presentation were:

(1) To present the findings of a patient audit of previous substance use prior to being detained in highly secure care. This will include looking at four distinct patient populations within the service.
(2) To look at the types of substances used and the presence or absence of intoxication at the time of the patient's index offence.
(3) To describe the variety of surrogate behaviours which occur within this population when access to alcohol and illicit substances is prevented.
(4) To talk about the development of a comprehensive manualized treatment programme which has evolved at the hospital over the last 5 years. This aims to address problems related to previous/current substance misuse, mental health and offending behaviour

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Social dimensions of adolescent substance use

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The aim of this study was to explore the relationship between various social aspects of young people's lives and substance use. It was hypothesized that differences existed between substance users and non-users and that there would be differences in the degree of influence exerted by the different social factors with these differences being mediated by age. The study was a survey of pupils aged 11 – 16 years in a stratified sample of five English schools. Data from 4516 participants were obtained in relation to their cigarette, alcohol and illicit drug use and their contact with the police, perceived academic achievements and future expectations, religious beliefs, family structure, the importance of family versus peer opinions and suspension from school. Cumulative, age-specific preferences of substance misuse were compared. Logistic regression was used to rank the various risk factors. Substantial differences were found between substance users and non-users and the various risk factors being examined. For example, of those who had only been in trouble with the police, 18.8% used illegal drugs compared with 1.6% of those who had not had a police contact and who had no other risk factors. Many of these relationships were age-sensitive. For instance, the negative relationship between belief in God and illicit drug use became

stronger as age increased (non-believers: $y = 8.1886x - 9.16$ $r^2 = 0.9484$; believers: $y = 5.1514x - 8.08$ $r^2 = 0.9247$). These results suggest that, within this sample of English adolescents, there was a strong relationship between substance use and the social factors examined. Although there were differences depending upon whether cigarette, alcohol or illicit drug use was being modelled, logistic regression indicated that the social factors could be ranked in the following order of importance: concurrent use of the second and third substances, having been in trouble with the police, perceived poor academic performance and low future academic expectations, a lack of religious belief, coming from a non-intact family, favouring peer over family opinion and having been suspended from school. Many of these relationships were age-sensitive, with substance use peaking at age 15. The models and relationships presented in this paper show that a constellation of behaviours are related to adolescent substance use. Also demonstrated is that behaviours cannot be considered in isolation, but need to be examined from a holistic or biopsychosocial standpoint. These relationships are complex and future research should consider not only causality of adolescent substance use, but also the aetiology of the satellite behaviours.

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Development of a UK-wide outcome monitoring system for socially marginalized people, with particular focus on substance misuse problems

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The Salvation Army began addressing the needs of clients with substance misuse problems in 1890 and now operates in 109 countries and participates as a non-governmental organization (NGO) at the United Nations. In 1998, their UK National Addiction Service was initiated. As part of this, a nation-wide assessment and outcome monitoring process has been developed, using a biopsychosocial model, focusing on quality of life. This process uses standardized questionnaires, the information from which enables the development of individually tailored programmes directed at bringing about a change within the client. Repeated measures are used to monitor the progress of the client in response to the interventions provided. The scheme consists of paper-based booklets presented in a user-friendly format for use with the clients, and web-based software enabling central collection of data, creating an information flow to support the nation-wide analysis and interpretation of information. The scheme is split into several modules of increasing detail and specificity to certain client groups. Modules 1 and 2 provide socio-demographics and initial problem identification and assessment. Modules 3 and 4a are concerned specifically with substance abuse, addressing the clients' progress through detoxification and rehabilitation. Modules 4b and 5 are designed to monitor clients through more general rehabilitation and resettlement back into mainstream society. The piloting of this scheme has indicated that it is successful at standardizing, monitoring and improving care planning across a large organization. Once fully operational, the web-based data collection will provide a unique database from which much important research can be carried out

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A randomized controlled trial of early warning signs relapse prevention training in the treatment of alcohol dependence

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The aim of the study was to test whether early warning signs relapse prevention training prevents relapse in alcohol dependent persons with history

of relapse. This was a randomized controlled trial comparing (i) aftercare as usual (control) with (ii) aftercare as usual plus 15 individual sessions of early warning signs relapse prevention training (intervention), using assessment at entry, and 4, 8 and 12 months later. The study comprised a total of 124 abstinent alcohol-dependent patients just completing a 6-week day treatment programme who had previously stopped drinking and relapsed at least twice (median 5 relapses): 62 in each condition, with interventions and control aftercare groups, supportive milieu and an alcohol-free social club. Intervention involved control plus 15 individual sessions of relapse prevention using Gorski's protocol. Intention-to-treat analysis found no significant differences in continuous abstinence during the follow-up year (17% of 58 controls, 31% of 58 treatment). Odds ratio (OR) of relapse for treatment relative to controls: 0.46 (95% CI 0.19 – 1.12, $p = 0.09$, NNT 7). Over the year the intervention group had a significantly smaller probability of drinking heavily (74% of controls, 55% of treatment: OR 0.43, 95% CI 0.19 – 0.96, $p = 0.04$, NNT 5), fewer days drinking ($P = 0.05$) and fewer days heavy drinking ($p = 0.04$). There were no significant differences in drinks per drinking day, GGT, ALT, psychopathology, alcohol problems, quality of life or costs of services used during follow-up. The clinically worthwhile effects justify the use of early warning signs relapse prevention training.

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Introducing buprenorphine as a treatment option in an established methadone maintenance programme

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In January 1999 buprenorphine was licensed in the United Kingdom as a replacement treatment for opiate dependence. This was a culmination of 30 years' research into its use as a treatment of opiate dependence and its introduction in 1996 as the first replacement treatment that could be prescribed by general practitioners in France. This paper presents:

- a review of the research literature on the effectiveness of buprenorphine as a treatment of opiate dependence; and
- a description of our experience on its introduction into community-based treatment services with established methadone maintenance programmes, with the findings of clinical audits.

Since 1999 buprenorphine has routinely been offered as a treatment option to opiate-dependent clients entering treatment with the Wigan and Bolton Substance Misuse Service. Around one in 10 new clients choose buprenorphine rather than methadone. Currently 6% of the 1000 service clients are prescribed buprenorphine maintenance treatment. We considered the following outcome measures in the audits: number and characteristics of clients starting buprenorphine treatment, duration of treatment, complications, if stopping buprenorphine alternative treatment and retention in service and satisfaction with buprenorphine treatment. A total of 228 clients have been prescribed buprenorphine by Wigan and Bolton substance misuse service from November 1998 to March 2002. Of these, 15% were prescribed for less than 2 weeks and a further 15% between 3 and 6 weeks. Fifty per cent have been prescribed between 7 and 24 weeks and 20% prescribed for 25 or more weeks. Of those stopping buprenorphine treatment nearly a half were prescribed another replacement medication and remained in treatment. A high proportion of clients responding to a questionnaire stated that they were satisfied with buprenorphine treatment.

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Managing gamma hydroxybutyrate or ''liquid ecstasy'' withdrawal—meta-analysis of published cases and reporting early experience in the UK

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The aim of this study was to generate descriptive data on the clinical course of gamma hydroxybutyrate withdrawal and on its management to date, to identify patterns of use associated with withdrawal delirium and to explore the emergence of gamma hydroxybutyrate dependence in the United Kingdom. Case reports of gamma hydroxybutyrate or gamma hydroxybutyrate precursor withdrawal were identified using standard electronic searches and analysed systematically using a computer statistics package. Another search identified any reports of gamma hydroxybutyrate misuse in the United Kingdom. A new case is presented of serial gamma hydroxybutyrate withdrawal treated at our unit in the United Kingdom. A total of 38 case reports of gamma hydroxybutyrate ($n = 28$) or gamma hydroxybutyrate precursor ($n = 10$) withdrawal were identified; 36 were from the United States. A rapidly deteriorating course into delirium (53% of sample) following presentation to an emergency department was typical for heavily dependent users. Withdrawal symptoms were broadly similar to those for alcohol although of more rapid onset. Delirium cases had a pattern of more frequent dosing (every 2.3 hours vs. every 6.9 hours for non-delirium) and a higher estimated daily dose (58 g vs. 39 g) prior to cessation. Benzodiazepines were the mainstay of pharmacological management, often in high doses. In three cases benzodiazepine refractory withdrawal responded to another sedative agent (phenobarbitol or chloral hydrate). No withdrawal seizures but one death were recorded. Reports of gamma hydroxybutyrate misuse and dependency are emerging in the United Kingdom, where it has established a niche as a ''rave'' drug. The withdrawal state associated with gamma hydroxybutyrate dependency is potentially life-threatening and requires vigorous clinical management, especially when associated with frequent, round-the-clock dosing. Clinicians need to be vigilant for such cases now emerging in the United Kingdom.

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Substance misuse management—a seamlessly integrated approach

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The overall aim of this report is to highlight the effectiveness of providing a specialist substance misuse nurse role within mental health and an accident and emergency department. Quantitative data collection from referrals and treatment interventions. The accident and emergency department is at the forefront of delivery of care to people experiencing substance misuse problems and is therefore perfectly placed to provide appropriate and effective interventions. Following a comprehensive 12-month evaluation of this role it was evident that hospital staff were not only screening and referring patients for interventions, but importantly requesting training within this complex field. It was observed that there was a significantly high attendance rate of those returning for assessment to nurse-led clinics delivered in the accident and emergency department. This was due possibly to the fact that the majority of individuals were seen within a 3-day period. A high percentage of patients assessed reported alcohol as a primary problem with a much smaller percentage with that of opiate and polysubstance misuse; the latter tended to be admissions onto the psychiatric unit and were involved in a dual diagnosis team. A high percentage of individuals identified harmful and binge drinking levels and were not physically dependent, therefore admission for detoxification would have been inappropriate. Over half of individuals assessed attended post-assessment follow-up appointments and engaged further in community drug and alcohol services. Providing an adaptable and responsible service within the accident and emergency department and mental health unit can help reduce significantly the number of inappropriate inpatient admissions. The role provides an essential component to providing a care pathway that is seamless across agencies that bridges the gaps between secondary and primary care services for the improvement of care management of individuals with substance misuse problems.

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A comparison of buprenorphine with lofexidine in the rapid opiate detoxification of patients with opiate dependency receiving treatment in a community setting

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There is little comparative evidence of the newer drugs buprenorphine and lofexidine in rapid opiate detoxification in community settings. The aim of this study was to audit the outcomes of rapid opiate detoxification programmes using lofexidine or buprenorphine from July 2001 to July 2002 at Wakefield and District Primary Care Substance Misuse Service, a GP specialist-led service. Buprenorphine or lofexidine rapid detoxification programmes were offered to patients stable on doses of 25 ml methadone or less, or whose reported use of heroin was less than 0.3 g daily. Other inclusion criteria were: well-motivated, stable accommodation and identified carer. Patients were identified from our prescribing database and outcomes compared in terms of numbers completing detoxification and length of recorded abstinence up to 6 months. Twenty-four clients received buprenorphine detoxification between July 2001 and July 2002. Of these, 22 (92%) achieved stabilization at a mean dose of 8.72 mg. Fourteen clients (58%) completed their programmes successfully. Twelve clients (50%) were documented opiate-free after 2 weeks, dropping to five clients, (20%) after 3 months. Forty clients received lofexidine detoxification between July 2001 and July 2002. Of these, 24 clients (60%) completed their detoxification. Sixteen clients (40%) were documented opiate-free after 2 weeks, dropping to eight clients (20 %) after 3 months. No clients were documented opiate-free after 6 months in either programme and there were no reported adverse events. Buprenorphine and lofexidine are accessible and acceptable treatments for rapid opiate detoxification. Our audit shows similar outcomes for both drugs: approximately two-thirds of clients completing programmes, and one-fifth maintaining opiate freedom for up to a further 3 months for both drug programmes. Clinicians and commissioners of services may need to consider cost when determining the use of these treatments in the wider treatment context which includes maintenance and structured methadone programmes.

References

1. White R, Alcorn R, Feinmann C, *et al.* Drug Alcohol Depend 2001;65: 77–83.
2. Carnwarth T, Hardman J. Randomised double blind comparison of lofexidine and clonidine for acute detoxification from opiods. Drug Alcohol Depend 1998;50:251–4.
3. Strang J, Bearn J, Gossop M. Lofexidine for opiate detoxification: review of recent randomised and open controlled trials. Am J Addict 1999;8:337–48.

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Recognition of a dopamine replacement therapy dependence syndrome in Parkinson's disease

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Dopamine replacement therapy (e.g. *l*-DOPA and apomorphine) for Parkinson's disease also activates the dopaminergic pathways implicated in psychoactive drug-induced reward and dependence. Recently there has been increasing awareness of the potential for excessive use of dopamine replacement therapy by patients with Parkinson's disease. The aim of this study was to examine a group of patients with Parkinson's disease thought to be using dopamine replacement therapy in excess of therapeutic need, to see if they met established operational psychiatric criteria for substance dependence. This was a case – control study at a tertiary referral neurology clinic for the treatment of Parkinson's disease. Ten patients with Parkinson's disease diagnosed as excessive users of dopamine replacement therapy on neurological criteria were compared with 10 patients with Parkinson's disease compliant with prescribed dopamine replacement therapy. Intervention was a clinical interview using the Maudsley Addiction Profile, the Structured Clinical Interview for DSM-IV and a semi-structured questionnaire designed for this study to distinguish use of dopamine replacement therapy to alleviate the symptoms of Parkinson's

disease from non-therapeutic use for psychological effects. Seven of 10 of the group deemed to be misusing dopamine replacement therapy fulfilled clinical criteria for dependence on dopamine replacement therapy. They experienced dysphoric ''withdrawal'' symptoms in the ''off'' state and increased their dose of dopamine replacement therapy in an effort to control their mood. They continued to use inappropriately high doses of dopamine replacement therapy in spite of resultant physical and social harm caused by excessive dopamine replacement therapy. This study provides evidence that patients on dopamine replacement therapy may become dependent on it. It has both clinical implications for the treatment of Parkinson's disease and sheds further light on dopaminergic mechanisms in the genesis of substance dependence.

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Are psychiatrists necessary?—a description of a successful nurse-led shared-care scheme in the management of substance misusers

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A recent Audit Commission Report[1] found that 25% of GPs felt confident in treating drug users, and research involving a 10% sample of all GPs in England[2] showed 25% of GPs undertaking some substitute prescribing, with just under 20% of GPs undertaking this in shared care. The government's own target is 30% involvement. By these standards, the shared care scheme in West Norfolk is a success: a survey in 2000 of 57 local GPs found that 84% were willing to co-operate with the local (nurse-led) drug service and 74% were willing to carry out substitute prescribing within shared management of this client group. It is suspected that these figures are even higher now, with a repeat survey due this year. GPs in West Norfolk are paid three levels of remuneration dependent on the level of their involvement, with four of the largest surgeries having drug-dependency clinics within their surgeries, run co-operatively with the specialist drug service and utilizing GPs interested in such work. The introduction of Subutex last year has quickly led to it becoming the primary treatment for opiate-dependent patients in general practice, with GPs being impressed by its improved safety profile. This development into general practice was aided by the introduction of specimen-prescribing regimes and education sessions as well as by the existence of a well-established community-based pharmacy-supervised consumption scheme. The talk, by a nurse who has worked in both consultant and nurse-led services, will explore the success of such a shared-care scheme and discuss whether the lack of consultant psychiatrist input has actually helped to improve the participation of primary care in drug dependency management.

References

1. The Audit Commission. Changing habits: the commissioning and management of community drug treatment services for adults. London: The Audit Commission, 2002.
2. Substance Misuse Management in General Practice and National Addiction Centre. Primary care responds to the challenge. Network 2002;2:1.

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Elevated depression scores following abstinence from MDMA

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Despite recent evidence suggesting that MDMA (3,4-methylenedioxymethamphetamine) has long lasting neurotoxic effects on both serotonergic and dopaminergic neurones in animals, including primates, the long-lasting effects of MDMA in man still remains unclear.[1] Current research suggests regular recreational use of MDMA is associated with elevated scores on self-reported measures of depression. Whether significant self-reported depression persists following a period of abstinence from the drug remains controversial. The current work presents preliminary findings from a cross-sectional study investigating the short- and long-lasting effects of MDMA on self-reported depression.[2] A total of 172 people participated: 32 non-drug users, 35 nicotine/alcohol users, 30 cannabis/polydrug users, 38 current MDMA users (consumed MDMA within the last 6 months) and 37 ex-MDMA/polydrug users (abstained from MDMA for a period longer than 1 year). All groups were matched for sex, age

and educational background. Both current and ex-MDMA users reported significantly higher self-reported depression scores in comparison to the non-drug group (respectively, Mann–Whitney *U*-test $p < 0.05$, $p < 0.05$). There was no significant difference in mean depression scores between current MDMA users and ex-MDMA users (Mann–Whitney *U*-test, $p > 0.05$). There was a significant association between the total amount of self-reported MDMA consumed and the level of self-reported depression controlling for the amount of self-reported cannabis consumed (partial correlation coefficient, $r = 0.5$, $p < 0.01$). Current and ex-MDMA users have increased self-reported levels of depression in comparison to non-drug control groups. Similar levels of depression exist between current MDMA users and those that have abstained from the drug for more than a year, suggesting longer-lasting damage. Increased levels of self-reported depression fail to be due to polydrug use including alcohol, nicotine, cannabis and amphetamine.

References

1. Fischer C, Hatzidimitriou G, Wlos J, Katz J, Ricaurte GA. Reorganistion of ascending 5-HT axon projections in animals previously exposed to therecreational drug (+/−) 3,4-methylenedioxymethamphetamine (MDMA, Ecstasy). J Neurosci 1995;15:5476–85.
2. Parrot AC, Lasky J. Ecstasy (MDMA) effects upon mood and cognition; before, during and after a Saturday night dance. Psychopharmacology 1998;139:261–8.

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Mental health status in single homeless men—a cross-sectional study in Dortmund, Germany

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The purpose of this study was to establish the prevalence of mental disorders in the homeless in a metropolitan area. In this cross-sectional study 80 single homeless males were recruited at various locations in Dortmund, Germany in 1996. Additionally a comparison group of 37 formerly homeless men were studied. A physical examination and a standardized interview were carried out. The psychopathological status was documented on the basis of the semistructured clinical interview AMDP (Arbeitsgemeinschaft für medizinische Dokumentation in der Psychiatrie). In addition parts of the CIDI covering Mini Mental State Examination and substance-related disorders were used. The prevalence of alcohol dependence in the homeless group was 51.2%, for other substance dependencies 17.1%. In the former homeless, 35.1% attracted a diagnosis of alcohol dependence, none were given a diagnosis of current dependence on other substances. Life-time prevalence for alcohol dependence was similar in both groups with 52.4% and 56.8%, life-time prevalence for other substance dependencies was 20.7% and 10.8% for the homeless and former homeless, respectively. A current depressive disorder was diagnosed in 8.5% of the homeless and 8.1% of the former homeless and a psychotic disorder in 1.2% and 5.4%, respectively. Cognitive impairment was found in 14.6% of the homeless and 2.6% of the former homeless. Seventy-eight per cent of the homeless and 54.9% of the former homeless men were in need of treatment. Psychiatric morbidity in the homeless is high. Of particular concern are substance-related disorders and cognitive impairment. Formerly homeless show a more favourable profile regarding substance-related disorders, but similar prevalences of other psychiatric disorders. Both groups are under-treated.

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Dual dependence: concomitant use of alcohol in opiate addiction

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Recent studies have demonstrated a high prevalence of alcohol misuse and dependence in drug misusers.[1] This has been found to be associated with an increase in physical and psychological problems, mortality due to overdose of opiates and

alcohol and increased relapse rate.[2] This study looks at prevalence of alcohol misuse in patients admitted to the inpatient detox unit for opiate detoxification. All patients admitted to the inpatient unit were screened for alcohol misuse using the AUDIT (Alcohol Use Disorders Identification Test). Fifty patients were admitted between February and June 2002. Thirty-five (70%) were male, and the mean age was 27.2 years. Of the 50 patients 45 (90%) were admitted for heroin detoxification. The mean AUDIT score was 4.24 (median 2.00, standard deviation 4.97); 12 (24%) scored 8 or above, the majority were males and admitted for heroin detoxification and were 30 years old or less. The patients admitted to the inpatient detox unit for drug misuse problems had a similar prevalence of alcohol misuse, as other studies have demonstrated. It is clear that this is an issue for a large proportion of our patients and needs addressing. We propose continuing to screen all patients for alcohol misuse and offering those who score above 8 on the AUDIT questionnaire a brief alcohol intervention.[3]

References

1. Gossop M, Marsden J, Stewart D. Dual dependence: assessment of dependence upon alcohol and illicit drugs, and the relationship of alcohol dependence among drug misusers to patterns of drinking, illicit drug use and health problems. Addiction 2002;97:169–78.
2. Marsden J, Gossop M, Stewart D, *et al.* Psychiatric symptoms among clients seeking treatment for drug dependence. Intake data from the National Treatment Outcome Research Study. Br J Psychiatry 2000;176:285–9.
3. Miller W, Rollnick S. Motivational interviewing. New York: Guilford Books, 1991.

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Cocaine and crack cocaine use among clients admitted for opiate or alcohol detoxification in an inpatient setting

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Cocaine and crack cocaine misusers are increasing in numbers and presenting for treatment. In particular crack cocaine misuse is increasing in opiate users.[1–3] The aim of this project was to measure the prevalence of cocaine use among clients admitted for inpatient detoxification from either opiates or alcohol. Fifty clients were included in the study. Each one was given a simple questionnaire on admission to the inpatient unit to elicit self- reported cocaine use. A urine drug screen was also performed as part of the admission protocol and the result for cocaine was noted. Nine (18%) clients tested positive for cocaine on urine drug screening. All these clients were admitted for opiate detoxification. However, 34 (68%) of clients admitted to having used cocaine at some in the past, the majority had used crack cocaine and had smoked it as opposed to injecting. Of those clients 20 (40%) had used cocaine in the month prior to admission. A substantial number of clients admitted for opiate detoxification have a recent history of concurrent cocaine use, the majority of which is in the form of crack cocaine. This clearly has an impact on existing services for opiate addiction and needs to be addressed both locally and nationally.[2,3]

References

1. Health related behaviour: users presenting to drug misuse services for the first time. London: Department of Health National Statistics, 2000.
2. Research into practice: commissioning cocaine/crack dependence. National Treatment Agency, August 2002.
3. Crack cocaine misuse is treatable—given the appropriate skills. National Treatment Agency, 2002.

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Development of the Bexley-Maudsley automated psychological screening test for PC

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Chronic and excessive consumption of alcohol in humans has been established to result in

neurocognitive impairment that may be acute and chronic and associated with permanent brain damage.[1] The original version of the Bexley–Maudsley Automated Psychological Screening (BMAPS) test was developed 20 years ago by William and Clare Acker for pre-PC microcomputers as a neurocognitive test battery to assess a number of domains of neurocognitive function established to be sensitive to change in alcohol dependency. Acker *et al.*[2] found that those with alcohol dependency performed significantly worse on BMAPS subtests compared to controls. Our present research programme aims to establish normative and clinical values of our newly developed PC version of BMAPS and to determine the diversity of its clinical applications.

A series of studies is being undertaken using discrete groups of patients with clinical features sensitive to secondary neurocognitive change states as a consequence of primary physical pathology. Control norms are being established using a non-clinical control group. A within-subjects design will be used to establish internal and test–retest reliability. Control data from 30 non-clinical participants has revealed good concordance between published original BMAPS program norms and the PC version. Data from two distinct clinical populations, patients with alcohol dependency, and patients with type 1 insulin dependent diabetes, are currently being collected. Identification of neurocognitive impairment is an important component of delivering an appropriate therapeutic treatment intervention to this group of patients.[3]

References

1. Martin CR, Hewitt G. Alcohol, memory and cognition. In: Bonner A, Waterhouse J, editors. Molecules to mankind, chapter 9.London: Macmillan, 1996.
2. Acker C, Acker W, Shaw GK. Assessment of cognitive function in alcoholics by computer: a control study. Alcohol Alcohol 1984;19:223–33.
3. Martin CR, Bonner B. A pilot investigation of the effect of tryptophan manipulation on the affective state of male chronic alcoholics. Alcohol Alcohol 2000;35:49–51.

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Exploring the brain circuits of opiate craving

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Using positron emission tomography (PET) imaging of regional cerebral blood flow (rCBF) and statistical parametric mapping (SPM) analysis, we investigated the neural circuits associated with brain regions activated during opiate craving. In a previous study we reported activation of the left anterior cingulate (AC) and orbito-frontal cortices (OFC) in response to recorded autobiographical scripts and opiate craving, respectively, in 12 abstinent opiate-dependent subjects. SPM99 was used to analyse the PET images to examine the regions of neural activation that were associated with these primary brain activations. The AC region was associated with activity in the left temporal region. The left OFC region activity correlated with activity in the right OFC, left parietal and posterior insular regions. There was also a positive association of activity in the OFC with activity in both the hippocampus and brainstem. Both the AC and OFC regions showed a negative association with posterior visual areas. These results suggest that the patterns of cerebral activation reflect the ability of drug-related stimuli to activate attentional and memory circuits. This argues that neural circuits of dependence and craving are circuits that mediate the general functions of memory and attention rather than dependence *per se*.

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The effect of a conventional educational intervention on pharmacists' attitudes to methadone maintenance

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Methadone substitution programmes are of proven effectiveness.[1] Staff commitment to abstinence in methadone programmes is associated with poorer client outcomes when compared to long-term maintenance programmes.[2] Daily supervised consumption of methadone increases the potential for pharmacist attitudes to affect the client. Our aim was to determine if a conventional educational evening undertaken by pharmacists prior to commencement of supervision of methadone consumption influenced (1) pharmacists' attitudes towards abstinence orientated substitution programmes and substance misusers and (2) the attitudes of pharmacy assistants not attending the intervention. Forty-two community pharmacists who attended training evenings addressing issues related to methadone prescribing and substance misuse were studied. The Abstinence Orientation Scale (AOS) measures commitment to abstinence in methadone programmes.[2,3] High scores are associated with decreased retention of clients in treatment.[3] Also administered were questionnaires assessing knowledge of methadone and general disapproval of substance users. Pharmacists completed questionnaires immediately before and after the educational intervention and 1 month later. Pharmacist assistants' scores were obtained at baseline and 1 month. A total of 88% of pharmacists were followed-up at the end of the educational intervention and 66% at 1 month. Mean pharmacist AOS score indicated a relatively strong commitment to abstinence programmes that decreased with time ($p < 0.48$). Pharmacist assistant scores showed a significant decrease at 1 month (mean 3.41, $p < 0.046$). Drug disapproval and methadone knowledge scores showed a non-significant increase over the follow-up period for both groups. Results indicate minimal change in pharmacists' attitudes to methadone programmes and substance misusers following this typical educational evening. This suggests that alternative interventions need to be considered if negative attitudes are to be addressed.

References

1. Marsch L. The efficacy of methadone maintenance in reducing illicit opiate use, HIV risk behaviour and criminality: a meta-analysis. Addiction 1998;93: 515–32.
2. Caplehorn JRM. Comparison of abstinence-orientated and indefinite methadone maintenance treatment. Int J Addict 1994;29:1361–75.
3. Caplehorn J. Staff attitudes and retention of patients in their methadone maintenance programmes. Drug Alcohol Depend 1998;52:57–61.

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Attitudes of NHS psychiatrists, psychiatric nurses and medical students towards workplace substance use policies

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The aim of the study is to assess the attitudes of a sample of nurses, doctors and medical students towards NHS substance misuse policies including mandatory random drug and alcohol testing. Respondents (nurses and doctors working in the Maudsley Hospital and 3rd-year medical students from Guy's, Kings and Thomas's Medical School) completed a confidential and anonymous questionnaire. Respondents were asked whether they agreed with mandatory random drug testing for all staff and/or for those suspected of substance abuse. They were asked where the assessment and treatment of substance misuse problems should occur and where they would seek advice and help for substance misuse problems. The study comprised a total of 164 respondents (53 psychiatrists, 56 nurses and 55 medical students). Mandatory random drug and alcohol testing for all staff: 38.2% agreed and 40.2% disagreed. The remainder were unsure. There was no significant difference between the professions on this issue ($\chi^2 = 6.36$, $p = 0.174$). Mandatory random drug testing for staff suspected of substance misuse: 58.5% agreed, 24.3% were unsure and just 17.1% disagreed with the policy. Psychiatrists were more inclined to disagree with the policy than nurses and medical students ($\chi^2 = 9.16$, $p = 0.057$). Assessment and treatment of drug and alcohol problems: less than 10% thought that this should be provided within the staff member's current place

of employment. Approximately oe-third thought there should be private provision for treatment with a little over one-quarter thinking that it should be provided within the NHS. The most popular sources of assistance were GP (90.4%) and a colleague (76.3%). The least popular options were their consultant (23.7%) and occupational health (30.4%). The Department of Health has concluded recently that random drug testing for NHS employees ''is not considered an appropriate form of action for NHS employers at this time''. The high numbers of respondents in favour of testing particularly for those suspected of substance misuse is therefore surprising. Only 30.4% of respondents said they would contact their occupational health department to seek help. This may cause delay in recognition and treatment and could increase the potential threat to patients from the health worker who has a drug or alcohol problem.

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Training in addictions: a survey of trainees in psychiatry in the Newcastle and Northern Rotation

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The aim of the study was to assess the burden of work posed by substance misuse problems in day-to-day clinical work of trainees and their perception of the training received in this field. A questionnaire was handed out to the trainees attending the psychiatry teaching at the University Department in Royal Victoria Infirmary in Newcastle upon Tyne in October 2001. An explanation was given to the respondents about the nature of the survey and what was expected of them. A total of 53 trainees completed the questionnaire. Thirty-three trainees (62.2%) had more than 12 months experience in psychiatry. The mean work experience of the trainees in psychiatry was 23.35 months. Trainees were asked to rate the burden of work posed by addictions work. The maximum exposure was in out-of- hours (on-call) work. Trainees were asked to rate their confidence in managing various clinical situations, i.e. intoxication or withdrawal. Trainees expressed a good level of confidence in managing alcohol, cannabis and opiate withdrawal states and intoxication but poor levels with those related to stimulants and other drugs. Trainees' perception of training and supervision received for managing substance-misuse problems with and without co-morbid psychiatric illnesses was assessed. They perceived the training for managing alcohol problems as fair, but less for drug-related problems. Trainees rated the need for further training in management of both drug and alcohol problems at a median of 4, which represents a high need. Only seven (13.2%) of the trainees had any knowledge about the existence of any national guidelines (orange book) in this field. Psychiatry trainees seem to rate a high need for more training and supervision in the field of substance misuse, especially in dealing with drug-related and co-morbid psychiatric problems.

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Brain glucose metabolism in the alcohol-related Wernicke–Korsakoff syndrome

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This study reports [^{18}F]-FDG-PET findings in Wernicke–Korsakoff patients. Twelve patients suffering amnesia arising from the Korsakoff syndrome were compared with 10 control sub-

jects without alcohol-related disability. Subjects received [^{18}F]-fluorodeoxyglucose (FDG-PET) imaging as well as neuropsychological assessment and high-resolution MR imaging with volumetric analysis. Volumetric MRI analysis had revealed thalamic and mamillary body atrophy in the patient group as well as frontal lobe atrophy with relative sparing of medial temporal lobe structures. Differences in regional metabolism were identified using complementary region of interest (ROI) and statistical parametric mapping (SPM) approaches employing either absolute methods or a reference region approach to increase statistical power. In general, we found relative *hyper*metabolism in white matter and *hypo*metabolism in subcortical grey matter in Korsakoff patients. When FDG uptake ratios were examined with occipital lobe metabolism as covariate reference region, Korsakoff patients showed widespread bilateral white matter hypermetabolism on both SPM and ROI analysis, with a subgroup of subjects showing frontal hypometabolism. When white matter metabolism was the reference covariate, Korsakoff patients showed relative hypometabolism in the diencephalic grey matter, consistent with their known underlying neuropathology, and medial temporal and retrosplenial hypometabolism, interpreted as secondary metabolic effects within the diencephalic-limbic memory circuits. There was also evidence of a highly variable degree of more general frontotemporal neocortical hypometabolism more marked in frontal regions that correlated with measures of memory function, and may be related to alcohol use *per se* rather than to the Korsakoff syndrome itself.

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