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Messages and findings from the Department of Health drugs misuse research initiative: final overview report

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Messages and findings from the Department of Health drugs misuse research initiative: final overview report

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Abstract

This overview report summarizes the outcome of Phase One of the Drugs Misuse Research Initiative, which was funded through the Policy Research Programme at the Department of Health. The views expressed are those of the author and are not necessarily those of the Department of Health.

The brief summaries of key messages and findings from each project are drawn from their final reports and executive summaries, and from commentaries on and discussions of these reports. The selection of what are “key” findings and lessons for research, policy, and practice are those of myself, as author of the overview report, but derive directly from the substantial reports produced by project teams. I hope I have done justice to their work, while recognizing that the interpretation and contextualization are my own, as is responsibility for any errors.

The authors of the executive summaries which follow the overview report are the project teams themselves.

Keywords: *drugs misuse, co-morbidity/dual diagnosis, waiting lists, treatment interventions, young people*

INTRODUCTION

In 2000, the then British Parliamentary Under-Secretary of State, Gisela Stuart, announced a new research programme on drugs misuse. This initiative was to deliver research-based evidence to underpin the development of effective prevention strategies and drug treatment services, both of which were seen as important to achieving the goals of the Government’s 10-year anti-drugs strategy. A total of around £2.4 million was to be invested in research over 4 years to increase and improve knowledge on:

- The effectiveness and cost-effectiveness of treatment and care modalities;

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- The impact of waiting lists for drug treatment on uptake, completion rates and outcomes, and how to use time on the waiting list positively to increase the likelihood of treatment success;
- Co-morbidity of substance misuse and mental health problems;
- The impact of drug use on young people's psychosocial development;
- Prevention and treatment interventions aimed at young people; and
- Long-term, heavy cannabis use.

Announcing this programme, Gisela Stuart said: "drug problems cause immense harm to individuals and to society. This Government is committed to a 10-year strategy of joint action for tackling drugs misuse and there is a pressing need for high quality research to support the objectives of this strategy. This programme of research recognizes, in particular, the health risks associated with drugs." Professor John Pattison, then Director of R&D at the Department of Health, commented "in focusing on drugs misuse, this research, which is being commissioned through the Department's Policy Research Programme, will underpin one of the priorities in the Secretary of State's programme to improve health and tackle health inequalities."

The purpose of the Department of Health's Policy Research Programme (PRP) is to provide, through high quality research, a knowledge base for health services policy, social services policy, and central policies directed at the health of the population as a whole. It aims to provide a robust evidence base on issues of policy priority across the whole remit of the Secretary of State through the funding of high quality R&D on social care, public health, and strategic policy issues arising in relation to health. The PRP operates on a commissioned basis, tendering for research in response to current policy needs and priorities.

Trends which had led to concern for more research on drugs misuse included growth in numbers presenting for treatment, increasing concern about the number of clients with dual diagnosis, anecdotal evidence of the links between recreational and problematic drug misuse, lack of information about the cost-effectiveness of services, an increase in the number of methadone overdoses and deaths, and an increase in the number of problematic stimulant misusers and limitations in understanding what treatments are most effective for these clients.

A total of 14 studies were commissioned under the Drugs Misuse Research Initiative (DMRI). The total cost of the programme was just over £2.4 million. This was a multi-disciplinary programme with contributions from psychiatry, health economics, psychology, public health, and sociology. The methods used ranged from randomized controlled trials to secondary analysis of large data sets, systematic reviews, and social surveys using quantitative and qualitative approaches. The research included accessing hard to reach groups and researching sensitive topics and applied research, for example developing instruments like brief interventions and screening tools. The 14 projects were conducted in fieldwork sites across England, Scotland, and Wales and were based in a range of universities and other institutions across the UK.

Three projects were funded under the topic of treatment interventions (25% of the total DMRI expenditure), four under dual diagnosis (28% of total cost), three

were on waiting lists (19%), and four on young people (28%). The projects took between 20 months and 47 months to complete. The length of time reflected mainly the research methodology being used, with those aiming to use an RCT methodology being most time-consuming.

Background

Although there has been recent stabilization in prevalence of use, there appears to have been a fivefold to eightfold increase in illicit drug taking in Britain over the last 30 years. A Department of Health (DH) survey showed that, of 11–15 year olds, 18% had taken drugs in 2004 (compared to 21% in 2003; Fuller, 2005). The British Crime Survey of 2001–2002 found that, of all 16–59 year olds, 12% had taken an illicit drug and 3% had used a class A drug in the last year (Aust, Sharp, & Goulden, 2002). While drug taking is thus still a minority activity, these numbers equate to about 4 million reporting ever having used illicit drugs and about 1 million reporting having used class A drugs in the last year. It has been estimated that there are between a quarter and half a million problem drug users in England and Wales (Godfrey, Eaton, McDougall, & Culyer, 2002). At the same time, there has been a general increase in the fear of crime. In 1979, the number of people in prison was 42,000; in 2003 the number had almost doubled to 74,000 and has continued to rise since then. Surveys show that 60–70% of prisoners were using drugs before imprisonment (Social Exclusion Unit, 2002, p. 6). In 2000–2001, figures indicated that 51% of males on remand and 54% of females on remand reported a drug dependency problem (Department of Health, 2001).

The UK Government's 10-year strategy for tackling drug misuse, published in 1998, has four pillars:

- To help young people resist drugs in order to achieve their full potential in society;
- To protect our communities from drug-related anti-social and criminal behaviour;
- To enable people with drug problems to overcome them and live healthy and crime-free lives; and
- To stifle the availability of illegal drugs on our streets.

Introducing the 10-year strategy in 1998, Tony Blair, the Prime Minister, wrote about “the vicious cycle of drugs and crime which wrecks lives and threatens communities.” He went on: “the fight against drugs” should be part of a wider range of policies to renew our communities and ensure decent opportunities are available to all.” The UK drugs strategy was updated in November 2002 with a focus on class A drugs, the prevention of crime, building safer communities, and tackling international trafficking.

Drugs policy in Britain now focuses on the most vulnerable groups, the most damaged communities, and the most dangerous drugs. Key aims are to strengthen communities, tackle drug-related crime, deal with drug markets, and get prolific offenders into treatment. Currently, the key Government commitments for drugs treatment itself are to: increase the participation of problem drug users in

drug treatment programmes by 55% by 2004 and by 100% by 2008; and increase year on year the proportion of users successfully sustaining or completing treatment programmes. In the health professions, key specialist concerns presently are with drug-related deaths, continuing poly-drug use, the children of drug-using parents, the increase in the prevalence of hepatitis C, and co-morbidity.

Research priorities

During the 1990s, the National Treatment Outcomes Research Study (NTORS) was the main research funded by the Policy Research Programme at the Department of Health. This funding has now ended. The main NTORS study, which followed an initial cohort of 1100 drug users in treatment, aimed to identify the key treatment process variables and investigate their impact on client outcomes. Associated studies looked at multiple treatment utilization, pathways to recovery over time, changes in physical and mental health after treatment, drinking outcomes for NTORS clients, and factors associated with mortality among clients in the cohort (Gossop, Marsden, Stewart, & Kidd, 2003).

It was estimated that, in 2000, over £15 million was committed to support research on drugs misuse by central government (including NHS R&D) (MacGregor, 2001). (This was the total sum invested in currently active, funded projects and was not an annual figure; some projects would be funded for 3 or more years.¹) Research funded by government departments dominated the total national research effort. The bulk of this was funded through the Department of Health (including the NHS) and the Home Office. Topics ranged across the four pillars of the strategy: treatment issues, communities, young people, and availability. A variety of methods was being employed, with basic research being more likely to be on treatment, including use of RCT methodologies. Work on communities involved a combination of approaches with strategic and applied work being most common. Outcome evaluations of new initiatives featured strongly. Work on young people was most likely to involve either prevalence studies or process evaluations of interventions. Work on availability aimed to compile reliable information to arrive at estimates of activity and model distribution flows. Particular achievements from this government research funding included developing surveys of young people, the evaluation of new policies and practices (especially those related to the drugs–crime link), and studies of clinical and social care for patients with drug and mental health problems. Concern was expressed by the research community about the lack of support from other funders for more basic, critical, or long-term research. However some funders, such as the Joseph Rowntree Foundation and the Wellcome Foundation, have supported such research more recently.

The DH began development work for the DMRI in 1998. The DMRI built on the document *Task force to review services for drug misusers* (the Polkinghorne effectiveness review) which was published on 1 May 1996. This was a comprehensive and wide-ranging review of drug treatment services. The review concluded that treatment is effective in reducing the harm drug problems cause to society and

to individuals. (Treatment was seen to embrace social care and support as well as clinical interventions.) The task force review was unable however to establish whether one type of treatment was more effective than another.

A variety of treatment approaches and specific interventions operating in England were identified in that review. Those on which it was thought further research would be desirable included: shared care arrangements involving specialist support for GPs; treatment opportunities provided in the criminal justice system, especially in prisons and on release; involvement of community pharmacists in syringe exchange schemes; provision of basic health care in low-threshold drugs services; provision of hepatitis B vaccination; provision of structured counselling; and provision of injectable opioids and other injectable addictive drugs to drug misusers.

The task force review also listed a number of specific issues which were deserving of further research including: the needs of young people at risk and how best to meet these; the costs and benefits of specialist drugs workers; follow-up of people who drop out of treatment, including establishing why they did so; relative cost-effectiveness of inpatient and outpatient detoxification programmes; methods to reduce organizational barriers to access to services; ensuring that people working in both drugs and mental illness services are aware of the need to identify and respond to problems of combined psychiatric illness and drug misuse; ensuring that people working in both drug and alcohol treatment services are aware of the need to identify and respond to overlapping alcohol and drug treatment problems; identification of optimum lengths of treatment and care; and definitions of key indicators of treatment organization and outcome.

In the White Paper proposing the new 10-year anti-drugs strategy, a number of aims were outlined and research questions relevant to each identified. Topics listed included: qualitative studies of patterns of misuse of regular young users and assessment of the impact on drug misuse of wider social factors, the clinical and social care of people with drugs and mental health problems, the cost-effectiveness of current treatment and care options, the effectiveness of treatment interventions for young people, the links between recreational drug misuse (including cannabis) and later health problems, and the treatment of stimulant drug dependency. The DMRI programme built on these themes.

Research and strategies for drugs misuse were expected to fit within broader policies outlined in the Green Paper *Our healthier nation* (Department of Health, 1998a). This strategy placed renewed emphasis on the social dimension to health and pointed to the need for co-ordinated solutions. Particular attention should focus on the marginalized and most deprived and a link between social exclusion and illegal drugs taking was mentioned (DH, 1998a: paras 1.13 and 1.14). It was also proposed that research findings should be widely disseminated and acted upon, especially with regard to the communication of health risks (DH, 1998a: paras 3.19, 3.20). Tackling alcohol and drug misuse was referred to as an objective of Government and national players in the section setting out the contract on mental health. Services should develop protocols to guide best practice and alcohol and drugs services should be developed locally for young

people and adults. There was stress on developing measures of progress and on monitoring and evaluation.

The views of experts

In developing the commission for the DMRI, DH had identified four key priority research areas. These were: the effectiveness and cost-effectiveness of current methods of prevention in the UK and overseas and the likely success of alternative methods; the clinical management and social care of dual diagnosis cases; investigation of the cost-effectiveness of current treatment and care modalities, including the interface between health and social care; and identification of the relative level of risk of drug misuse among sub-groups of the population and of the most effective methods for targeting the different groups with effective prevention messages, especially those at most risk of subsequent problematic misuse. Other areas identified as possible research topic areas included: an investigation to identify the causal links between recreational drug use and later health problems, the role and efficacy of injectable opioid prescribing and development of criteria to indicate for whom such prescribing might be appropriate, and the treatment of stimulant (especially amphetamine and “crack” cocaine) dependence.

Some of these topics were eventually investigated through projects funded by the DH through the DMRI or other research routes. Relevant research projects on some of these themes were also commissioned by the National Treatment Agency (NTA) and by other Government departments. A scoping exercise was carried out to help the DH to refine its research needs and identify key research questions within priority areas. In consulting with the research community prior to taking forward the DMRI, a number of observations were made on each of these themes. These are briefly summarized below.

With regard to research on the cost-effectiveness of both treatment and prevention activities, experts made a number of points:

- To assess effectiveness, we need to know what “it” is before we can say whether “it” is effective or not. In both secondary and tertiary prevention, treatment and care, we are insufficiently informed about what is actually happening. There is a need for better descriptive material on implementation and process.
- It is possible to measure cost but there is a need to encourage more health economists into this area of analysis and link such research with similar research in other fields.
- Better statistical techniques often need to be employed in drugs research on these topics.
- Definitions of outcomes cannot be simply assumed. There is a need for more reflection and precision.

With regard to methods of prevention, experts consulted said:

- The key research question is the relation between recreational drug use and problematic drug use.
- Key ordering concepts are those of “risk” and “protective” factors.

- The priority should be research linked to the prevention of injecting and reduction in consumption levels.

With respect to current treatment and care modalities, the view of several experts in the field was that “modalities of treatment evaluated and described in the research literature are not what are actually currently being delivered” and that “there is much variation in practice.” They pointed out:

- There is a need for more research on what happens in the “black box” of treatment and care.
- Greater attention to implementation and process issues is crucial and the influence of social factors is also very important. There is a need for research which brings these factors into the equation.
- There is a need also to link research to improving practice.
- Research on shared care would be of value.
- Research might also usefully address issues of contracting and funding of services.

These experts also commented that they thought that an epidemic of heroin use was then beginning in some areas. They believed that there is a clear link between deprivation and problematic drug misuse, especially of more chaotic, severe, injecting heroin misuse. They also suggested that not only the causes but also the consequences of drug misuse are part of the explanation of the links: the consequences of drug misuse vary in terms of the social supports available.

They identified special groups to be considered:

- There may be particular problems for people of Asian origin and for women with child care responsibilities.
- Children of injecting drug misusers may face particular hazards which should be investigated.
- There may be a link with early damaging childhood experiences and there is thus potential for preventive interventions at an early age. The definition of high risk is fairly robust as there is a well-recognized pattern here. However one should be aware of the dangers of labelling. Risks do however tend to cluster and drug misuse is thus linked to other problem areas.
- The prison population is a particular population group to which attention should be directed.

They suggested a lack of services and access issues may increase risk, while there are variations in both the patterns of drug use and variations in the availability of services.

With regard to health education, they commented that the key word should be “intervention” rather than “message,” as “prevention is more than the production of a glossy pamphlet.” They suggested:

- The focus should be on secondary rather than primary prevention.
- There is particular value in intervening to prevent a switch to injecting and much knowledge has been gained about research on harm minimization as a result of research on HIV/AIDS. A focus on preventing injecting is particularly important because of the prevalence of hepatitis B and C.

- Setting and site are important features of approaches to prevention and there is a need for more attention to appropriate locations, for example in A&E departments and in prisons.
- There is some knowledge about innovative methods such as peer interventions and use of indigenous fieldworkers linked to action research on which studies could build.

Many of these observations were born out by research funded under DMRI. Others remain important topics, some of which will be carried forward in future DH funded research in phase two of the DMRI and other projects funded by DH and other government departments. Much knowledge has been accumulated but much more needs to be done to address such a wide range of issues. A long list of other topics were identified as worthy of research funding, including a need for better surveillance systems² to provide early warnings of trends and research on the value of compulsory drug treatment and the role of testing.

YOUNG PEOPLE, RECREATIONAL USE, AND HEALTH PROMOTION

Policy context

Health policy has aimed to respond to increasing awareness that levels of drug and alcohol use by young people in the UK are among the highest in the EU (Marsden, Stillwell, Barlow, Taylor, Boys, & Hunt, 2004b, p. 13). Misuse of alcohol, in particular, impacts heavily on public services like policing, the ambulance service, and accident and emergency departments. With regard to illegal drugs, over the last 10 years or so, there has been a growing body of research within the UK which has documented a steady increase in the number of young people using them (McKeganey et al., 2003b, p. 7). These studies have shown that, by their mid-teens, between 30% and 50% of young people in the UK have experimented with illegal drugs, although a much smaller percentage are using drugs on a more regular basis; the majority of drug users remain recreational users.

Thus the trend appeared to be that at the end of the 1990s in Britain, “in general terms, more people are using more drugs and are doing so at an earlier age,” as some experts described it. In this context, the topic of young people and use of illicit drugs was prioritized with the desire to know more about the causes and consequences of these phenomena in the hope that this knowledge would enhance prevention efforts. Research carried out in the USA had indicated that the earlier the age at which young people start to use illegal drugs, the greater is the likelihood of their developing problems associated with longer term drug use (McKeganey et al., 2003a). Early age of onset of drug use is associated with problematic drug use (Marsden et al., 2004b, p. 15). Thus a particular interest was in the use of illegal drugs by very young people.

Prevalence varies across subgroups, being higher in vulnerable groups like young people in care or the homeless and in social groups such as clubbers. Serious and persistent young offenders are considerably more likely to have used drugs in the last 12 months. The importance of early sexual and physical

abuse as a common antecedent of both later drug use and various psychosocial problems is also being recognized (Macleod et al., 2002b, p. 14). Prevalence in general decreases as people age beyond young adulthood (Marsden, Stillwell, Barlow, Taylor, Boys, & Hunt, 2004b, p. 15). It is important to note that most young drug users will never present to drug services or be identified as problem drug users and that the majority appear to “mature out” of their drug use (Macleod et al., 2002b, p. 15).

The context for research on young people was one of heightened public concern. However portrayals of drug use and drug users in popular media are often misleading and atypical individuals with multiple problems may be over-represented in treatment populations (Macleod et al., 2002a). For the DH, a key interest was to make available a reliable and objective evidence base to help to inform policy. Methodological issues are important here. Both drug use in adolescence and the experience of psycho-social problems in young adulthood are related to early psychological and social problems and early social disadvantage. Studies that do not take this into account may wrongly attribute causality to an association between drug use and harm which arises purely because both share common antecedents (Macleod et al., 2002a). The research concern was to fund a study which would review the evidence in a systematic way.

Cannabis use in particular has attracted a degree of public attention: “the debate about use of cannabis arouses strong emotions” (Editorial, 1998). Groups representing parents, politicians, and the media have voiced diverse opinions on the use of cannabis. However previous research has found that adults of all ages rate cannabis as the least harmful of drugs, including alcohol and tobacco, whether or not they actually use cannabis. During the period of phase one of the DMRI, policy on cannabis changed in the UK, not without arousing controversy and debate. The Advisory Council on the Misuse of Drugs published its recommendations to the Home Secretary in 2002. They recommended the reclassification of cannabis preparations to class C under the Misuse of Drugs Act 1971. (Class C includes steroids, benzodiazepines, and growth hormones. Class B includes amphetamines and barbiturates. Class A includes heroin and cocaine.) Research findings suggest that there continues to be a need for research focusing on the health effects of cannabis use.

The largest increase in stimulant use in recent years has been in relation to cocaine, but use of other stimulants is also an important part of poly-drug use by young people. There is evidence that specialist drug misuse treatment services in the UK are perceived by stimulant users to remain oriented towards the needs of people with illicit heroin or other opiate dependence. Recently the NTA has acted to encourage greater provision of services for users of crack, which may lead to change in these perceptions. The policy interest was to know more about what interventions might work with young stimulant users.

Brief Interventions have been found to be effective in reducing harm with diverse client groups. Key factors driving the development of brief interventions have been an increasing emphasis on the early identification of problems and their relative inexpensiveness compared to other treatment options. It has

been noted that assessment alone may work as a form of brief intervention (Marsden et al., 2004b, p. 25). In the light of this, a study focusing in particular on the impact of assessment when delivering a brief intervention to stimulant users might offer some pointers to service development with this group. Further research would be required to confirm what “treatment” impact results from assessment in brief interventions.

The psychosocial consequences of drug misuse: A systematic review of longitudinal studies

PROJECT TEAM

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This project involved a thorough search and rigorous analysis of the literature. It provides a model for systematic reviews in this field and includes details about methodology and procedures which would be useful to others engaged in this kind of research.

Key findings

There is a lack of firm evidence to answer many of the key policy questions since there is a paucity of good research in this area. Of the 16 studies assessed as providing the best available evidence, none was from the UK. Cannabis use showed consistent associations with lower educational attainment, increased risk of use of other drugs, and increased reporting of psychological problems. However, importantly, the relative consistency of these associations does not confirm a causal relation. Most studies assessed were limited in their ability to adjust for possible confounding factors, particularly those relating to early life adversity. Consistently, cannabis use in early adolescence was associated with greater problems than use in late adolescence, but again the issue of possible confounding must be taken into account in interpreting these findings. With respect to use of other drugs, studies suggested a deleterious effect of relatively heavy use of cocaine or heroin over relatively long periods on general health. There is an absence of data on the long-term effects of ecstasy use.

Lessons for research

Associations between exposures (such as cannabis use) and outcomes (such as psychotic symptoms) can arise in observational data for a number of reasons. Clearly, the exposure may cause the outcome. However it is important to fully consider alternative non-causal explanations for observed associations before

coming to conclusions around causality. Broadly, these explanations come within three categories:

- Bias, where the association is a measurement artefact and is not real. For example, people who under or over report drug use (according perhaps to their notion of social desirability) may also under or over report other things that have notions of social desirability attached to them, leading to an apparent association between the two.
- Reverse causation is another source of potentially misleading associations. Here the association is real but (in this example) it is the harmful “outcome” that increases the risk of drug “exposure” rather than vice versa.
- Finally confounding refers to the situation where an association between two factors arises not because they bear any causal relation to each other but because they share common antecedents. For example, factors related to early life adversity may increase the risk of both drug use and of harm through independent pathways.

The issue of causation is of central importance to policy. Interventions attempting to modify non-causal risk factors are unlikely to be effective in reducing harm. There remains a need for a UK population-based, prospective (longitudinal) study with sufficient power and appropriate design to provide an evidence base for future policy. While *ab initio* studies would take a long time to produce evidence useful for policy makers, there is potential to add questions to existing longitudinal studies (such as the ESRC Millennium cohort or the ALSPAC work).

Lessons for policy

Preventive interventions may have unexpected effects and will not prevent harm that is not caused by drug use. There is the potential for harm from drugs policy itself. There are some adverse outcomes which may be related to the socio-legal framework in which drug use occurs. Prevention initiatives must be thoroughly evaluated. Evaluations should look at a range of outcomes in addition to drug use *per se*.

Preteens and illegal drugs: Use, offers, exposure, and prevention

PROJECT TEAM

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This project involved research on legal and illegal drug use and drug exposure among children aged 10 to 12 years in Glasgow and Newcastle. A combination of quantitative and qualitative methods were used, including a survey of 2318 children and face to face interviews with 216 children in three groups: children who had already used illegal drugs, children who had been exposed to illegal drugs, and children who had neither been exposed to illicit drugs nor had used them.

Key findings

By the age of 12 years, a small number of young people (under 5%) have begun to use illegal drugs. While illegal drug use at this age principally involves cannabis, some of the drug using pupils had also used other illegal drugs. Illegal drug use at this age is closely associated with involvement in other problem behaviours. By the age of 12 years, just under 10% of pupils had been offered illegal drugs and almost 29% had been in situations where illegal drugs had been used. Almost one third of these 10 to 12 year olds had been exposed to illegal drugs and almost 1 in 10 had been offered illegal drugs. Drug offers were harder for young people to turn down where they originated from people who were socially close to them. Almost 4 in 100 had used illegal drugs in the past but only 1.5% had used illegal drugs in the last month. Cannabis was the drug most widely used. Use of other illegal drugs was less than 1% of the preteens surveyed. The relatively low level of illegal drug use among these preteens was in stark contrast to their levels of alcohol use. A high proportion of the children distinguished between cannabis and other drugs with the former commonly being regarded as relatively benign. Illegal drug use was associated with evidence of a range of other social and behavioural problems. Drug use and drug offers for preteens are part of a wider context of issues relating to friendship and family. Those preteens who are more closely involved with illicit drugs are a minority who also exhibit a range of problem behaviours and conduct disorders. Both external pressure and some individual choice on the part of the child play a part in the decision to take an illegal drug. The closer the relationship between a child and the person making an offer of illicit drugs, the harder it seemed to be to reject it. The most effective defence against an unwelcome offer was to have a good reason for rejecting it. A total of 14% of children reported that someone in their family had used or was using illicit drugs. These children were worried about this. There is a lack of support for children whose families are users. Pupils wanted to know more about the effects of different drugs, how to recognize them and how to deal with situations in which they might be exposed to drugs or offered them.

Lessons for research

Interviewing children of a young age requires particular sensitivity and adherence to procedures regarding child protection. Issues of consent and ethics are

particularly pertinent here. Names of interviewers must be checked. It is important to have procedures in place to deal with revelations of child abuse or similar problems that might emerge in the course of a research study.

Issues of comprehension, concentration, and literacy impact on young people's understanding of research and their participation in it. Any research in schools is particularly vulnerable to survey fatigue issues. Research on this topic has to pay good attention to liaison with local Drug Action Teams (DATs) and other key practitioners. Setting up focus groups with multi-professional groups can pose problems given their very busy schedules. Research on this topic attracts relatively high press and media interest, and journalists can make errors in reporting on research. It is possible to publish results quickly and widely. However, to find out which young people who experiment with illegal drugs would develop into problematic drug users would require good longitudinal research following cohorts of young people over many years.

Lessons for policy

The idea that it is enough to protect young people from dealers is too simplistic. There are complex forces and pressures (opportunities and choices) at work leading to exposure to and possible use of illicit drugs. Both protective and risk factors are important. Preeteen children who use illicit drugs often come from unfavourable or disadvantaged family backgrounds and experience a variety of behavioural problems of which early cannabis use is just one. More generically oriented family services or child psychiatric services may be most appropriate to meet their multiple needs. There does not appear to be a need to develop specialist addiction services for preteens. There is a need for more general services for preteens who are at risk of initiating illegal drug use at a young age or have already done so. Such support would need to encompass both peer and family relationships. Drugs policy needs to discuss whether different approaches are needed for different types of children, i.e. those who are evidencing problems compared to those who are not. The danger of stigmatizing problem children is important but not necessarily a reason not to try to target responses. Advice about life skills approaches needs further consideration and research. The issues raised about young people's views on the relatively harmless nature of cannabis are important.

Lessons for practice

There is a need to ensure that young people have available strategies for turning down drug offers by providing them with effective explanations for refusing an offer of a drug, in particular cannabis. There is a case for including the development of appropriate life and refusal skills in the drug education which pre-teenage children receive at school. These children preferred interactive methods of health education. They preferred the involvement of other experts rather than, or in addition to, teachers, especially those with relevant real life experience.

Drugs education may need to be more gender specific. Moreover, some children may not be receptive to drugs education because they do not yet see drugs as being relevant to them in any way. An individually tailored approach to drug education is preferable, given the wide range of interest, knowledge, and familiarity with illegal drugs at this young age.

Long-term, heavy cannabis use

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This study, while not focusing on very young people, is included in this section because of its discussion of recreational drug use in which use of cannabis tends to figure prominently. Use of cannabis, as we have seen, has become more common among young people in recent decades but there are concerns that continuing use of this substance, especially in larger quantities and more frequently, could have damaging effects. The purpose of the study was to identify and assess patterns of use and problems associated with prolonged heavy use of cannabis. Heavy, long-term use was compared with light, long-term use. A sample of 405 long term users was recruited who had typically been using cannabis at least weekly for 10 years without much break. The study used a combination of quantitative and qualitative approaches. In-depth interviews were conducted with a sub-sample of 150 participants. The aim was to illustrate the consequences of long-term, heavy use of cannabis. This study aimed to be a real world study of cannabis users. A snowballing sample was attained. This technique allows researchers to penetrate hidden populations. The fieldwork was conducted in Bristol, Birmingham, Glasgow, Inverness, and Newcastle. A strength of the study is that it accessed a general population sample. The study provides the first UK data on the characteristics of long-term cannabis users, their patterns of cannabis and other drug use, and their psychological and health status. It is useful in generating hypotheses which could be followed up using more rigorous methods. It sets down a benchmark which further work could build upon.

Key findings

The main finding is that, among this particular sample of long-term heavy cannabis users, use of cannabis was non-intrusive, non-destructive, and controlled. Their cannabis use was typically non-problematic and not associated with risk behaviour. Amount or pattern of use of cannabis were not influential. Comparisons with non-cannabis users were not part of this study and whether or not the group as a whole is more at risk of physical or mental health problems would require further study. But heavier as opposed to lighter long-term use does

not seem to lead to greater problems. The health effects of long-term cannabis use need further research, utilizing a longitudinal design and including clinical measures, which might focus, for example, on the effects of smoking (e.g., respiratory and circulatory risks) and possible mental health (e.g., dependence and depression). The majority of cannabis users stated that their primary reason for using cannabis was enjoyment. It was also appreciated as helping them to relax. Some preferred it as an alternative to alcohol. A few found it helpful to deal with medical complaints such as MS or PMT. The majority were regular tobacco smokers. Heavier cannabis use was associated with cannabis dependence. They were all aware of the detrimental effect of use of cannabis on driving ability, and most disapproved of driving while under the influence of cannabis. They typically stressed the need to keep cannabis use separate from work responsibilities.

Lessons for research

It is possible to recruit considerable numbers of long-term, heavy cannabis users to participate in detailed research on their behaviour if care and experience are brought to bear on the process. A number of issues around recruitment procedures and problems were discovered in the process of doing this research. Different approaches may be required for different sites. Knowledge of the local area is important for recruitment. New technology, such as mobile phones and text messaging, can be useful. Recruitment of women with children is particularly difficult. It is unlikely that many long-term heavy cannabis users can be recruited through agencies. Most cannabis users are not in touch with drugs agencies. Recruitment of samples through psychiatric services produces a biased sample of those with psychiatric morbidity which possibly pre-exists use of cannabis. Longitudinal rather than cross-sectional study would be more persuasive in terms of findings on the long-term consequences of long-term heavy cannabis use. Again the absence of longitudinal research in the field is highlighted. Research using snowball samples and self-reports will always be subject to criticism of lack of objectivity, bias, and unrepresentativeness. Efforts must be made to defend against such criticisms, for example by comparing results with those from relevant other surveys. Comparisons with matched controls of non-users of cannabis might be another way to deal with such criticism. Some discussion of different patterns of drug use between different social or occupational classes needs to form part of the context within which results are interpreted.

Lessons for policy

There is a need for credible public health messages to enable cannabis users to minimize the risks associated with this behaviour. The long-term use of cannabis by adults raises a number of as yet unexplored public health issues. Attention needs to be given to the development of relevant health education materials directed to cannabis use among adult populations (most health education to date has been directed at children and young people). Participants' responses

to information about cannabis are useful to know and can inform communications on health promotion. Peer education may be an important approach for health education. It is important to note that one cannot conclude from this study that use of cannabis is harmless. A study using medical checks would be needed to ascertain relevant facts. There are likely links between cannabis smoking and lung health. Following reclassification of cannabis, it is important to give more attention to the public health links between cannabis and smoking. The report provides confirmation of the link between cannabis use and tobacco use, and the relation of the two to each other in maintaining a habit. This has implications for health promotion strategies.

Lessons for practice

With regard to health education practice, it is important to note that use of cannabis is likely to perpetuate tobacco use. Smoking cessation interventions targeted at cannabis users would have to take cannabis use into account. It might be useful to consider targeting cannabis education messages through cannabis using networks. Cannabis education leaflets could be developed.

An evaluation of a brief intervention model for use with young non-injecting stimulant users

PROJECT TEAM

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This project was a multi-site, experimental study based on fieldwork conducted in Canterbury, Camberwell, and Twickenham and other locations in Greater London and East Kent. The evaluation was a two-condition, multi-site, randomized controlled trial with a single 6-month follow-up. It involved close working with a range of agencies, including HIT, Richmond Detached Project, Heatham House Twickenham, Release Dance Team, and Kaleidoscope. The focus was on young (16–22 years) cocaine, crack, or ecstasy users not in treatment and non-injecting, and the aim was to develop and evaluate a brief harm reduction intervention model for young stimulant users. This involved an intervention comprising a self-administered questionnaire (DLAQ) plus a one to one interview (AIMS) based on a motivational interviewing approach to counselling. The intervention was designed so that drug workers with limited counselling skills and experience could deliver it, following a short training programme. The final report includes an assessment of the benefits and drawbacks of using young peer drug workers to deliver a brief intervention. A total of 342 people were included in the study. The majority were principally using ecstasy (202), with 73 using cocaine and 67 using crack. Eighty-seven percent were followed up at 6 months.

Key findings

The stimulant users in the sample also consumed high levels of alcohol and commonly used cannabis and smoked cigarettes. There were high rates of offending in this sample. Primary crack users showed signs of poorer health and more severe dependency. The motivational intervention was acceptable to the participants, with the majority reporting that it was of value to them. The interventions encouraged harm reduction change in a proportion of participants. There was significantly greater overall reduction in the frequency of using cocaine, crack, and ecstasy among the experimental condition. It can be concluded that brief MI interventions are a useful and acceptable method of engaging young stimulant users in relation to substance use and misuse.

Lessons for research

Longitudinal, experimental studies with young, out-of-treatment drug users are feasible. This study stands out for its success in recruiting and following up a large sample. What were the factors that seemed most influential? Firstly, it should be noted that obtaining ethical approval can be very difficult and time consuming for multi-site studies. Four of the eight LRECs to which this study applied did not follow the guidelines for processing MREC approved applications (Marsden et al., 2004b, p. 4). Changes in patterns of drug use or faulty intelligence can present problems. In these fieldwork locations, it appeared that ecstasy had largely replaced amphetamine sulphate as the most commonly used stimulant among young people. The crucial drivers of successful retention were a multilevel outreach strategy, participant referral, primary and secondary expense payments, having access to suitable local sites, a sufficient number of flexible and motivated personnel, and multiple contact points (Marsden et al., 2004a). Partnership working with outreach services played a key role. The most successful recruitment strategies involved close working with a local outreach service. Promoting the research in a locality assisted with recruitment. Use of locations encouraging a feeling of security and confidentiality also helped. It can prove difficult to collect information on those who refuse to participate in a trial in the outreach context. The use of a prize draw incentive was also used and evaluated as a method of increasing retention. With respect to some of the specifics of data collection, self report was found to be a reasonably reliable measure of use. In a sub-sample, almost 9 in 10 self reports were validated by objective validation. This study found that attempts to collect hair or saliva samples negatively impacted on recruitment in this non-treatment population (Marsden et al., 2004b, p. 153). It was not as difficult to persuade participants to allow tape recording of interviews.

Lessons for policy

Brief MIs are of value for use with young stimulant users and can be successfully delivered by trained and well-supported workers. There was some evidence that

the AIMS intervention was significantly better than a basic assessment of drug substance use and lifestyle questionnaire in encouraging young people to reduce harmful or risky substance use but there was not sufficient separation between the two conditions to provide a clear recommendation that brief motivational interventions should be delivered in practice without further development.

Lessons for practice

There was evidence that peer workers can successfully deliver a brief motivational intervention, although in practice a majority of workers are likely to require good supervision and support by committed supervisors.

A number of problems restricted the ability to involve young peer drug workers in delivering the brief intervention. Many of the workers trained to deliver the intervention did not do so. With adequate supervision and support, workers were able to deliver the baseline sessions and to recruit through street-based outreach. In implementing peer work, it may be effective to spend more time with workers than with managers to encourage ownership of the new initiative among those who will be responsible for it (Marsden et al., 2004b, pp. 150–151). In implementing a new initiative, it may be valuable to focus initially on a relatively small number of workers who can then act as advocates and trainers for the initiative (Marsden et al., 2004b, p. 151). Use of video recordings in training sessions is beneficial.

Key messages from DMRI research on young people, recreational use, and health promotion

- To find out which young people who experiment with illegal drugs will develop into problematic drug users would require good longitudinal research following cohorts of young people over many years.
- There is a need for a UK population-based, prospective (longitudinal) study with sufficient power and appropriate design.
- The health effects of long-term cannabis use need further research, utilizing a longitudinal design and including clinical measures.
- Pre-teen children who use illicit drugs often come from adverse family backgrounds and experience a variety of behavioural problems, of which early cannabis use is just one. More generically-oriented family services or child psychiatric services may be most appropriate to meet their multiple needs.
- Brief interventions are a useful and acceptable method of engaging young stimulant users.
- There is a need for credible public health messages to enable cannabis users to minimize the risks associated with this behaviour, especially to give more attention to the links between cannabis and smoking and between cannabis use and tobacco use.

CO-MORBIDITY

Policy context

The concept of dual diagnosis or co-morbidity of substance misuse and psychiatric disorders has gained prominence in recent years. “[C]o-morbidity is a heterogeneous condition ... [a]nd many areas remain unexplored, particularly relating to prevalence, course, and treatment outcome in the United Kingdom ... Terminology remains in dispute. Dual diagnosis is not always a preferred term but is now recognized by many as a reference to the co-occurrence of substance use and mental illness. Clearly though, there are often multiple morbidities, including poly-substance use, misuse and dependence, physical and multiple psychiatric conditions” (Crawford & Crome, 2001, p. 52).

The methodological difficulties that arise for research in this area relate partly to issues of definition. It is crucial to clarify the varying elements in the definitions of substance use, misuse, harmful use, or dependent use. This has a bearing on the diagnosis as well as the severity of the psychiatric diagnosis, for example whether psychosis, anxiety, or personality disorder.

One view is that the only way to be certain that a psychiatric disorder is or is not directly related to substance misuse is to combine several methods. First, employ a clinical interview with corroboration from informants of the temporal course of the psychological symptoms and the substance misuse and assessment of the mental state at the time. This would include a review of case notes to confirm psychiatric history and “progress” while under the care of the medical team. Second, include urine, blood, and hair analysis. It is important to note at which point in the treatment process the assessment or diagnosis is made because patients suffer many psychological symptoms and psychiatric syndromes as a direct result of withdrawal, intoxication, and chronic use, which may resolve once substance use has stopped.

Variations in prevalence rates discovered might reflect differences in the populations assessed, the research methodology, sampling strategies, diagnostic tools used, thresholds set, geographical context, and time frame (Strathdee et al., 2002b, p. 75). Particularly important to note are method of recruitment and criteria for classification.

Common key characteristics that are associated with the dually diagnosed have been identified (Bannerjee, Clancy, & Crome, 2001). Typically those placed in this category include a predominance of young men, people with lower levels of education, and those with limited social networks. They demonstrate high-risk characteristics, such as homelessness and unstable housing, and have an increased likelihood of suicide. More severe mental health problems and an increased risk of being violent, along with more contact with the criminal justice system, are described. There is also an increased risk of victimization, family problems, and often a history of childhood abuse. People in this category are more likely to slip through the net of care and are less likely to be compliant with medication and other treatment (Strathdee et al., 2002b, p. 14).

Often, in practice, co-morbidity refers to the concurrence of the two disorders (substance misuse and psychiatric condition) at the same time and not just co-occurrence in the lifetime history. It may be that annual prevalence is the best approximation.

Key policy concerns which influenced the identification of co-morbidity as a policy issue included the fact that some studies had suggested that co-morbidity is common in certain population groups. The burden on services from complex psychiatric disorders had been highlighted. It was evident that the population of persons with severe psychiatric disorders and substance-related disorders presents unique problems, in relation to initial diagnosis, the focus of intervention and general management issues, risks of violence and self harm, risks of homelessness, and possible poorer prognosis (Farrell, 2004, p. 5).

Personality disorder, especially anti-social personality disorder, is associated with nicotine, alcohol, and drug dependence. These link in turn to social deprivation, lower levels of social support, and greater risk of hazardous life events. These complex relationships pose challenges to researchers and practitioners alike.

In samples of prisoners and the homeless, there are very high rates of alcohol dependence and associated psychiatric co-morbidity and the burden of alcohol on services used by these populations (as well as more generally) is substantial. There are known links between alcohol dependence and self-harm or suicide. A key concern for practitioners has been how to manage these patients. There are also worries about poor prognosis, suicidal behaviour, poor treatment compliance, high admission rates, increased risk of offending, and violent behaviour (Weaver, Charles, Madden, & Renton, 2002b, p. 12).

Most of the evidence about prevalence and treatment comes from the USA, so the DMRI studies can make a contribution by adding to evidence on the situation in the UK. Most UK studies previously were relatively small and designed to investigate co-morbidity among patients with psychotic disorders. Policy questions which it was thought could be investigated included the possible lack of liaison between staff in psychiatric and drug services and the challenges that arise in terms of how to treat such patients. A key issue was how populations with the more severe mental illnesses should best be managed.

The increase in the proportion of the population using cannabis, and in first use at an earlier age, has been identified as a possible link to increasing problems within certain populations, especially adolescent mental health treatment populations, juvenile justice, and addiction treatment programme populations (Hall, 2005). While the majority of the rise in self-reported ever, recent, or current drug use is accounted for by cannabis, a substantial proportion also relates to use of psycho-stimulants like ecstasy, amphetamine, and cocaine, with a minority reporting heroin use (Farrell, 2004, p. 6). The young population also consumes high levels of alcohol and tobacco.

While prevalence of cannabis use in the last year among adults, as reported in the British Crime Survey, had not changed substantially between the early 1990s and 2000 (8–9%), the prevalence among adults aged 16–64 years reported to the National Psychiatric Morbidity Household Survey had roughly doubled from

5% to 12% between 1993 and 2000 (Farrell, 2004, p. 56). Heavier cannabis use and dependence is correlated with increased rates of common mental disorders and greater involvement with tobacco, alcohol, and other drugs (Farrell, 2004, p. 56). These findings are influenced importantly by other socio-demographic factors, as discussed previously.

In the UK, during the lifetime of the DMRI, the reclassification of cannabis use from a class B controlled substance to class C, associated with less severe penalties for possession (as opposed to trafficking), led to increased discussion of the risks associated with cannabis consumption. The key policy questions were: whether there is a condition which can be defined as cannabis dependence, whether or not there is a gateway effect (in terms of use of cannabis increasing the likelihood of use of other drugs), the link between cannabis use by adolescents and educational underachievement, and the possible relationships between cannabis use and psychosis. In the highly polarized context of debate, the need for evidence is all the greater (Hall, 2005). A notable feature of these debates has been the lack of attention to health education.

Co-morbidity in the national psychiatric morbidity surveys

PROJECT TEAM

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This project used data collected by the national psychiatric morbidity surveys in 1993 and 2000 and additional surveys of the prison, homeless, child and adolescent populations to explore the prevalence of substance use and psychiatric morbidity. The substances looked at were drugs, alcohol, and nicotine. Psychiatric morbidity covered neurosis and psychosis. The research asked key questions about the role of drug use and drug dependence in exacerbating psychiatric morbidity, and aimed to assess whether changes were evident between 1993 and 2000. The surveys looked at social functioning, social support, and health service utilization, and links with social deprivation were also explored. This was a multi-funded, collaborative programme of research to which the DH through the DMRI gave some support along with others.

Key findings

There is a robust relationship between tobacco, alcohol, and drug dependence and other psychiatric disorders. Of the total sample of national household members in England and Wales surveyed in 1993, two thirds were not dependent on drugs, alcohol, or nicotine. One third were classed as substance dependent, with the majority of these being dependent on nicotine. Those who were dependent on a substance were more likely to show signs of neurotic disorder: neurotic disorders were assessed as present in about 1 in 10 of the non-dependent, 2 in 10 of the

nicotine dependent, 3 in 10 of the alcohol dependent, and more than 4 in 10 of the drug dependent. Rates of self-reported cannabis use either ever or in the past year and month had doubled over a 7-year period (comparing surveys conducted in 1993 and 2000; Farrell, 2004, p. 88). Cannabis use among adults aged 16–64 doubled between 1993 and 2000 (Farrell, 2004, p. 56). Twelve percent of these adults took this drug in the last year when surveyed in 2000. Of the 16–35 year olds in the sample, more than two-fifths had ever used cannabis and around one in five had used it within the year prior to interview (Farrell, 2004, p. 68). Twenty percent of the young adult population being recent cannabis users is not a trivial number, and it is thus important to consider the possible health effects of such use from a public health point of view. Just over one in six of the lifetime cannabis users in this young adult population were assessed as cannabis dependent. There was, however, a surprising lack of significant change in the social and psychological correlates of cannabis use in the general population over a 7-year period, despite significant increases in the rates of ever use and regular cannabis use (Farrell, 2004, p. 100). Findings from this study support other evidence showing that early involvement with cannabis and regular or heavy use is associated with negative developmental, social, and psychological factors. Regular use is associated with heavier involvement with other substances and increased risk of becoming dependent. Heavier cannabis use and dependence were correlated with significantly increased rates of common mental disorders and greater involvement with tobacco, alcohol, and other drugs. Among prisoners surveyed, it was found that severe dependence on cannabis and psycho-stimulants (amphetamines and cocaine) is associated with a higher risk of psychosis. By contrast, severe dependence on heroin is associated with a reduced risk of psychosis. Almost two thirds of the heroin users and cannabis users reported that they had used these drugs in prison compared with less than a quarter of the lifetime cocaine users. Over a quarter of the heroin users reported that they had initiated use of this drug in prison. The study observes that prisons are a high-risk environment for heroin and other drug initiation and use. Among young people (13–15 years old) surveyed in 1999, it was found that having a psychiatric disorder was associated with an increased risk of substance use involvement. Links between psychoactive substance use and psychiatric disorders in early adolescence were primarily driven by smoking. Smoking is linked to other forms of substance use.

Lessons for research

There are a number of unique national data sets which can be usefully exploited through secondary analysis. These are valuable in providing information on non-clinical populations.

Lessons for policy

Overall there is now greater awareness of the issue of psychiatric co-morbidity than existed a decade ago, and there is increasing attention to addressing these

needs within different settings. Service interventions with regard to tobacco, alcohol, and drug dependence and psychiatric disorders appear to be limited in scope and effect. There is a need for a longer-term, strategic approach involving broader prevention, education, and treatment activities with strong involvement of primary care. There is a case to be made for discouraging initiation of cannabis use and for informing young people of the greater risks associated with regular, heavy, and dependent use of cannabis. Furthermore, there is a need to explore ways of reducing heroin initiation in prison as part of a broader risk prevention strategy.

A national epidemiological study of co-morbid substance abuse and psychiatric illness in primary care between 1993–1998 using the General Practice Research Database

PROJECT TEAM

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In this study, data from 1.4 million patients in 230 practices in England and Wales were used to determine the nature and extent of co-morbidity in primary care in England and Wales from 1993–1998. These practices contribute to the General Practice Research Database (GPRD). Co-morbidity was defined by “the co-occurrence of substance abuse and psychiatric disorders as recorded by a General Practitioner” (Frisher, Crome, Croft, Millson, Collins, & Conolly, 2002).

Key findings

The annual period prevalence of co-morbidity increased every year from 1993 to 1998. The estimated number of co-morbid cases in the population for England and Wales rose from 24,226 in 1993 to 39,296 in 1998. The study pointed to the importance of neuroses in primary care but neurotic conditions are not the entire problem. The research discovered significant numbers of cases with psychosis, schizophrenia, and personality disorders. The study estimated that, between 1993 and 1998, there were at least 195,000 co-morbid patients and 3.5 million GP consultations involving co-morbid patients in England and Wales. The impact on health services is far in excess of that for mono-morbid patients: co-morbid individuals have an extra consultation frequency for all problems, estimated as an excess of 1,115,751 consultations in England and Wales from 1993–1998. Benzodiazepine dependence, although decreasing, remains the most prevalent form of substance abuse among people (particularly women) aged over 55. The study also found substantial regional variations in co-morbidity (Frisher et al., 2002, p. 37). In addition, the rate is higher in the most deprived areas compared to practices in affluent areas but rates of

co-morbidity are increasing more rapidly in affluent areas. The baseline prevalence of psychiatric illness over the study period was 15% and 0.3% for substance abuse. The Relative Risk (RR) for psychiatric illness for substance misusers compared with non-substance misusers was 1.54 (95% Confidence Interval (CI) 1.47 to 1.62) RR for substance misuse among psychiatric compared with non-psychiatric cases was 2.09 (95% CI 1.99 to 2.22). The Population Attributable Risk (PAR) for psychiatric illness attributable to substance misuse was 0.2%. PAR for substance misuse attributable to psychiatric illness was 14.2%. A concurrent validation study provided reassurance that primary care data do contain information on the vast majority of patients who are diagnosed with substance abuse and psychiatric illness in secondary care settings.

Lessons for research

The General Practice Research Database provides a good data source for secondary analysis. It has the potential to support more detailed study of issues concerning dual diagnosis.

Lessons for policy

These figures paint a picture of a significant problem in terms of primary care workload. The numbers of individuals who newly develop co-morbidity in primary care are increasing year on year. General Practitioners are treating about 10% more co-morbid patients each year. Co-morbid patients have an extra consultation frequency for all problems but co-morbidity is increasing most rapidly for serious psychiatric disorders. The study is an important reminder to policy-makers that while the focus of policy is presently on the most severe patients with drug problems, one must not underestimate the range of problems in primary care. Only a comparatively small proportion of psychiatric illness seems possibly attributable to substance use whereas a more substantial proportion of substance use seems possibly attributable to psychiatric illness. This study does not support the hypotheses that co-morbidity between substance misuse and psychiatric illness is primarily the result of substance misuse or that increasing co-morbidity is largely attributable to increasing substance misuse (Frisher, Crome, Macleod, Millson, & Croft, 2005).

Lessons for practice

Co-morbidity is placing high demands on primary care staff. There are indications that benzodiazepine dependence is still a considerable problem in primary care (Frisher et al., 2002, p. 38). On current trends, GPs will see ever increasing numbers of co-morbid patients. The active early recognition of co-morbidity may lead to better outcomes. Co-morbid patients who had contact with secondary care psychiatric services had fewer A&E visits. More training in the management of co-morbid patients in both primary and secondary care would be valuable.

Dual diagnosis in a Primary Care Group (PCG) (100,000 population locality): A step-by-step epidemiological needs assessment and design of a training and service response model

PROJECT TEAM

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The study's objective was to develop a screening and assessment tool to identify dual diagnosis for use in routine clinical practice and to use this to assess the prevalence of dual diagnosis and related health, social, and lifestyle needs across a range of treatment services. The study also developed training for use in identifying dual diagnosis. The research team were aware that dual diagnosis is a term that has different meanings depending on the context of its use and were aware of other related terms such as co-morbidity and complex needs. This study used the term dual diagnosis to refer to "patients who have both a severe and enduring mental illness concurrent with a problematic substance use that is detrimental to their health" (Strathdee et al., 2002b, p. 5).

Key findings

The study demonstrated the feasibility of using a two-tier screening and assessment procedure as part of routine clinical practice across a range of service settings to effectively identify clients at risk for dual diagnosis. The team found that screens are easy to use, quick, and accurate but they are not sufficient; a full needs assessment is required. A total of 589 clients were screened, and 45% reported potentially problematic substance use and mental health symptoms. Twenty-two percent of the total sample fulfilled the research criteria for a dual diagnosis and in addition were severely mentally ill (Strathdee et al., 2002b, p. 74). In this location, the highest rates of those screened positive for dual diagnosis (i.e., reporting concurrent substance use and mental health symptoms) were among substance misuse clients (93% in alcohol services and 91% in drugs services) followed by mental health clients (62% forensic, 55% inpatients, and 37% outpatients). The lowest rates of positive screening were found among primary care clients (24%). The in-depth assessment showed a similar ranking of the proportion of patients with concurrent mental health and substance use disorder: 83% of those in substance misuse settings, 56% of those in forensic services, 43% of those in psychiatric inpatient services, 20% of those in outpatient psychiatric services, and 8% of those in primary care. Of the mental health clients who completed an assessment, 48% met the research criteria for an alcohol use disorder and 48% for a drug use disorder with cannabis and cocaine powder being the most frequently misused illicit drugs. Of the substance

misuse clients who completed an assessment, the most common mental health disorders were generalized anxiety disorder (55%), agoraphobia (43%), and current depression (41%). Dual diagnosis clients demonstrated significantly more complex and multi-axial needs in relation to personality disorder, physical health, risk or violence, quality of life, and overall level of disability. Similarly, these needs were increased further among those who fulfilled the research criteria for poly-substance use disorder in comparison to those with only one substance use disorder or no substance use disorder. The overall conclusion was therefore that dual diagnosis is a significant problem for services in this local area.

Lessons for research

This study pioneered an innovative approach to translating evidence-based practice into routine clinical settings in the field of dual diagnosis screening and assessment. It found that involving local clinical staff as data collectors leads to an applied version of epidemiological assessment that highlights issues of direct clinical relevance, such as the high level of mental health symptoms among alcohol treatment populations and the consistency of secondary markers of severity across the mental health treatment populations (Strathdee et al., 2002a).

There was some difficulty in recruiting patients from primary care and from the forensic services. Difficulties were encountered for the research team in accessing these services, but in addition it was found that there were far fewer patients in contact with these services than the team were originally led to believe. In primary care, GPs were initially reluctant to co-operate and some sought advice from their defence unions. These advised that establishing case registers of mentally ill clients could have legal implications (Strathdee et al., 2002b, p. 79). Over time this issue was resolved but it had the effect of delaying progress in implementing the research design. The team also found that participating agencies were not happy about implementing hair analysis. Workers were unwilling to make this request to patients and patients' responses were not positive.

One problem frequently encountered by local studies is that they can be criticized as limited in terms of their generalizability. It is important to be aware that no one location is likely to be representative but local studies can show why their selected area is interesting. In this case, the location contained areas of deprivation.

The way a research design is implemented is a key issue influencing its chances of success. In this case, planning and steering of the project locally were enabled through establishing working groups to ensure local ownership of the project (Strathdee et al., 2002b, p. 19). Regular feedback and presentation of results were given to each participating team and services during the entire study period (Strathdee et al., 2002b, p. 19).

Lessons for policy

An issue raised by this research team (one which is indicated by all the studies in this topic area) is that it would be useful to develop a common language when discussing dual diagnosis and co-morbidity. This study is differentiated

from previous research by the disparity in the proportion of positive screens across settings. Findings suggest that substance misuse clients, particularly problem drinkers, may require more intensive assessment and interventions for mental health than is currently provided (Strathdee et al., 2002b, pp. 74–75).

Lessons for practice

The dual diagnosis field is bereft of appropriate screening and assessment tools. But trying to get an instrument to fit all is probably too ambitious. Instruments may have to be adapted to use across different clinical areas among different client profiles. There is a need however for consistent assessment across services, followed by interventions geared towards the problem profiles identified within that treatment population (Strathdee et al., 2002b, p. 74).

GPs identify alcohol as a major primary care problem. The high levels of suicidal ideation found among mental health clients deserve more attention. Prevalence of dual diagnosis was largely underestimated by the staff working in each of the services. Staff showed more positive attitudes to dual diagnosis clients as the study progressed. Use of the screen and added training can be part of a process of bringing about change in the culture of services. A key argument of this research team is that it is possible to change the culture of assessment and orientation of staff to vulnerable groups. Training has a big part to play. Procedures used may encourage involvement of care staff and shifts in awareness and ownership in staff. Focus groups and staff attitude assessment indicated that there is a clear need for further training in dual diagnosis across services which are managing large numbers of clients with complex and multi-axial needs which are not at present being adequately addressed. There was a consensus that mild to moderate dual diagnosis cases could be managed within existing services if further training was provided but that specialist dual diagnosis workers or teams such as ACT (Assertive Community Treatment) teams may provide the optimal treatment for the most severe and chaotic dual diagnosis cases.

Co-morbidity of substance misuse and mental illness collaborative study (COSMIC): A study of the prevalence and management of co-morbidity among adult substance misuse and mental health treatment populations

PROJECT TEAM

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The main aim of this study was to estimate the prevalence of co-morbid substance misuse and mental health problems (co-morbidity) among current

patients of substance misuse and mental health services. Treatment needs were assessed and an attempt was made to assess whether there are differences between populations drawn from London and provincial urban areas. The field-work was carried out in Brent and Hammersmith & Fulham, Nottingham, and Sheffield. This study is a landmark in dual diagnosis/co-morbidity research in the UK. In designing this study, the team were aware that the term dual diagnosis implies a homogeneous patient population whereas presentations that combine these disorders may well be complex and varied in nature. The term may have different meanings to clinicians working in different treatment settings (Weaver et al., 2002b, p. 12). In this study, the term “co-morbidity” was therefore preferred, meaning the simultaneous presence of two or more disorders. The team also aimed to be even more precise and to be able to explain what presentations are being combined, for example psychosis and drug dependence.

Key findings

Assessment of co-morbid status. The study method enabled researchers to compare validated research assessments of the co-morbid status of subjects with those provided by services. Hair and urine analysis undertaken within the mental health population confirmed the reliability of self-reported research assessments about drug use. Comparison of research assessments and those provided by services showed that when a co-morbid problem was reported by the services, it was usually confirmed by the research assessments. However large numbers of cases identified as co-morbid by the research team were incorrectly reported as “problem/disorder absent” by services. This finding was observed in drug, alcohol, and mental health populations. This suggests that substance misuse and mental health services fail to identify significant levels of co-morbidity and that the reporting of co-morbid status by both substance misuse and mental health services has limited utility as a valid method of measuring the prevalence of co-morbidity.

Drug and alcohol service patients. A majority of patients in contact with statutory drug and alcohol services experience mental health problems. Most co-morbid patients have affective or anxiety disorders. Close to half of the drug treatment population experience “multiple morbidity.” There were significant differences in the demographic profile of the drug service treatment samples between London and non-London centres in terms of gender and age distributions. There were significant differences in the reported drug use of London and non-London drug service patients. There were no significant observed differences in the prevalence of psychiatric disorder between London and non-London centres in the drug service treatment populations. Overall one third of drug service patients reported hazardous or harmful alcohol use. Three types of co-morbidity within drug and alcohol treatment populations

can be distinguished: non-substance-related psychotic disorder, non-psychotic patients with personality disorder, and non-psychotic and non-personality disordered patients with affective or mixed affective/anxiety disorder. Co-morbid patients (especially those with personality disorder) have significantly poorer social function and a greater need for community care interventions. They are perceived to be more chaotic and more aggressive by their keyworkers. There is a higher level of unmet need among these patients compared to other drug service patients. Patients with psychosis were most likely to have contact with mental health services. As with the drug service population, alcohol service patients who were co-morbid had greater need for community care interventions than non-co-morbid.

Adult mental health service treatment populations. Within the mental health services treatment populations, the prevalence rate for all co-morbidity was found to be higher than previously reported in comparable UK populations, a difference largely accounted for by the high level of problem drug use observed. The prevalence was dramatically high in certain inner city areas. There were significant differences in the ethnic profile of London and non-London study populations with a higher proportion of BME people in the London centres. Almost one third of this population reported problem drug use in the past year. Cannabis was the most frequently reported drug. A quarter of patients reported hazardous or harmful alcohol use, but less than 5% exhibited patterns of drug use likely to satisfy eligibility criteria for drug treatment programmes. The observed prevalence of problem drug use and drug dependence was significantly higher in London centres when compared to non-London centres.

Lessons for research

It is important to devote time and energy to assuring cooperation from fieldwork sites and collaborating services. There is a need in this type of research to include procedures on how to deal with disclosure of information about children who might be at risk that emerges from research interviews. Researchers cannot rely on diagnoses or assessments made by non-specialist staff in services to identify all cases of co-morbidity. Studies which have estimated prevalence on the basis of assessments provided by keyworkers may have significantly underestimated prevalence. Investigators should not rely on this form of assessment in future studies. This research project has addressed only a small part of this complex and challenging area. More research in this area is needed. This cross-sectional study proved useful, but further studies that use longitudinal designs to investigate the relationship between substance use and mental illness are required.

Lessons for policy

There is an urgent need for training since staff demonstrated lack of competence in assessment and diagnosis. The need for staff development and training is evidenced by the inability of services to identify substantial numbers of co-morbid patients and the failure to provide interventions for co-morbid disorders in all but a minority of cases. The capacity of mental health and substance misuse services to independently manage co-morbidity needs to be developed. The scale and heterogeneity of need among the populations studied indicates the complexity of issues related to service development. The potential for cross-referral and joint management of co-morbid patients appears to be low, particularly in relation to psychotic patients in treatment with mental health services. Mental health and substance misuse services should begin work to develop joint policies around assessment, intervention, and management. This team concluded by expressing caution in relation to any proposals to invest in the development of new combined treatment teams. They do however suggest that “work begins to assess how the two approaches and philosophies represented by the mental health and substance misuse services may be best harmonized and integrated in the longer term” (Weaver et al., 2002b, Section 7.4.2). However they stress that it is important to make a distinction between integrated treatment and integrated treatment teams, the latter being a term employed to describe a particular model of service delivery. Acknowledgement of regional variation is a key issue. There were significant differences on some variables between London and non-London centres, but caution is required in interpreting these findings. Further investigation is needed of possible regional variations; other factors which might influence patterns are deprivation and urbanization.

Lessons for practice

Severe poly-drug use was the norm in the drug service population and misuse of alcohol was a common complicating problem. Problems arising from illicit or non-prescribed drug use were likely to be a complicating problem in the management of a substantial minority of alcohol patients. Co-morbid patients frequently suffer from multiple rather than dual disorders. Most cases identified had lengthy and well-documented case histories. The scale of the need presented by patients with psychosis and substance misuse co-morbidity implies that the need cannot be addressed by the creation of “dual diagnosis specialists.” There is a need for all mainstream mental health staff to be trained to manage co-morbidity at some basic level. Thus collaborative working between substance misuse and mental health specialists is required to effectively meet the needs of co-morbid patients with psychosis. A large number of patients of substance misuse services do not meet the criteria for access to community mental health services. Alternatives might be collaborative working with local psychotherapy services or with GPs. Staff turnover in London centres can be a problem for service delivery, quality of patient care, and research implementation.

Key messages from DMRI research on co-morbidity

- There are a number of national data-sets which can be usefully exploited through secondary analysis.
- Variations in prevalence rates may reflect differences in definitions and in the populations assessed, the research methodology, sampling strategies, diagnostic tools used, thresholds set, geographical context, and timeframe.
- Rates of co-morbidity have increased over time.
- Dual diagnosis is a significant problem for local services and in terms of primary care workload.
- More training in the management of co-morbid patients in both primary and secondary care would be valuable.
- Training can bring about change in the culture of services leading to more positive attitudes to dual diagnosis patients.

WAITING LISTS

Policy context

The rationale for prioritizing research on waiting lists derived partly from a recognition that the time that problem drug users spent waiting for treatment was often quite lengthy in both community and inpatient services. The degree to which this was so was to some extent dependent on local policy, the availability of treatment options, resources, and the demand for treatment. Other factors like geographical distance from services could also influence access. It was arguable that long waiting times would impact negatively on take-up rates and on the length of a client's engagement with services. In addition, there was the obvious inconvenience or even hardship suffered by clients left waiting for access to services. Treatment on demand was very rare. Many clinics had to employ waiting lists, although waiting times varied between services and over time. The NTA reported waiting times in excess of 99 weeks in some areas (Strang et al., 2004b, p. 7) though there have been very substantial improvements since that time. This situation had been mentioned in the Polkinghorne Report of 1996 (Department of Health, 1996). More recently, the 2002 report *Changing habits* (Audit Commission, 2002) stated that lengthy waiting lists could drive clients away. Other studies had found that long waiting lists were among the most frequently mentioned deterrents when users themselves were asked their reasons for not seeking help. The Audit Commission report also raised the concern that longer waits might increase the risk that service choice would become driven by availability rather than need. The capacity of drug treatment services to deal with levels of treatment demand and consequent waiting times continues to be a policy concern, related as it is to the importance of providing timely and appropriate treatment at or soon after a drug user's presentation at a service.

A reduction in waiting times is one of the key aims of the NHS Plan and a reduction in the number of drug misusers being denied access to appropriate

treatment is one of the objectives of the Government's Drug Strategy (UKADCU, 1998). The National Drug Treatment Monitoring System (NDTMS), implemented in April 2001, was designed to enable improved monitoring of clients in treatment and to provide relevant information, including waiting times, take up, and retention. The NTA issued guidance on acceptable lengths of waits in March 2002 (National Treatment Agency, 2002b) in accordance with a target set for the NTA by DH. In preparing these guidelines, the NTA had been partly informed by interim findings from the DMRI Outcome of Waiting Lists (OWL) project and had also conducted focus group discussions and one to one interviews with a range of stakeholders, including providers, commissioners, and service users. Over 250 individuals participated in this consultation process. Prior to issuing the guidance, the NTA had sent out a letter proposing maximum acceptable waiting times and giving notice of forthcoming guidance on managing and reducing waiting. This NTA guidance set waiting time targets ranging from 2 to 3 weeks by 2003/2004 for each treatment modality in *Models of care* (National Treatment Agency, 2002a) and identified waiting times as one of four key performance indicators for drug misuse services. *Models of care* had set out guidance on issues to do with commissioning and partnership, better coordination, and support for primary care.

Many services now offer some element of priority "fast tracking" alongside a variety of interim interventions pending engagement on a treatment programme (Donmall, Watson, Millar, & Dunn, 2003b, p. 16). Attention to waiting times continues to be important in a context where national policy emphasizes increasing the number of drug misusers participating in effective treatment, early identification, and treatment of young people with drug problems, as well as initiatives to divert drug users from the criminal justice system into treatment (Donmall, Watson, Millar, & Dunn, 2003b, p. 16). The NTA, which is responsible among other things for guiding, supporting, and monitoring the commissioning of drug misuse services in the NHS, aims to increase the participation of problem drug users in treatment programmes by 66% by 2005 and by 100% by 2008. The aim is to minimize unnecessary delays and increase the capacity of services. Building on this, the most recent DH Public Service Agreement includes the aim to "increase year on year the proportion of users successfully sustaining or completing treatment programmes."

Among the questions which interest policy makers are: what are the determinants of waiting lists, both within the NHS and in the voluntary sector? What are the pathways onto waiting lists? What happens to individuals when they are on waiting lists? How are waiting lists managed? Does waiting time have an influence on whether or not a person makes it into treatment? And can waiting time be used effectively? Research studies within the DMRI programme outlined below help to provide some answers. It is interesting to note that, when commissioning these projects, funders and advisors were aware that policy changes can influence the functioning of waiting lists and the clinical handling of patients. This turned out to be a prescient observation as the provision of additional funds to improve waiting times impacted on the implementation of aspects of the projects described below.

Randomised clinical trial of the effects of time on a waiting list on clinical outcomes in opiate addicts awaiting outpatient treatment

PROJECT TEAM

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The setting for this project was an outpatient drug treatment service in south London providing maintenance and withdrawal programmes predominantly with the use of methadone. The research involved a randomized clinical trial of drug users seeking outpatient treatment for opiate dependence. The objective was to examine the impact of drug treatment waiting times on the likelihood of treatment entry, retention, and changes in client behaviour. A total of 182 individuals were recruited over 28 months to compare the process and outcomes of accelerated treatment entry with standard treatment entry.

Key findings

Although there was an overall benefit of reduced waiting times on treatment initiation, many of the secondary effects were either not significant or not in the predicted direction (Strang et al., 2004b, p. 73). Of all patients in the study, over two thirds entered treatment after waiting. Treatment entry was associated with physical and psychological health gains, reduced criminal activity, and improved motivation. More patients from the accelerated group than from the standard group entered treatment. Once in treatment, this group showed significant improvements in substance use, particularly related to use of heroin or non-prescribed methadone. Waiting times did not seem to affect treatment entry within the standard group however. The time spent waiting for treatment varied for those in the standard group, ranging from 2 to 21 weeks. There was no difference in the rate of treatment entry between those waiting a short or long period within this standard group. Almost two thirds of all these patients continued to attend for 3 months, and almost half continued to attend for 6 or more months. This was not affected by whether or not the patient was in the accelerated or standard group. Older patients were more likely to be retained in treatment than younger ones.

Lessons for research

Recruitment targets can prove to be too ambitious. The original aim was to recruit 300 clients. Target numbers were reduced because of a fall in the number of opiate users accessing treatment at the clinic, because of a high number not eligible to participate (for example, because prioritized by the service or already prescribed substitute medication), and because of numbers of clients

refusing trial participation. There are issues around the use of a randomized clinical method in an applied environment. In this case, it was not possible for the research team to control the length of the waiting time particularly within the standard condition (Strang et al., 2004b, p. 80). The use of a priority system to “fast track” severe and immediate needs also limits the extent to which results can be generalized.

Lessons for policy

Reducing waiting times is good but it is not the whole story. Reducing delays encourages entry into treatment but retention is not affected. However those who enter treatment appear to improve more than those who do not. Engaging drug users in treatment as early as possible is desirable. The use of crack cocaine was more common in those who failed to take up treatment (Strang et al., 2004b, p. 74).

Lessons for practice

Treatment uptake remains a problem in the clinical context: here one third did not take up treatment after referral. Decreasing delays has a positive effect on attendance (Strang et al., 2004b, p. 73). Efforts made by clients awaiting treatment (to reduce drug use, improve health, or limit criminality) have a limited duration, and gains made in the initial waiting times may be lost if clients are made to wait too long (Strang et al., 2004b, p. 75). Attrition or drop-out of patients around the dose assessment point in treatment requires some attention. Services need to pay attention to opiate users’ use of other drugs such as alcohol and cannabis (Strang et al., 2004b, p. 76) and more attention to the needs of crack cocaine users and injecting drug users is needed.

Outcome of waiting lists (OWL) study: Waiting for drug treatment—effects on uptake and immediate outcome

PROJECT TEAM

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The study reports on findings on waiting times in the period 2000 to 2002. The research involved a national survey of drug services carried out between December 2000 and January 2001, a prospective study of new referrals, a retrospective study of client records, and an interview survey to assess drug users’ views. The focus was on treatment for opiate misuse.

Key findings

“The main finding of this study is that there is no measurable effect of the observed waiting times on treatment uptake or on retention in treatment at

3–6 months. This finding is very important and perhaps unexpected given received wisdom in the field and specific current policy directives” (Donmall et al., 2003b, p. 117). The key finding was thus, that waiting times do not appear to influence either take-up or retention in treatment. This finding must be interpreted with care and contextualized so as not to appear to justify complacency around waiting times. Of those agencies offering the target treatment options (prescribing and inpatient services), two thirds had a current waiting list for substitute prescribing and three quarters had a waiting list for inpatient treatment (Donmall et al., 2003a). Many services reported that they were operating close to capacity, with almost half reporting shortfalls in staffing. Nearly half reported that their prescribing budget was usually overspent, with most of the rest reporting they spent close to the limit. Half of services reported waits of 4 weeks or less; clients in a fifth of services waited more than 20 weeks. The mean time spent waiting from referral to start of treatment for non-priority clients was reported to be 12 weeks, covering the time from referral to assessment and then from assessment to start of treatment. These figures were services’ own estimates of waiting times. However actual observation of waiting times differed from these estimates. There was considerable volatility in waiting times. Waiting time volatility appears to be a feature of drug services. At this time, nearly half of services did not carry out any system of waiting list management. However others did, using a variety of procedures.

Detailed study of waiting times at 15 agencies showed that the bulk of attrition occurred between referral and assessment. Relatively few clients are lost following assessment. Multivariate analysis of factors that might influence uptake of treatment showed no significant effect of waiting time *per se*. Uptake seemed most influenced by age (older clients were more likely to take up treatment offers), previous experience of treatment, and self referral or referral via a GP. Uptake was substantially better at some agencies than others. Similarly, the nature of the individual agency appeared to have a strong effect on retention. Waiting time appeared to have no independent effect on retention rates. Other factors had some influence including referral source, pick up regimes, supervised consumption, duration of opiate use, problematic alcohol use on presentation, illicit methadone use on presentation, and agency. A complex interaction is involved linking a patient’s stability and the kind of treatment regime offered to each patient. Perceptions about waiting were important in influencing clients’ response to treatment services. Waiting reputations may develop and discourage presentation for treatment. There was some resentment of the “fast track” system where it favoured clients other than themselves. A third of clients may increase their drug use while waiting and there may be other negative personal or social consequences.

Lessons for research

This research shows the importance of definitions and measures used. Agencies define and measure their waiting times in a variety of ways. The process involves moving between the stages of referral → presentation → assessment →

treatment → prescribing. How each of these is defined and measured impacts on calculations of waiting times. This study also demonstrated that complex and substantial data collection on services is possible. However response rates from services continue to present problems, influencing the question of how representative a sample may be. Cooperation from agencies depends on their own staffing situation; an initial agreement to be involved may change over time. Policy changes (at national and local level) may affect the implementation of research. Here agency waiting times changed before and during the data collection period.

It is also important to recognize the role of perceptions. The service user's perspective may be particularly informative in understanding the personal and social consequences of waiting for drug treatment. Agencies' perceptions of waiting times may not be accurate. Actual observation is generally better than relying on reports.

Speculations derived from this study could inform hypotheses for future research, for example with reference to variations among agencies in the approach taken to drug free status during treatment. Donmall and colleagues note that these findings are consistent with Hough's comment that high drop-out rates sometimes reflect a tough-minded approach to the enforcement of rules and conditions (such as staying drug-free; Hough, 1996). Similarly it would be worth investigating in what ways rules about missing keyworker sessions might influence retention. The role of variations in the extent of additional support offered to clients on methadone programmes could also be investigated in future studies. Some services offer complementary therapies, training, employment programmes, and other supports. Some agencies had strong links with local non-statutory services that provided day care activities and counselling services. The distance clients have to travel to get to an agency and attend appointments may be relevant. Motivation may make a difference and may explain the referral source effect. Less stable clients may be retained for a shorter time and this may explain the influence of pick up regime and supervised consumption. Clearly a cluster of related factors influence the experience and effects of treatment and these are worthy of further investigation.

Lessons for policy

It is clear that some agencies are more attractive to users than others and are more successful in engaging and retaining clients. The factors that influence this are worthy of more attention. More study (research and discussion) is needed on what exactly constitutes best practice and how it is that poor practice can continue. Waiting times should not be used on their own as a measure of the quality of service provision. At the time this study was conducted, it was evident that more resources were needed for treatment services as well as paying attention to more efficient ways of managing existing resources. It was evident from this study that the definition of "waiting" needed to be standardized.³ The information on retention contained in this report is relevant to current policy concerns. The strong agency effect is particularly important.

Lessons for practice

An agency's style of operation makes a difference, especially with regard to processes of access and care. It appears that some patients are "voting with their feet": services need to pay more attention to these indicators of patient choice. There is a need for a strategy for dealing with clients who are waiting for assessments in all agencies. Having no ongoing contact from the drug team while waiting leads to frustration; an occasional letter or phone call to inform clients of their progress up the waiting list was often all that was needed. This study found that most people would like to be able to speak to a worker on a one to one basis for advice on what to do or how best to cope while they were waiting. Some felt that the interim doses given by GPs were insufficient so they continued to use some street drugs on top of their prescription. There was some resentment of the fast track system which allowed arrest referral clients to access treatment more quickly. This was seen as unfair by some respondents. Before and during treatment, ways to fill in time are found to be helpful, for example day centres or drop in services.

The final report on this project (Donmall et al., 2003b, p. 107–108) notes that waiting times are influenced by resource problems such as staff leaving the agency or going on long-term sick leave, lack of medical cover or doctor sessions, and accommodation problems which can limit the number of clinics run or clients seen. Other influences noted included changes in caseload profile such as there being fewer DNAs, increasing numbers of referrals, increasing numbers of priority clients (which holds non-priority clients back even longer), and more complex clients on the caseload (e.g., dual diagnosis or child protection issues). Similarly, waiting times can be influenced by procedural changes such as a breakdown in shared care arrangements locally or the introduction of dose testing as standard, resulting in a longer assessment period. These problems can be addressed by filling vacant posts, increasing the allocation of doctor time, provision of additional resources to fund staff overtime, provision of additional core funding, procedural changes such as the introduction of a triage system for referral and assessment, employment of dedicated detox workers, deliberate overbooking to compensate for DNAs, and more provision of shared care.

Accessing drug services: Needs and views of drug service users

PROJECT TEAM

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This project was located in the North of England. It aimed to understand the nature of drug users' needs. It examined a range of interventions offered to clients presenting to drug treatment services and considered the pathways, enablers and

barriers to access to services from the clients' perspective. The key aim was to assess how far service users received provision to meet their needs. A total of 1418 case note files were reviewed and 46 service users and 51 drug service providers were interviewed. The findings from interviews with service users and service providers were utilized to develop a Drug Users Needs Assessment Schedule (DUNA) which incorporates the views of drug users directly into the assessment process. This was tested at five services.

Key findings

Referrals to the drug services surveyed here came mainly from GPs or were self-referrals. Others were referred via probation or other drug services. In these services, there were few shared care arrangements. Clients referred by probation were less likely to attend than those who self-referred. Uptake of assessment appointment was not affected by waiting time, client age, gender, or service agency. Retention in treatment was influenced by agency, referral pathway, primary drug problem, and gender. Waiting time, age, and fast-tracking did not have an effect on likelihood of being retained in treatment. Clients at some agencies were more likely to be retained in treatment than at others. The agency with the best retention rate had five times more clients remaining in treatment at 3 months than the agency with the poorest retention rate. The agency with the best retention rate was seen by service users as particularly friendly.

A number of factors influenced retention. Self-referral was a good predictor of retention in treatment. Users of drugs other than heroin were less likely to be retained in treatment. Women were more likely to be retained in treatment than men. The length of time clients had to wait for treatment did not have a significant effect on retention.

In the statutory services reviewed, almost 9 out of 10 provided community detoxification programmes and a similar proportion provided maintenance prescribing. These interventions were not available at most non-statutory services. The main interventions said to be offered were counselling, motivational interventions, and cognitive behavioural therapies. Nine out of 10 were said to provide relapse prevention. A variety of complementary therapies were also said to be available. Service user interviews, retrospective analysis of case records, and needs assessment interviews all indicated that complementary therapies were only offered to a very small proportion of service users. Levels of service user involvement in agencies (as opposed to being involved in their own treatment plans) were generally low. One in four agencies had user groups. Service users' concerns focused on waiting times, the way service rules were applied, and staff attitudes (both professional and administrative staff). Service location, transport, and opening hours were also important. DTTOs were appreciated as a way to fast track entry to services.

Lessons for research

Significant changes in governance arrangements were introduced into NHS services between 2000 and 2002. These changes had an immense impact on

research implementation for this study. Thirty Local Research Ethics Committees (LRECs) and 30 NHS Trust research governance committees were involved in this study which covered a wide geographical area. Applications to research governance committees were particularly problematic as each Trust had different questionnaires or requirements to be fulfilled. Since this time, research governance procedures at NHS trusts have been rationalized which may reduce difficulties such as those experienced by this team.

Lessons for policy

Some service users felt it was unsatisfactory that they had not been able to access interventions prior to committing a crime. Service users had a high level of desire for user or ex-user involvement while service providers were reluctant to move in this direction. A number of factors impact on retention in treatment. Services seem to have less to offer stimulant or other drug users. Some agencies are better at retaining clients than others. While prescribing interventions are important to drug users, clients are looking to drug service agencies to provide more in relation to broader needs and concerns.

Lessons for practice

Service providers would like to see greater availability of complementary therapies, psychological interventions, and structured counselling. They would also like to see more shared care provision. Service users favoured agencies which adopted a more flexible approach and treated them with respect. While a range of interventions were said to be available at agencies, only a few clients interviewed had actually received these. The majority had received prescriptions.

Key messages from DMRI research on waiting lists

- Reducing waiting times is good but it is not the whole story: waiting times should not be used on their own as a measure of the quality of service provision.
- Be careful about definitions and measures used.
- The issue of the effect of waiting times on treatment uptake and retention is complex.
- Perceptions about waiting are important.
- Service users' perspectives help us to understand the personal and social consequences of waiting for drug treatment.
- Some agencies are more attractive to users than others and are more successful in engaging and retaining clients.

TREATMENT INTERVENTIONS

Policy context

The report of the Task Force to Review Services for Drug Misusers (Department of Health, 1996) had noted the paucity of quality research on the effectiveness of treatment and identified as a key priority the need for greater evidence of effectiveness to guide rational commissioning of services. However, assessment of the effectiveness of treatment is not a simple matter. It is likely that clients seek treatment when they are at their worst so they are probably more likely to improve than to get worse after treatment whatever the form of the intervention. Observational clinical studies may overestimate the effects of specific treatments. Advice, education, and support are also influential factors over and above specific medical interventions. Because addiction is a psychosocial behavioural phenomenon as well as a biological one, treatment involving substitute prescribing is often as much about how individuals relate to the treatment as it is about what the treatment does to the individual. In addition though, issues of dosage are important in treatment practice and success.

The UK government's anti-drugs 10-year strategy (UKADCU, 1998; Home Office, 2002) and *Our healthier nation* (Department of Health, 1998a) recognized the need to provide effective and accessible treatments to enable drug misusers to overcome their drug problems and improve their health and social functioning. Most existing research has focused on the prescribing of long-acting opiate methadone in treating heroin dependence. Methadone reduces opiate withdrawal symptoms and can be an effective method of detoxification. However, there is a high incidence of relapse following detoxification, which has led to the prescribing of methadone on a long-term, non-reducing basis. Guidelines on the clinical management of methadone prescribing have been issued (Department of Health, 1999). In spite of this, some concerns have been raised about the dosage levels used in clinical practice, the view being that these may not always be high enough to be effective. There is some evidence that methadone maintenance treatment is more effective when the prescribed dose is in the medium to high range (Merrill et al., 2004b, p. 19). The benefits of methadone maintenance treatment derive from more than simply providing a substitute drug. Providing high quality counselling and general medical treatment services, establishing close long-term relationships with clinic staff, and retaining patients in treatment all add to the effectiveness of treatment (op.cit., p. 19).

While recognizing the difficulties in conducting research in this topic area and being aware of the complexity of the issues involved, it was decided to proceed with three experimental studies focusing on injectable methadone prescribing, use of cognitive behavioural therapy (CBT) with methadone maintenance (MM), and amphetamine prescribing.

Oral methadone maintenance is the standard treatment for opioid dependence and has proved to be effective. However some opiate-dependent, injecting drug users fail to make any health and social gains despite treatment and continue to inject illicit drugs and participate in criminal activity (Metrebian et al., 2003a). There is

little consensus of opinion on how best to manage these patients. Arguments have been made for prescribing injectable methadone to such patients. An important policy question is, who would actually benefit from receiving injectable methadone?

While there is evidence to support the effectiveness of methadone maintenance treatment from several countries and some evidence emerging recently on the role of injectable opiate treatment, there is less evidence on the role of ancillary interventions. Cognitive behavioural therapy has become the leading treatment approach in a variety of psychological disorders but there has been little research to evaluate the cost effectiveness of CBT in substance misuse disorders. Most studies of the effectiveness of CBT and psychotherapy in MM treatment have been carried out in the USA.

After cannabis, amphetamine has been the second most widely used illicit drug in UK, although there are now indications that it is being replaced in some areas by cocaine. Most amphetamine use is recreational, but a proportion of amphetamine users develop significant dependence. Amphetamine is often injected and injectors have been shown to be at risk of infection with blood-borne viruses. There has been little research into the effectiveness of treatment for amphetamine dependence. Services have generally failed to attract users into treatment, although in England and Wales between 900 and 1,000 amphetamine users appear to be being prescribed dexamphetamine (Merrill et al., 2004a), and 43% of dexamphetamine prescriptions are issued by doctors working outside specialist services (Merrill et al., 2004b, p. 18). In 1996, the Task Force to Review Services for Drug Misusers concluded that there might be a role for amphetamine substitution prescribing in some cases but that further research was needed. In 1998, the Government's 10-year strategy for tackling drug misuse highlighted the treatment of stimulant dependency as a priority research area.

A recent concern has been to try to include greater input from health economists in the assessment of the costs and benefits of treatment. In general, the literature indicates that treatment results in a range of savings to society. The main areas of life affected include health care, criminal activity, employment, and drug treatments. Reduced criminal activity appears to be the main area where costs can be saved. In addition, there is the potential benefit of treatment to the individual drug misusers themselves.

There has also been growing emphasis on the importance of utilizing the "gold standard" approach of the Randomized Controlled Trial in drugs research. There are a number of constraints on the conduct of this kind of research. CONSORT guidelines⁴ seek to ensure that best practice is followed in the design, conduct, analysis, and generalizability of trials, allowing the reader to make informed judgements regarding the internal and external validity of a trial. The MRC has also issued guidelines to which the DH expects research projects using a RCT methodology to adhere. These include, for example, the need to establish a trial steering committee, seek ethical approval, and institutionalize procedures for data monitoring. Recognizing the high costs and longer time scales involved in RCT research, the PRP decided that two of these experimental studies should be viewed principally as pilot exercises.

Pilot UK-Injectable Methadone Trial (Pilot UK-INJECT)

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This was a pilot feasibility study for a multi-centre randomized controlled trial to compare the outcomes and costs of offering and prescribing injectable versus oral methadone to a selected group of opiate-dependent, injecting drug users. The aim of the study was to demonstrate the feasibility of conducting a multi-centre RCT as well as looking at the feasibility of recruitment. In addition, the main economic aim of the pilot study was to test the feasibility of obtaining adequate service use and cost data for this group of patients. The recruitment sites were located in Manchester, Salford, Liverpool, and London (Camden and Islington, Brent, Kensington & Chelsea, and Westminster). It was necessary to operate within the DH clinical guidelines regarding the supervision of patients receiving oral and injectable drugs, with daily supervision at the clinic during the first 3 months of treatment.

Key findings

A multi-site study was shown to be possible. A total of 903 patients presenting to five clinics were screened for eligibility for the trial. The majority of these opiate-dependent drug users presenting to treatment were either not injecting, injecting infrequently, or had only recently started injecting. The conclusion was that the target population of opiate-dependent drug users with long injecting careers and many previous experiences of treatment with oral methadone appears not to be presenting to treatment services. Sixty percent of opiate-dependent drug users presenting to these treatment services were not regular or long-term IDUs, and 54% had not previously received oral methadone treatment continuously for at least 6 months. Two out of three of the clients who were eligible were not interested in participating in a trial. It appeared that a main reason for refusing to enter the trial was that patients wanted an oral methadone detoxification. A larger scale research study would need to have a revised design to overcome recruitment problems. The feasibility study showed that it is possible to collect reasonably detailed economic data in a number of ways. A relatively comprehensive list of health and social services used outside the clinics as well as information on criminal justice contacts, illegal activities, employment status, and days off work was collected. Total costs per patient at month two were £584 for the OM group and £3269

for the IM group (at month six these were £1542 and £7025 respectively). Differences in the costs are mainly due to the need for staff supervision of injecting clients, additional consumables required, higher dosage of methadone, higher cost per mg of ampoules compared to an oral mixture, and the increased length of time that clients were retained in treatment.

Lessons for research

It is valuable to conduct pilot trials before committing funds to a full RCT. Pilot studies should build in flexibility to serve as adequate pilots. A choice for trials is whether to have narrower or wider inclusion criteria. Narrower inclusion criteria may be better for informing on which patients most benefit from particular interventions. With wider inclusion criteria, sub-group analyses may be conducted to identify which patients achieve the greatest outcomes. Projects may need to choose between these two approaches.

The management of trials is complex and can be time-consuming. RCTs need to adhere to the MRC guidelines on good practice, which include establishing a Trial Steering Committee and a Data Monitoring and Ethics Committee. Clinical Trial Coordinators are needed. Trial protocols and clinic guidelines have to be produced. It takes time to get approval from the Medicines Control Agency to use drugs out of their product licence. It takes time to get approval from LRECs. It takes time to set up dispensing procedures and to recruit staff. In addition, in this case, there had been little experience of supervised injecting in the UK and protocols had to be devised for this. There were no existing guidelines for supervising injecting. Monitoring screening procedures was time-consuming. Supervising injecting was time-consuming and needed extra resources. Referral patterns vary from month to month and this needs to be taken into account in planning recruitment strategies.

The number of subjects ultimately recruited was less than half of the lower limit anticipated. Recruitment is clearly an issue for any larger scale trial. The lesson may be that randomized controlled trials should be kept as simple as possible. MRC Guidelines of Good Practice for conducting multi-centre RCTs were followed in this study. This design aimed to be a simple pragmatic one, recruiting patients during the normal pattern of service use. Future studies might consider using a crossover design instead of the usual RCT.

In implementing cost studies, thought should be given to the length of time over which respondents are asked to recall use of services. This study suggests that recall is good over periods from 30 days to 4 months, though a maximum of 3 months may be preferable.

Lessons for policy

There remains a need to rigorously evaluate the prescription of injectable methadone as a treatment for injecting opioid users. Insufficient information is known about drug users presenting to drug treatment services.

Lessons for practice

There is a case for more uniformity in drug assessment and treatment protocols across England and Wales, and this type of multi-centre study shows that it can be achieved. This experience of supervised injecting could be usefully used to devise some practice guidelines. A local protocol for supervised injecting has been developed. Suitable rooms to be used as injecting rooms had to be identified and extra resources were needed to equip rooms for this purpose.

The effectiveness and cost effectiveness of cognitive behaviour therapy for opiate misusers in methadone maintenance treatment: A multi-centre, randomised, controlled trial. UKCBTMM study (United Kingdom Cognitive Behaviour Therapy Study in Methadone Maintenance Treatment).

UKCBTMM PROJECT GROUP

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This project was conducted in 10 community-based clinics in three regions of England. The clinical locations were: Camden and Islington (north London), Bolton, Wigan, and Leigh (Manchester), Brighton, Merton, Sutton, and Wandsworth (south London), and Liverpool. This was a pragmatic, multi-centre trial in which the control condition Methadone Maintenance Treatment (MMT) was as close as possible to the usual treatment approach in UK clinics. The trial aimed to test the hypothesis that Cognitive Behavioural Therapy (CBT) is an effective adjunct to standard MMT in reducing illicit drug use and that it is a cost-effective adjunct, improves quality of life, and increases compliance with MMT. Clients randomized to CBT were offered weekly CBT sessions of 50 minutes involving up to 24 sessions over 6 months. This study proved to be valuable in discussing the problems of research and revealing variations in services and in expectations of services, as set out in the sub-sections below.

Key findings

A total of 842 outpatient opiate misusers were screened. Of these, 369 (44%) were eligible and 60 (16% of eligible) were randomized. The original aim had been to recruit 220 subjects. Indications were that the costs of treatment

are outweighed by resource savings: both treatments resulted in considerable cost savings relative to treatment costs. Significant difficulties were encountered in the implementation of the trial. These included low baseline levels of CBT trained staff, low rates of willingness to participate in the trial, and poor rates of engagement with, and drop out from, standard methadone treatment. Some clients of services were not sufficiently stabilized on a sufficiently high dose of methadone. CBT subjects attended fewer CBT sessions than planned; 24 were planned but on average four were attended. Some of the problems encountered were that there was a lack of enthusiasm for research in some sites among clinicians, managers, and commissioners; there was a lack of fidelity among therapists to taping sessions; there was a lack of availability of regular supervision of clients; and a lack of use of the Care Programme Approach. The difficulty in finding funds to support clinical people involved in research is an obstacle to research.

Lessons for research

The implementation of trials is as important as the design. In this case, some clinics or centres were found not to be geared or resourced to hosting research trials or were overloaded with research studies competing for similar subjects. This project involved a huge logistical operation combining input from 7 services, 14 CBT trainers and supervisors, 9 members of the research team, and 17 members of the UKCBTMM project group (principal investigator, authors of CBT manual, statisticians, clinical leads, health economists, and trial coordinator). The lesson learned is that complex studies need formal piloting before proceeding to implementation of the main trial. Rigorous project designs need review following a pilot. However, even where, as in this case, pilots lead to amendments to the design, this may not be enough to improve recruitment. It is important to carry out efficacy research before doing effectiveness research. Here researchers did not expect the type and standard of service that they found. Researchers need to be familiar with the reality of British drug treatment services when designing interventions and trials. Given the state of treatment in practice in the UK at present, too rigorous a treatment protocol is unrealistic. Studies might be more successful if research were carried out on established treatment interventions rather than trying to implement the services and carry out research at the same time. There can be delays in obtaining treatment costs for trial interventions and there is a need for better systems of funding the treatment costs of research. Applying methods developed in other countries may be difficult in the UK context. Recruitment into this trial was considerably lower than in previous published research using a similar trial design in the USA.

Lessons for policy

There is a need for caution in interpreting research evidence from the USA in relation to its applicability to the UK treatment setting. Most of the services were overstretched and understaffed with a high staff turnover. There were very

few staff in the services who had been trained to provide psychological interventions including CBT. The background methadone treatment was not optimal in many of the centres involved. Services were struggling with high caseloads, limited resources, and high staff turnover. The variation of methadone treatment and the therapist difficulties will no doubt be of interest and concern to policy-makers. The issue of dose is important and relates to engagement in treatment.

Lessons for practice

Practice in relation to standard methadone treatment varied considerably across the sites involved in this study. There was considerable variation in methadone treatment across the sites with those offering a low threshold, flexible, engagement policy having poor treatment retention. Low methadone doses are prescribed quite commonly. The low doses being prescribed in some services to some clients can be an important influence on engagement in services. There is a limited number of CBT trained staff. Training may not be completed. Over half of those recruited to CBT training dropped out, either because they did not want to continue or because they moved on to other jobs or positions. It can also be hard to find cases to practise on as part of the accreditation process. Clients appear unwilling to participate in lengthy, frequent CBT sessions.

Dexamphetamine substitution as a treatment of amphetamine dependence: A two centre randomised controlled trial

PROJECT TEAM

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The aim of this study was to investigate the impact of dexamphetamine prescribing for the treatment of amphetamine dependence. It was a randomized, two-centre, parallel group design. As a pilot study, it was intended that the results of this study could inform the design of more definitive studies (Merrill et al., 2004b, p. 36). The research was carried out in Manchester and Cardiff. The Manchester study participants were recruited from Manchester Drug Service, Salford Drug Service, and from the Community Drug Teams of Greater Manchester and Lancashire. All study participants were seen at the main Drugs North West outpatient department at Prestwich North Manchester. The Welsh study participants were recruited from routine referrals to the Community Addiction Unit, Cardiff, and Vale NHS Trust. The trial was rigorously undertaken. As with the other RCT design studies described above, the research was both time-consuming and relatively expensive.

Key findings

This pilot study demonstrated the feasibility of conducting a randomized controlled trial comparing the treatment of amphetamine dependence with BATA (best available treatment alone; a range of standard therapeutic interventions) and BATA supplemented by amphetamine substitution using dexamphetamine tablets (DEX). Appointments were sent to 165 participants: 58% attended for the initial assessment appointment and 42% failed to attend. Of the 96 participants who attended, 61% entered the trial and 39% were ineligible. In total, 59 individuals fulfilling DSM IV criteria for amphetamine dependence were recruited from the two centres. Thirty-two were randomized to DEX and 27 to BATA. The majority were unemployed, with a mean age of almost 32 years and all were male. Fifty-six percent were injecting on entry to the study. Polydrug use was common, with alcohol, tobacco, and cannabis being the most frequently used other substances. Both groups reported reductions in use of illicit amphetamine. Both treatments resulted in substantial falls in self-reported amphetamine use during the first month of treatment, which were maintained after the end of the treatment phase. Treatment with dexamphetamine resulted in better physical health early in treatment and trends towards improvements in other problem areas. Although there was a tendency towards better outcomes for treatment with DEX over BATA, the difference was less marked than suggested by previous uncontrolled studies.

Lessons for research

A combination of urinalysis and self report seems the most effective method of revealing illicit drug use (Merrill et al., 2004b, p. 22). This study supports the others in this topic area in demonstrating the difficulties in doing controlled clinical studies under conditions of routine care in busy clinical settings. In this case, good follow-up was achieved however. Future RCTs into the treatment of amphetamine dependence based on the methodology of the current study should be achievable within clinical settings. Future studies must involve higher numbers of participants that are based on power calculations that assume more limited benefits to dexamphetamine prescribing than previously assumed and that anticipate difficulties in recruitment and retention. There is a clear need for funders to monitor the selection of fieldwork sites to avoid research overload and fatigue, especially given the continuing growth in research.

Lessons for practice

Retention in treatment was disappointing. In both treatment groups, fewer than half of the clinical appointments were attended. Factors possibly influential include unwillingness to travel the distance to the treatment centre and patient perceptions that treatment options in the trial are less attractive than those offered in normal clinical practice. Differences in waiting times had no effect on retention or outcomes. The study did not support concerns raised by some that treatment

with dexamphetamine confers significant risks to the physical and mental health of patients. The evidence to date supports the Department of Health's current clinical guidelines that dexamphetamine substitution should remain a specialist intervention carried out by experienced practitioners. When offered, dexamphetamine should be part of a complete treatment package incorporating psychosocial interventions employed in BATA and clinical monitoring procedures, including urine drug screening with the ability to differentiate prescribed from illicit amphetamine, blood pressure checks, and mental health reviews. It would be a mistake to view the research evidence as the basis for expanding the provision of treatment with amphetamine but equally the evidence does not support moves to curtail such currently existing treatment (Merrill et al., 2004b, p. 77).

Key messages from DMRI research on treatment interventions

- It is essential to conduct pilot trials before committing to a full RCT.
- Pay close attention to how trials are implemented in real world situations.
- Be knowledgeable about the characteristics of treatment populations before designing a trial or intervention.
- Large research trials take time and are expensive but are not impossible.
- Insufficient information is known about drug users currently presenting to drug treatment services.
- Many drug services are overstretched.

CONCLUSION

Dissemination

During the course of the DMRI programme, three cluster meetings were held. In 2001, meetings were held between representatives of research teams and policy customers on themes relating to dual diagnosis or co-morbidity and waiting lists. In 2003, a meeting on randomized controlled trials in the drugs misuse field was held to disseminate lessons from the DMRI to commissioners and researchers. These meetings were held on a confidential basis and it was emphasized that the findings and interpretations were based on work in progress and at a preliminary stage. They did however facilitate discussion between researchers and policy makers and paved the way for the early dissemination of evidence. A final conference was held on 20 April 2005, the report from which is available from <http://www.mdx.ac.uk/www/drugsmisuse>

In addition, research teams met frequently with those working in partnership with their project at special meetings and steering and advisory group meetings. Such partners included health practitioners, administrators, other professionals working in the drugs field, funders, and service users. These face-to-face contacts, as well as presentations given at local, national, and international conferences helped to disseminate ideas and findings to research, policy, and practice communities.

The realities of research

Non-researchers do not always appreciate the difficulties involved in the production of findings. Facts are not just lying around to be gathered up in a straightforward way. Producing sound robust evidence, which can provide a scientific base for policy and practice, requires not only sufficient funding but adequate timescales, good organization, leadership and team working, sensitive working with partners (such as other agencies, clinicians, and patients), intelligent thinking and analysis, and reflective consideration before coming to conclusions. The preparatory run up period before fieldwork commences needs to be long enough (for example to secure access and gain ethical approval), and time is needed at the end of the project for production of reports, revisions, dissemination, and publication. The experiences of DMRI research teams offer some examples of the issues that can arise.

A particular problem encountered by several projects had to do with acquiring ethical approval to proceed with a study. Patience and good planning are needed here. Amendments may be required and time has to be allowed for this process, especially where research is being conducted in several locations. In the DMRI programme, relevant LRECs were informed about the projects, providing all necessary project documentation and where relevant a copy of the MREC letter of approval. Under the new COREC guidelines for multi-centre studies, a research team is not technically required to wait for confirmation from the local committee before starting the data collection. On most occasions, the LREC simply acknowledged that the project was taking place in its area. However, in a small number of cases, the LREC insisted that approval must also be received from the Caldicott committee at the relevant Trust before the study could proceed and this had the effect of delaying the start of data collection.

Commissioned projects can play a role in capacity building as they provide employment and training opportunities for research assistants. Most of the DMRI projects involved several researchers, often employed on short-term contracts. In practice, for a number of reasons, such as promotion or taking up the opportunity to accept a scarce clinical training place, researchers may move jobs during the period of the research.⁵ Researchers are not usually to be found standing around as a reserve army of labour to be employed at short notice. Advertising and selecting from applicants takes time. When this has to be done during the course of a project, it can disrupt planned timescales. Where research depends on collaboration with clinicians or agencies, high staff turnover in these organizations (which are not under the control of researchers) may cause delays. The responsibilities of the Principal Investigator (PI) are important here. At times, the PI may have to complete the work of members of the team, especially towards the end of a contract when researchers may leave. The role of “events, dear boy, events” applies equally to research as to politics. Thefts and burglaries can happen at the most inconvenient of times⁶ and timetables can be disrupted by other hazards.⁷

The impact of the DMRI programme

It is clear that the gestation time for the DMRI programme was relatively lengthy, and that it built on previous research and experience in deciding on priorities. The picture that emerges is of an incremental accumulation of knowledge on issues relating to the treatment and prevention of drugs misuse in the UK. It is never simple to assess the impact of any one project or even of a programme of studies. What the overview presented above demonstrates is the effect of research in building up understanding of the causes and consequences of drug-taking and the value of specific interventions. These DMRI studies contain a wealth of information which helps to answer the policy questions which shaped the programme initially. However much of this evidence could also be reread in future in the light of new policy problems. Policy makers and practitioners could turn to this material to help to explain new issues. For example, since the DMRI phase one was completed, there has emerged an increased interest in the possible links between cannabis use and psychological health. One report (Macleod et al., 2002b) includes a discussion of the relation between cannabis use and psychological health, including schizophrenia. There is currently much debate about whether or not there is a causal association between heavy cannabis use and later development of psychotic symptoms, and further research is now underway on this topic. Similarly findings from the studies on co-morbidity, waiting lists, and treatment interventions provide information on how clients engage with services, which are relevant to current concerns regarding improving uptake of, retention in, and quality of services. And, following from the ACMD report *Hidden Harm* (Advisory Council on the Misuse of Drugs, 2003), issues relating to children of drug using parents have high priority to which evidence from DMRI studies on young people can contribute.

The DMRI programme as a whole has been an effective vehicle for strengthening the evidence base to underpin the development of effective prevention strategies and drug treatment services. All projects have completed final reports and responded to referees' comments. Executive summaries have been produced and are published in the next section of this special supplement. Paper copies were circulated earlier to a limited audience and all executive summaries were put on the web as soon as completed.⁸ Journal articles and conference papers have been written (see Appendix) and more are in progress. Practitioner summaries have been produced via the NTA (see Appendix). A wealth of material has been produced which has helped to answer immediate policy questions but is also amenable to revisiting as an evidence base to help in illuminating discussion on new issues as they arise.

The DMRI has helped to develop research capacity, for example through training of new researchers as research assistants, and has helped to establish collaborations, first between researchers and clinicians and partner agencies and second among networks of researchers across institutions and geographical areas. The programme has demonstrated the value of high quality research conducted by serious and committed research teams.

The current policy context and future research

The concerns of those developing policy appear to continue to be on dealing with crime and ensuring the treatment system is effective in using the additional investment associated with the 10-year strategy to address drug misuse and associated harms, including criminal and antisocial behaviour. There will inevitably be changes in emphasis on what are the priority policy-related research questions. The key responsibility for drugs strategy in the UK now rests with the Home Office, although all government departments are expected to play a role in a collaborative and joined up way. Current policy stresses the aim to get drug-misusing offenders into treatment and to cut crimes related to drug use. The Drug Interventions Programme (formerly known as the Criminal Justice Interventions Programme) initially aimed to allocate £477 million over 3 years, focusing on 66 locations which report high levels of acquisitive crime. The aim is to intervene at key points in the process, in the custody suite, in courts and probation, and in prisons to encourage a move to treatment.

Funding allocated to treatment has increased from £1 billion in 2002 to £1.5 billion in 2005. The Prime Minister has taken a direct and personal interest in the success of this policy. The main focus of attention now is on the “PDU”, the problematic drug user who may be homeless, chaotic, co-morbid, marginalized, and involved in crime. The main focus of attention is thus on the anti-social hard core. Along with the increased emphasis on treatment are high hopes for its success.

A second phase of DMRI is now underway. The focus of this phase is research on understanding treatment experiences and services (ROUTES). Ten projects have been commissioned (see Appendix). The aim of the programme as a whole is to contribute to an assessment of the impact of increased investment in drug treatment services and expand the evidence base of what works in treatment. Issues addressed include access to services, service configuration, retention in treatment, user outcomes and experiences, cost-effectiveness, and consequences for the wider objectives of reducing crime and making communities safer. The main focus of research is on class A drugs and research includes attention to the most vulnerable groups and deprived communities, such as children and young people, women and Black and minority ethnic drug misusers, and both rural and urban communities.

Endnotes

- [1] In their report *Drugs dilemmas and choices* (2000), a Working Party of the Royal College of Psychiatrists and the Royal College of Physicians (London: Gaskell) estimated that “the total UK expenditure on research on drug problems by government departments, research councils and the major charitable foundations amounted to between £2.5 and £3 million in 1998” (p. 225). They pointed out that this was just 0.2% of the £1.4 billion that the Government then estimated was being spent overall on drugs problems in the UK each year.

- [2] Routine and sentinel surveillance methods are fundamental to public health decision-making and subsequent action. These involve ongoing systematic collection, analysis, and interpretation of data and the distribution of findings to those who need to know. (cf. Losos, J. Z. (1996). Routine and sentinel surveillance methods. *Eastern Mediterranean Health Journal*, 2, 46–50.)
- [3] Related to this finding and influenced by the project's interim report, the NTA 2002 guidance refers to “the average wait for structured drug treatment . . . measured from the date an individual is first referred (or self refers) for treatment to the date an individual is admitted for treatment following assessment” and also adds that “assessment which takes place before a client is admitted . . . is not part of treatment.”
- [4] The CONSORT statement is a research tool that takes an evidence-based approach to improve the quality of reports of randomized trials. The statement has been endorsed by medical journals such as *The Lancet*. CONSORT consists of a checklist and flow diagram to help improve the quality of reports of RCTs. The checklist includes items that need to be addressed and the flow diagram shows how participants progress in the trial from the time they were randomized to the end of their involvement. This should help users of the data to evaluate its validity for their purposes.
- [5] Other factors leading to changes in staffing in the DMRI projects included the early retirement due to unexpected illness of one research assistant and a delay brought about when the PI broke his arm in a road accident. Project managers need to expect sick leave among staff and build this into their plans. In the DMRI programme, it was not unknown for key researchers to take maternity leave or to experience the long-term illness of a member of the team. In more than one case, a research worker was involved in a car accident.
- [6] In one DMRI project, essential revisions to the draft final report and responses to each referee were stolen in a brief case just before completion and had to be started again from scratch. The extent to which theft and burglary are common features of our environment was also evidenced through other projects. In one, the project computer equipment was stolen twice. In another, the computer was stolen during a burglary leading to a need to reconstruct some of the data and analyses.
- [7] In one case, planned training programmes were disrupted by severe rainfall and flooding. And in designing recruitment to research studies, plans need to allow for the fact that holiday periods in agencies can affect patterns of use.
- [8] <http://www.mdx.ac.uk/www/drugsmisuse/executive>

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EXECUTIVE SUMMARIES OF ALL DMRI PROJECTS

Disclaimer

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Long-term heavy cannabis use. Executive summary of research report submitted to the Department of Health

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The purpose of this study was to identify and assess patterns of use and problems associated with prolonged heavy use of cannabis. The strategy for doing so involved comparing heavy long-term users with light long-term users. Considerable variation in the level and frequency of alcohol consumption was found. The sample contained higher levels of use of other illicit drugs than general population samples, but this was only related to cannabis use in a minor way.

Cannabis as a gateway drug

There was no strong evidence to support the gateway theory in the quantitative data analyses. Pattern or amount of cannabis consumption were not important predictors of use of other drugs. The quantitative data reveal only small associations between cannabis use and use of other drugs. The qualitative interviews suggest that use of other illicit drugs is related to availability of other drugs in the wider community and a willingness to experiment with them. Taken together, the quantitative and qualitative data provide no evidence for the stepping-stone theory, that cannabis use predisposes people to use of other “harder” drugs via some kind of cannabis dose-related physiological change.

Cannabis and health

The impact of cannabis on health was assessed using the General Health Questionnaire (GHQ-28), perceived impact of cannabis on health, and self-reports of health problems attributable to cannabis. Cannabis could not be said to be an important predictor of differences in GHQ scores, even where there were discernible statistically significant differences related to pattern or amount of cannabis consumption. Cannabis was not an important predictor of differences in the perceived effects of cannabis on aspects of health, nor in relation to reported health problems.

While it may be that cannabis-related problems had yet to manifest themselves, the standard instruments or self-reports did not reveal large-scale impact of cannabis. Nonetheless, cannabis is a drug that does carry some risks. Clinical examination might have revealed health problems due to cannabis, not least in relation to smoking and lung function, for example.

Dependence on cannabis and other drugs

Heavier cannabis use was associated with cannabis dependence to some extent, although it was not an important predictor of dependence scores, and it appears

that other factors play an important role in the development of cannabis dependence. Fifty-five percent of this sample met the revised lower criterion of dependence on the Severity of Dependence scale. Sixty-two percent of the sample met the criterion of dependence in relation to other drug use, which for 79% of the sample meant tobacco or alcohol.

Impulsivity, self-esteem, stress, and social support

A number of measures were taken to assess the relationship between cannabis consumption and impulsivity, self-esteem, stress, and social support. There were no main effects of cannabis consumption, either for amount or pattern, nor any interactions that could be considered to be important.

Personal rules for cannabis and cannabis-related beliefs

Overall, responses were what could be described as in the socially responsible direction. No differences were found for heavier vs. lighter users, or for variable vs. constant users, in relation to personal rules for cannabis use. In overall terms, it can be concluded that these long-term cannabis users were aware that cannabis could have a negative effect on motivation, work, and memory. They believe that cannabis has a positive effect on mood and sociability, that cannabis should be legalized or decriminalized, and that cannabis does not lead to hard drugs, addiction, or crime.

Cannabis and driving

In relation to other people's driving when under the influence of cannabis, the general view was that cannabis tends to make other people worse drivers. There were discernible differences between high, medium, and low long-term cannabis users in relation to own driving ability when under the influence of cannabis. All three cannabis amount groups were aware of detriment to their own driving abilities. High users were less convinced of this than medium or low users, but the importance of this statistically significant difference is low in terms of explaining differences between groups. Overall, there was a high level of disapproval within the interview sample for driving while under the influence of cannabis.

Information about cannabis

Participants were asked to indicate how influential they thought different sources of information were about cannabis. In rank order, cannabis-using friends were the most influential source, followed by drug books, medical literature, the quality press, music magazines, dealers, television, drug education leaflets, the Internet, family or parents, tabloid press, non-cannabis-using friends, and the police.

Cannabis, other drugs, and sex

Negotiation and practice of safer sex was not affected by cannabis use, irrespective of amount or pattern. There was a difference between cannabis and other drugs, such that other main drug of choice was more likely to negatively affect negotiation and practice of safer sex.

Differences in cannabis-related beliefs and attitudes across recruitment sites

There were some differences across the recruitment sites in relation to aspects of cannabis-related beliefs and attitudes, but these were relatively unimportant in the sense that cannabis did not explain much of the variation. Nonetheless, such variation appears to reflect some differences in cultural norms around cannabis and, while not attributable in any great sense to cannabis, there could be grounds for suggesting that cannabis-related information education programmes could facilitate a more uniform spread of appropriate knowledge and attitudes about cannabis.

Cannabis and offending

There were relatively high levels of offending within the sample, both for drug and non-drug offences. As with many other issues explored in this study, there were statistically significant differences between heavier and lighter cannabis users, but these differences could not be said to be a major factor in explaining offending patterns. This may be indicative of a general trend towards deviance among the sample. It may be that some of the more serious offenders were also heavier cannabis users and that cannabis use is not a causal factor in offending.

Impact on employment and education

There was little relationship between cannabis and either occupation or educational achievement. Heavy cannabis users had a lower mean score for educational achievement and lower socio-economic status than moderate or low users, although cannabis was not a major factor in explaining this. Participants typically stressed the need to keep cannabis use separate from work responsibilities. For some participants, this was based on prior interference of their cannabis use with their work performance, but for most this view could be described as a personal or social responsibility. A small group of participants, unrepresentative of the sample, still worked while under the influence of cannabis. Similar views were expressed in relation to cannabis use and education, with the majority of participants stating that the two should be kept apart.

Implications for health education

There are a number of implications for health education.

- Smoking, of cannabis and tobacco, is an important health issue. Use of cannabis is likely to perpetuate tobacco use.

- Smoking cessation interventions targeted at cannabis users will have to take account of concurrent cannabis smoking. Research is needed on how best to address this. Moreover, the social aspects of cannabis use identified in this research are likely to reinforce the cannabis smoking habit.
- As eating of cannabis does not permit the same precision of control over the desired effects of cannabis, it will be difficult to persuade cannabis smokers to change to cannabis eating. Eating cannabis has its own implications for health education in relation to self-titration and management of effects.
- There may be some scope for harm reduction in the form of reduced smoking, or separating cannabis smoking from tobacco smoking with the aim of reducing overall amounts smoked.
- Targeting of cannabis education messages for dissemination through cannabis-using networks could be of value, given the emphasis placed on cannabis-using friends as sources of information.
- There could be merit in developing cannabis education leaflets. Such leaflets could be targeted at specific, cannabis-using groups as well as the wider population.
- Cannabis education messages could be disseminated through youth culture and music magazines.

Concluding comments

Overall, the sample described here contrasts with most studies of users of other illegal drugs in many respects, such as socio-economic status and educational achievement, and in the relatively low levels of negative health effects attributable to their drug use. It should be borne in mind that this is a study of long-term, heavy cannabis users, and that this sample could be said to represent the more excessive end of a population for whom cannabis is a main drug of choice. That said, however, one of the main conclusions to be drawn from this study is the extent to which participants' cannabis use is characterized by being non-intrusive, non-destructive, and controlled. Public health information about the risks of cannabis use are likely to be more effective if such messages work with the grain of this established aspect of contemporary drug culture.

This study assessed the influence of patterns of cannabis use on a wide range of variables, and the common thread to the quantitative findings is that there are only relatively small effects of heavier as opposed to lighter long-term cannabis use in relation to the variables assessed here. While there were many variables for which statistical significance in relation to cannabis consumption was established, cannabis was only a minor if not unimportant predictor of differences in measures of health, perceived effects, psychological variables, use of other drugs, and risk behaviour.

The qualitative data provided important deeper insights into the role of cannabis for this sample. The overall impression given by the qualitative section of this report is of a sample for which their cannabis use is typically non-problematic and not associated with risk behaviour. Where individual participants are described

within this section that cannot be easily profiled this way, this mainly serves to highlight their beliefs and behaviour as atypical. The level of thoughtfulness within the sample regarding not just their personal use of cannabis but also regarding broader cannabis-related issues was apparent in both the quality and quantity of the data collected using a qualitative methodology.

There were a number of important messages in relation to education and harm reduction. Variation in group or cultural norms indicate a need to level the playing field in relation to accurate cannabis information and in relation to responsible use of cannabis. Innovative approaches to cannabis education for adult users are required, some aspects of which are likely to be hindered by current legislation. Educational interventions are also potentially valuable in relation to interactions between cannabis and other drugs. While other main drugs of choice were alcohol and tobacco for most people, it was evident that occasional use of other illicit drugs was not uncommon. A particularly striking feature was the potential for cannabis use to be a factor in the maintenance of a tobacco habit. Tobacco smoking cessation efforts will also require being innovative if this issue is to be addressed.

The over-arching finding from this study is that there are only relatively small effects of heavier as opposed to lighter long-term cannabis use in terms of the variables assessed here. The power of the sample size and the inferential statistics used convincingly established that amount or pattern of cannabis use were not major factors. In other words, statistical significance and significance in the everyday sense of importance are two different things. Cannabis was shown to be statistically significant in relation to a range of measures, but the importance of that was also shown to be relatively small because the amount of difference explained by cannabis use was very small.

Nonetheless, cannabis use has some potential for harm. There is a need to ensure that credible public health messages are delivered to enable cannabis users to minimize risks, particularly from smoking as this is the preferred mode of consumption for most cannabis users. While cannabis does not have the same potential for harm as heroin, cocaine, or alcohol, it is not without risks and users need to be aware of these.

Endnote

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Outcome of Waiting Lists (OWL) study. Waiting for drug treatment: Effects on uptake and immediate outcome

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A reduction in waiting times is one of the key aims of the NHS plan, and reduction in the numbers of drug misusers being denied immediate access to appropriate treatment is one of the objectives spelled out in the Government's drugs strategy (UKADCU, 1998). Furthermore, contemporary guidance on acceptable lengths of wait issued in March 2002 by the NTA sets waiting time targets (from 2 to 3 weeks by 2003/2004) for each treatment modality outlined in *Models of care*, and has identified waiting times as one of four Key Performance Indicators for drug misuse services (National Treatment Agency, 2002a). A review of the literature suggests a scarcity of studies on the independent effects of waiting for drug treatment on an individual's admission to and engagement with treatment regimes, and that the results are inconclusive. This project, part of the Department of Health's Drug Misuse Research Initiative, has focused on treatment for opiate use, specifically substitute prescribing with methadone. We have investigated:

- the current status of waiting lists and times for drug treatment (methadone prescribing and inpatient treatment for opiate users) across England,
- the impact of waiting on treatment uptake and retention, and
- the effects of waiting on those seeking treatment.

The investigation has acute relevance for policy makers, for providers of drug treatment services, and for those seeking and waiting for treatment. There have been four component studies:

- Study 1: National survey of drug services.* A national questionnaire survey of drug services to identify, quantify, and describe factors which influence waiting lists and their management.
- Study 2: The effect of waiting times on treatment uptake.* A prospective study of new referrals.
- Study 3: The effect of waiting times on retention in treatment.* A retrospective study of client records.
- Study 4: Client perspectives of waiting for treatment.* An interview survey of drug users' perspectives of the effect of waiting for treatment.

Study 1: National survey of drug services

Following preliminary interviews with agency managers and service commissioners from around the country to explore factors relevant to the determination and management of waiting lists for drug treatment, a national agency survey was undertaken. Questionnaires were sent to all 643 identified drug treatment services in England. A total of 322 (50%) were completed and returned between December 2000 and January 2001. Of those, 296 were valid individual agency responses (among which 37% were from target prescribing services and 27% from target inpatient services—the remainder covered a wide range of other service types). An examination of basic information about non-respondent agencies from existing lists suggested a similar spread of types of agencies providing similar treatment options to the respondent group. Waiting lists were apparent in all areas of service provision. Of those offering the target treatment options, 66% indicated that they had a current waiting list for substitute prescribing and 77% had a waiting list for inpatient treatment.

Target agencies reported a mean client caseload of around 200 (range 6–1,200). Although 25% had client caseloads of 50 or fewer, many indicated that they were operating close to capacity: 45% reported a staff shortfall (ranging from 0.5 to 6.0 WTE¹¹), 49% of these services were at least 1.5 WTE clinical workers down at the time the survey was carried out. Nearly half (45%) reported that their prescribing budget was usually overspent and a further 46% that it was spent up to the limit.

The number of clients waiting at a service ranged from 0–275. A quarter (25%) of services had 52 people or more waiting for treatment, 7% had 100 or more. Services reported average waiting times from referral to assessment of 8 weeks (range 0–52 weeks), although 50% of services reported waits of 4 weeks or less. Following assessment, services reported a mean wait of 4 weeks to start of treatment (range 0–30 weeks), although 50% reported waits of 2 weeks or less. The total wait from referral to starting treatment, for non-priority clients, ranged from 0 to 54 weeks (mean of 12 weeks) with half waiting up to 8 weeks and a quarter waiting 16 weeks or more.

It must be noted, these are agencies' own estimates: waiting times reported by agencies in the survey were not always consistent with those actually observed in the subsequent study period. Such "waiting perceptions" may not always be accurate.

Considerable volatility was found in waiting times. Possible reasons for increases in waiting times suggested by agency managers during the recruitment stage include: resource problems (staff, lack of medical cover, accommodation); caseload issues (increasing referrals, increasing numbers of priority clients, more complex clients); and procedural changes (difficulties with shared care arrangements, introduction of dose testing).

Possible reasons for decreases in waiting times suggested by agency managers during the recruitment stage include: resource issues (filling vacant posts, increased doctor time, extra financial resources); procedural changes (introduction

of triage system, employment of dedicated detoxification¹² worker, deliberate overbooking of assessment clinics, alternatives to methadone, stricter rules, shared care). Such “waiting time volatility” seems to be a feature of drug service provision.

Nearly 75% of services said that they provide interim support for people while waiting. This ranged from telephone or letter contact to motivational interviewing, complementary therapies, drop-in sessions, and interim prescribing. Two thirds of agencies (67%) said that they attempted to arrange interim prescribing via GPs for their waiting list clients. Nearly half of services did not carry out anything that they described as waiting list management.

Study 2: The effect of waiting times on treatment uptake

Fifteen agencies, representing a spectrum of waiting times, were selected for detailed investigation and analysis. Agencies were asked to track clients prospectively from the point of referral through assessment and up to the start of treatment. New referrals were tracked between July 2001 and March 2002. Data were analysed to identify predictors of uptake. Analysis was conducted at the client level because waiting times at the target agencies changed during the course of data collection. Multivariate analysis of factors that might influence uptake indicated no significant effect of waiting time.

The bulk of attrition occurred between referral and assessment: relatively few clients were lost following assessment. While waiting times did not predict assessment uptake at all, four factors were found to independently predict uptake. Uptake was best among: older clients, those with a previous experience of treatment, those self-referred, or those referred by their GP. Most important, we found a highly significant effect of agency, with uptake being substantially better at some agencies than at others.

While age and previous experience of treatment are client related factors that agencies cannot influence, referral source and other agency factors relate to the process of access and care that characterize an agency’s style of operation. The study was not designed to elucidate why uptake was significantly higher in some agencies than in others, but it was very clear that the agency itself has a greater influence on uptake than waiting times. Such agency factors deserve further investigation.

Study 3: The effect of waiting times on retention in treatment

Information from client records was examined retrospectively at 16 agencies between October 2001 and May 2002. Clients were tracked from the point of referral for up to 6 months from the start of prescribing in order to compare retention rates and determine the reasons for discharge from treatment. Retention levels were recorded at 1, 2, 3, and 6 months from the date of the first prescription. Again, data were analysed at the client level because waiting times at the target agencies changed during the course of data collection.

Multivariate analysis of factors that might influence retention indicated no significant effect of waiting time.

Retention in treatment for 3–6 months was influenced by the following factors: referral source, pick-up regimes, supervised consumption, duration of opiate use, problematic alcohol use on presentation, illicit methadone use on presentation, and agency. At both 3 and 6 months, GP and self-referred clients were more likely to be retained than those referred via other routes.

The effect of treatment regime appears complex and was different at 3 and 6 months. At 3 months, clients on a daily pick-up for some of the time were most likely to be retained; at 6 months, clients who were on a daily pick-up some of the time or always were more likely to be retained than those who were not on such a regime. At 3 months, clients on supervised consumption were much less likely to be retained than those not on this regime. It should be noted that agencies allocate clients to particular treatment regimes on the basis of their stability, and we consider it likely that a complex interaction between a client's stability and choice of treatment regime underlies these effects.

Aspects of the client's drug use also appeared to predict retention: the longer the clients had been using opiates, the more likely they were to be retained at 3 months. Interestingly, those clients with problematic alcohol use as well as opiates on presentation were also more likely to be retained at 3 months. Clients with declared illicit methadone use at presentation were more likely to be retained at 6 months. Once again, the individual agency appeared to have the strongest effect. Clients at some agencies were much more likely to be retained at 3 and 6 months than at others. This suggests there was something about the way certain agencies worked that made their clients more likely to stay in treatment. Given current policy emphasis on increasing the number of drug misusers who successfully complete treatment, we consider that this effect requires further detailed investigation.

Study 4: Client perspectives of waiting for treatment

Fifteen case studies were carried out by interview during April and May 2002. All clients were currently waiting for treatment at four different agencies. All interviewees had already waited more than 2 months from initial referral to the start of the treatment programme, and four had been provided with an interim script by their GP. We found that perceptions about waiting were important in determining whether clients presented for treatment. A number said it would help if they were given a clearer idea of how long they would be expected to wait. A recurring criticism from clients was the lack of contact from the drug service during the waiting period, although this was offset where there was support from a partner or family member. Some said they would have appreciated a day or drop-in service while waiting. Some had undoubtedly increased their drug use during the waiting period, but interim prescribing had helped others to cut down their illicit use. There was clear resentment of the fast track system by which arrest referred clients were able to access treatment more quickly.

Does waiting for treatment matter?

We have investigated the effect of waiting times among a group of drug users seeking treatment for opiate problems. From this study, we cannot quantify the extent to which long waiting times discourage potential clients from seeking help in the first place, although we have ample indication that they do. Clients, as well as agency managers, have indicated that long waiting times may result in a degree of “referral apathy,” whereby word gets around about the wait for a particular service: “I know people who’ve just not bothered coming in the first place . . .” Thus, “waiting reputations” develop that may discourage presentation for treatment.

Insofar as clients on a waiting list are not receiving treatment, we would expect that they will continue to engage in drug misuse and associated behaviour while waiting. In these respects, irrespective of our findings that waiting does not affect treatment uptake or retention following referral, we judge that waiting for treatment *does matter* and that efforts to reduce waiting times are justified. Furthermore, a substantial minority of our small sample of interviewed clients reported that their drug use increased while waiting.

Although a largely unspoken observation, it is undeniable that, for many years, the field has recognized some agencies to be “better” than others. We have demonstrated that, irrespective of the influence of other factors, some agencies are clearly more attractive to clients and successful, both in terms of engaging them and retaining them in treatment, than are others. Given current policy concerns that stress the importance of engaging larger numbers of drug misusers in treatment, the factors that influence agencies attractiveness to clients require much more substantial exploration than has been made to date.

Key messages

Definitional issues. Agencies define and measure their “waiting times” in a variety of different ways (*viz.* referral → presentation → assessment → treatment → prescribing). It is very important that policy, national and local, is very clear over definitions.

Extent of waiting. Waiting lists were apparent in all areas of service provision. Of those offering the target treatment options, two thirds had a current waiting list for substitute prescribing, and over three quarters had a waiting list for inpatient treatment. Services reported a mean client caseload of just over 200 (range 6–1,200), although a quarter had service caseloads of 50 or less. Nearly half reported a current staff shortfall (0.5 to 6.0 WTE), and nearly half stated that their annual prescribing budget was usually overspent.

Waiting times. Services reported average waiting times from referral to assessment of 8 weeks (range 0–52 weeks), although 50% reported waits of 4 weeks or less. Following assessment, services reported a mean wait of 4 weeks to start of treatment (range 0–30 weeks), although 50% reported waits of 2 weeks

or less. The average total wait from referral to treatment was 12 weeks (range 0–54 weeks), with half waiting up to 8 weeks and a quarter waiting for 16 weeks or more. Nearly 75% of services said they provided interim support for people while waiting. This study suggests that the bulk of attrition occurs between referral and assessment, with relatively few clients “lost” following assessment.

Waiting list volatility. We observed considerable “volatility” in waiting times (both between agencies and within agencies over time), with increases and decreases being the result of resource problems, changes in caseload profile, and procedure. Relatively minor changes often have a profound effect on service delivery.

Waiting perceptions. Agencies’ perceptions about the length of their waiting time are not always accurate; any assessment and monitoring of waiting times should be based on objective, verifiable, and clearly defined measures.

Waiting reputations. Clients’ perceptions of how long they will have to wait based on the reputation of particular agencies may affect whether they feel it is worthwhile seeking treatment in the first place.

Waiting consequences. A third of clients may increase their drug use while waiting, and there may be other negative personal and social consequences.

Effect of waiting on treatment uptake. The length of time clients waited between initial referral and assessment did not have a significant effect on whether or not they took up an offer of an assessment appointment. Waiting times did not independently predict treatment uptake. Our multivariate model suggests that uptake is positively and independently predicted if the clients were older, had already experienced drug treatment, were self-referred, or were referred by the agency being attended.

Effect of waiting on treatment retention. The length of time that clients waited between referral and the start of prescribing did not have a significant effect on retention at either 3 or 6 months. Waiting times did not independently predict retention in treatment. Our multivariate model suggests that retention at both 3 and 6 months is positively and independently predicted by the agency being attended, by clients being self or GP referred, and by the use of a daily methadone pick-up regime for some of the treatment time. In addition, at 3 months, clients were independently more likely to be retained in treatment the longer they had been using opiates and if they were also problematic alcohol users, but less likely to be if they were put on supervised consumption. At 6 months, clients were independently more likely to be retained in treatment if already using methadone on presentation, but less likely to be if they were combined users of heroin and benzodiazepines on presentation.

Other factors and the agency effect. Waiting times should not be used on their own as a measure of the quality of service provision at least in terms of uptake and retention. Other factors have been shown to influence these outcomes. Most consistent is the highly significant effect that the agency itself has on whether clients are taken on and retained in a methadone treatment regime. Some agencies are evidently much better than others at engaging clients and retaining them in treatment. Given current policy concerns that stress the importance of engaging larger numbers of drug misusers in treatment, the factors that influence agencies attractiveness to clients require much more substantial exploration than has been made to date.

Endnotes

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- [11] WTE: whole time equivalent.
- [12] Detoxification a.k.a. “detox”.

The effectiveness and cost effectiveness of cognitive behaviour therapy for opiate misusers in methadone maintenance treatment: A multicentre, randomised, controlled trial. UKCBTMM Study: United Kingdom Cognitive Behaviour Therapy Study In Methadone Maintenance Treatment¹³

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There is evidence to support the effectiveness of methadone maintenance treatment (MM) from several countries, and it is increasingly applied as a treatment approach in Europe. The quality of provision of adjunctive psychosocial treatments has been shown to be important in the effectiveness of MM. Cognitive behaviour therapy (CBT) has become the leading treatment approach in a variety of psychological disorders. In contrast, relatively little research has been conducted to evaluate the effectiveness, and particularly cost effectiveness, of CBT in substance use disorders. There are several reasons to expect that CBT could make a significant impact on drug misuse and associated problems. CBT has been evaluated as an adjunct to MM. Several RCTs have been undertaken to assess the efficacy of psychotherapy in methadone maintenance treatment. The evidence from these studies, which were exclusively conducted in the USA, overall support the efficacy of CBT, although the models of CBT applied varied considerably between studies. One study showed that CBT was more effective than minimal methadone treatment. However, the efficacy and cost effectiveness of CBT in MM in the UK NHS setting is unknown.

Policy relevance

There is a need for greater evidence of effectiveness to guide rational commissioning of services, including evaluation of different counselling approaches. To that end, this study had certain key features designed to assess cost effectiveness and maximize its generalizability throughout the NHS drug treatment system. This was a pragmatic multicentre trial in which the control condition

(Methadone Maintenance Therapy; MMT) was as close as possible to the usual treatment approach in UK clinics, while incorporating a degree of standardization and exclusion of some patients necessary to protect internal validity.

Hypotheses

Primary. CBT is an effective adjunct to standard MMT in reducing illicit drug use.

Secondary. CBT is a cost-effective adjunct to standard MMT; CBT plus MMT improves quality of life compared with MMT alone; CBT enhances compliance with MMT; CBT reduces negative outcome expectancies of drug use, enhances coping and self-efficacy compared to standard MMT alone; coping, self-efficacy, and expectancies are mediating variables in treatment outcome; addiction severity and psychiatric co-morbidity are treatment specific prognostic (matching) variables for outcome; therapist skills and the quality of therapy are positively related to treatment outcome.

Research design and methodology

Design. Pragmatic, randomized, multicentre, parallel group design comparing CBT plus MMT with MMT alone. Outcome assessment 1 year, with interim assessment at 6 months.

Setting. Ten community based clinics offering methadone maintenance treatment for opiate misusers in regions in England: North West (Manchester, Bolton, Wigan, and Leigh), London (Camden, Islington, and South West London), and South East (Brighton).

Inclusion criteria. Male or female; age 18–70; stabilized on oral methadone treatment; ICD-10 diagnosis of opiate dependence; willing to nominate a locator; stable place of residence; living within commuting distance.

Exclusion criteria. Current severe mental illness; severe physical illness; treatment for drug dependence past 3 months; pending imprisonment; severe brain damage or mental impairment.

CBT intervention. Therapists were recruited from existing staff, attended a standardized training programme, and received regular CBT supervision and were assessed for accreditation. Therapy was delivered according to a purpose designed CBT manual. Clients randomized to CBT were offered weekly CBT sessions for 50 minutes up to 24 sessions over 6 months. They also attended fortnightly key-working (MMT) sessions. Core and elective CBT sessions were delivered. Core sessions addressed motivation, coping skills, maladaptive thoughts, attitudes, and beliefs. Elective sessions addressed such issues as psychiatric co-morbidity. All sessions were tape-recorded. We aim to publish the CBT manual.

MMT intervention. Keyworkers were recruited from existing staff to deliver the MMT intervention. This was as close as possible to usual keyworking, but was manual guided to standardize the intervention. Clients were expected to attend fortnightly keyworking sessions as a minimum.

Outcome measurement. Primary outcome measure: heroin use (percent days abstinent; amount spent on heroin in past 180 days) (Time Line Follow-Back interview). Secondary outcomes: addiction severity (European Addiction Severity Index); severity of drug dependence (Severity of Dependence Scale); quality of life (Short Form-12; EQ5D); psychological symptoms (Brief Symptom Inventory); compliance with methadone treatment (clinic records).

Health economic outcome. Cost of treatments used, other consequences of treatment (health, social, economic, work, criminal justice), quality adjusted life years (based on EQ5D).

Treatment process measures. Coping behaviours (Coping Responses Inventory); Stage of Change (SOCRATES); self-efficacy (Drug Taking Confidence Questionnaire); outcome expectancies.

Subjects

A total of 842 outpatient opiate misusers were screened, 369 (44% of screened) were eligible, and 60 (16% of eligible) subjects were randomized (29 to CBT, 31 to MMT). The follow-up rate was 82% at 6 months and 88% at 12 months. Main reasons for ineligibility were: low methadone dose or methadone detoxification (29%); not engaged in methadone treatment (28%); unstable housing (24%); severe mental illness (9%); severe physical illness (8%); or pending imprisonment (8%). Participating subjects were predominantly male (75%), white (93%), and taking heroin by injection (63%). They had a mean duration of 5 months in methadone treatment at the point of recruitment, and were taking a mean dose of 52 mg methadone per day. Sixty-five percent had received prior opiate treatment, with a mean of 4.6 previous episodes. Subjects were found to be well matched between the two groups at baseline.

Results

Implementation. Significant difficulties were encountered in implementation of the trial. These included: low baseline levels of CBT trained staff; low rates of subject eligibility and willingness to participate, particularly in certain sites; poor engagement in, and drop out from, standard methadone treatment; delay in obtaining treatment costs for the trial interventions; high turnover of staff; delays in therapists obtaining training accreditation; attrition of therapists in both CBT and MMT due to high staff turnover and motivational issues; low level of client engagement in CBT.

Treatment outcome. No statistically significant differences were found on the primary or secondary outcome measures between the two groups in terms of differences in changes from baseline. There was a trend for CBT to show advantages over MMT on several outcome measures, with standardized effect sizes comparable with our predictions (0.3) in relation to reductions in EASI score and heroin use, and increased compliance with prescribed methadone use in the CBT compared with the MMT group. CBT subjects attended fewer CBT sessions than planned (mean = 2.6; median = 4).

Cost effectiveness. The results confirmed earlier findings that the costs of treatment are outweighed by resource savings. However, the reductions were smaller than in some other studies, most likely because subjects were recruited into the study on average 5 months into methadone treatment. Although CBT showed a mean cost saving advantage of £7,000 per patient over MMT alone, there were no significant cost differences between the groups. A simulated Incremental Cost Effectiveness Ratio showed that, at a threshold value of £30,000 per QALY, the probability that CBT is preferred over MMT alone is 74%. Sensitivity analyses did not show any significant differences from the planned health economic analysis.

Process measures. Some of the process measures showed effects of CBT in the predicted direction, albeit the results were not statistically significant. These included increased ability to consider alternative coping responses and increased problem solving. There was a non-significant reduction in negative coping responses such as cognitive avoidance, emotional discharge, and resignation. There was a significant increase in self-efficacy in the CBT group.

Secondary hypotheses. Contrary to expectations, there was a significant increase in quality of life in the MMT compared to the CBT group on SF12 in relation to physical problems. It is possible that the CBT group became more introspective as a result of CBT and therefore more sensitive to physical sensations. Or it may be the case that the CBT group had an increase in physical symptoms as a consequence of their relative reduction in illicit heroin use.

Conclusions

Implementation. Recruitment into the trial was considerably lower than in previous published research using a similar trial design in the USA. This might be accounted for by several factors including: differences in the US and UK treatment systems; delays in obtaining treatment costs; lower level of client eligibility; lower baseline level of psychosocial services in UK methadone treatment which may have affected staff and client expectations of CBT treatment; considerable variation in methadone treatment across the sites with those offering a low threshold, flexible engagement policy having poor treatment retention and low study recruitment; low methadone dose was a major reason for exclusion, as was

disengagement from treatment; several of the centres were not geared or resourced to hosting research trials, or were overloaded with research studies competing for similar subjects. It is also important to note that, in comparison to previous studies, this was a pragmatic clinical trial conducted in typical clinical settings, with a limited number of existing CBT trained staff. Because the study required the establishment of a new CBT service in each of the sites as well as conducting an evaluation, this caused considerable delay in implementation and diversion of research resources to carry out clinical implementation. However, we were able to recruit the planned number of services and staff to participate, and we were able to implement CBT in the final group of clinical centres.

Study findings. In relation to treatment outcome, there was no significant difference between CBT and MMT on any of the outcome measures, although there was a tendency for CBT to show some advantages over MMT. In relation to cost effectiveness, again there were no significant differences between the groups. Both treatments resulted in considerable cost savings relative to treatment costs. The CBT showed a mean cost saving of £7,000 per patient over MMT but this was not statistically significant. An incremental cost effectiveness ratio however showed that CBT would be preferred to MMT 74% of the time by policy makers. The reasons for the negative findings are likely to be several but include low statistical power; we had planned to recruit 220 subjects but in the end managed to recruit only 60. This points to the potential for type II error, particularly as the standardized effect sizes were close to those predicted on the main outcome measures. It is also possible that the CBT treatment was not effective. Subjects received lower “doses” of CBT than intended (planned = 24, actual median = 4). It is also possible that the CBT therapists were not sufficiently trained or competent to implement effective CBT. This was mitigated against by several factors, including standard intensive training, a standard manual, regular supervision, and accreditation by an independent expert rater who rated tape recorded sessions. Further research on this data will examine the extent to which CBT was delivered according to the protocol, based on the taped sessions.

Limitations of research. The interpretation of the results is limited by the small sample size (potential for type II error) and the lower than planned uptake of CBT sessions. While the treatment centres involved in the study are relatively typical of UK drug treatment services, the sample is only a small proportion of all clients attending methadone treatment, and therefore may not be representative. Also, several clients were excluded for the reasons given previously. Nevertheless, we expect that the clients who entered the study are likely to be representative of those who would volunteer for adjunctive CBT if it was offered more widely in the NHS. We also feel that the staff who took part in the study were typical of available staff in the services who would volunteer to be trained for this work should it become more widely implemented. We also believe that the pragmatic nature of the trial is an additional strength compared to previous

efficacy trials carried out in academic centres. This increases the study's policy relevance.

Implications for research. In terms of future research, we feel that it is important to carry out efficacy research before doing effectiveness research. Future studies of this type would benefit from carrying out research on established treatment interventions rather than implementing the services and research at the same time. Once CBT services are more established in the UK, a more definitive trial could be conducted. Complex studies of this nature need formal piloting before proceeding to implementation of the main trial. We need a better system for treatment cost funding for centrally funded clinical trials. Delays in obtaining treatment costs caused significant problems with staff training and recruitment and implementation of the trial. We also recommend the development of a network of research active addiction treatment centres in the UK to facilitate trials of this nature. The NIMHE model may provide some useful pointers. Finally, this study advises some caution in interpreting research evidence from the USA in relation to its applicability to the UK treatment setting. We have identified several important differences between this and previous US research which suggest caution is called for. This also points to the need for more research specifically in the UK on the effectiveness of addiction treatment to guide clinical policy.

Implications for clinical practice. We found that practice in relation to standard methadone treatment varied considerably across the sites involved in this study. Several of the treatment clinics involved in this study were providing methadone treatment in a less than optimal way, as suggested by the existing evidence base. Mostly this appeared to be a measure of the services being under pressure to attract as many patients as possible into treatment, while at the same time trying to provide a high quality service. Most of the services were overstretched; understaffed with a high staff turnover. We believe that these problems need to be addressed by supporting services to improve quality possibly at the expense of quantity. Very few staff in the service had been trained to provide psychological interventions, including CBT, which has implications for workforce development. The baseline level of individual client keyworking was extremely low in some programmes. In spite of this, we managed to train the target number of staff to the accreditation standard, which shows that it is possible to implement a CBT programme in the NHS setting. We also had difficulties in engaging clients in CBT. We think this was partly due to a low baseline level of psychological interventions in existing treatment services, and hence a low level of expectation of clients engaging, and perhaps a reluctance with some clients to become involved in more intensive treatment than usual, or to address psychological issues which had often not been previously identified in routine clinical care. There was also a nihilistic view of psychological intervention and clients' capacity for change among some staff in this setting, which will require some major work to change, including appropriate training to bring about a necessary cultural shift.

Implications for policy. This study found that the background methadone treatment was not optimal on many of the centres involved. We believe it is a priority for policy makers to provide the necessary resources to improve the quality and comprehensiveness of methadone treatment in line with existing evidence. While adjunctive psychological interventions should clearly be part of this, there are other aspects of methadone treatment that should be improved, including adequate resources for individual client work, support, and supervision. Several of the services were struggling with high caseloads, limited resources, and a high staff turnover. Some clients appeared confused by flexible drop-in arrangements and a lack of clarity on the terms of engagement. There appears to be an over-reliance on maximizing the number of clients in treatment and lowering the threshold and terms of engagement for clients, at the expense of the quality of care. We found low baseline levels of training in psychological interventions in the services studied. We feel that policy should be developed to increase the psychological skills of the drug treatment workforce.

Endnote

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Co-morbidity in the National Psychiatric Morbidity Surveys

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HOWARD MELTZER and the authors of the papers referred to in this summary.

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The core aim of the project was to use data collected by the National Psychiatric Morbidity Surveys (representative surveys in 1993 and 2000 of the general population) and additional surveys of the prison and homeless and child and adolescent populations to explore the prevalence of substance use and psychiatric morbidity (common mental disorders, personality disorder and psychosis).

Previous studies had suggested that co-morbidity is common in certain population groups. The project aimed to assess co-morbidity (among drug, alcohol, and nicotine and general psychiatric morbidity of neurosis and psychosis) and to test its stability across a variety of settings, specifically across populations and across time. The aim was to address specific questions on the role of drug use and drug dependence in exacerbating psychiatric morbidity and increasing help-seeking behaviours. The project examined the stability of these co-morbidities across the time interval of the two surveys and across different sub-populations. The project also aimed to explore the relationship between substance use and psychiatric co-morbidity on social functioning, social support, and health service utilization. A final aim concerned a general exploratory investigation into the relationship between substance use and dependence and socio-economic deprivation.

The project made comprehensive, coordinated use of the National Psychiatric Morbidity constituent surveys of general household (10,000 respondents), prison (3,500), and homeless (1,000) samples. It integrated existing survey data with data from the most recent (2000) National Psychiatric Morbidity Household Survey (10,000). The question addressed was whether or not co-morbidity remains stable over different settings and over time. The study aimed to consider also effects on service utilization. Funds from the DMRI supported the contribution of team members (especially Colin Taylor and Annabel Boys) to what was a multi-funded, collaborative programme of research.

Methods of analysis

The National Psychiatric Household Survey samples are representative, after weighting, of the 16–64 population. The surveys are conducted at 5-year intervals. Ranges of structured diagnostic questions are used, including the CIS-R and questions on alcohol, tobacco, and drugs. A second phase subsample who screen positive for psychosis receive a SCAN interview from a trained clinician. In addition to these two household surveys, data are drawn from a sample of 10% of the English prison population and a survey of 1,000 homeless people. The prison sample also completed the AUDIT questionnaire on hazardous alcohol use. The statistical methods used in the study ranged from basic descriptive methods to GLM modelling with a two-phase screened

sub-sample. Simple and marginal measures of prevalence and odds ratios were applied to assess risk factors and co-morbidity. Logistic regression methods were used to compare odds ratios and general risk factors to correct for confounding effects. Data were collected and collated using SPSS. STATA was used for the analysis.

Published paper

Farrell, M., Howes, S., Bebbington, P., Brugha, T., Jenkins, R., Lewis, G., et al. (2001). Nicotine, alcohol and drug dependence and psychiatric co-morbidity: Results of a national household survey 1993. *British Journal of Psychiatry*, 179, 432–427.

Background. There is a well-recognized relationship between substance use disorders and other related psychiatric disorders. This relationship has been well-documented in a range of North American population-based studies, and reasonably consistent results have been reported across a range of studies. It is assumed that the same relationship applies in other community settings.

Method. A national household study of psychiatric morbidity was conducted in England and Wales. Psychiatric assessment was based on the CIS-R. Measures of nicotine, alcohol, and drug use and dependence were obtained. This paper compares the levels of psychiatric morbidity in the non-dependent, nicotine, alcohol, and drug dependent cases.

Results. The relationship of drug, alcohol, and nicotine dependence to psychological morbidity was explored across the sample. The non-dependent population (i.e., those who were scored as non-dependent on drugs, alcohol, and nicotine) were compared against those who were classed as either drug, alcohol, or nicotine dependent. Sixty-seven percent (6779) of the total sample was classed as non-dependent, while 33% (3329) were classed as either drug, alcohol, or nicotine dependent, with nicotine dependence accounting for the majority of this. There was a clear relationship between dependence on nicotine, alcohol, and drugs and psychological morbidity. The non-dependent population differed significantly in terms of the presence of neurotic disorders from the nicotine, alcohol, and drug dependent. Twelve percent of the non-dependent population were assessed as having any neurotic disorder compared to 22% of the nicotine dependent, 30% of the alcohol dependent, and 45% of the drug dependent population. Significant differences across the groups were also found for the presence of two or more neurotic disorders, with highest prevalence rates among the drug dependent population where 12% were assessed as having two or more neurotic disorders compared to only 1% of the non-dependent population.

Conclusions. These findings are consistent with the ECA, the NCS, and other population surveys, and demonstrate a clear relationship between these differing conditions. The nature of the relationship is discussed, but further longitudinal

work is required to disentangle the complex interrelationships of these different conditions.

Published paper

Farrell, M., Boys, A., Bebbington, P., Brugha, T., Coid, J., Jenkins, R., et al. (2002). Psychosis and drug dependence: Results from a National Survey of Prisoners. *British Journal of Psychiatry*, 181, 393–398.

Background. The links between drug use and psychosis are of major aetiological and prognostic significance. Psychosis and drug dependence frequently co-occur within the prison population providing the opportunity to study this link more closely.

Aims. To explore the relationship between psychosis and drug dependence in a sample of prisoners.

Method. A total of 3142 prisoners were surveyed nationally, and structured clinical data were obtained from a sub-sample of 503 respondents. Psychiatric assessment was based on Schedules for Clinical Assessment in Neuropsychiatry (version 1.0). Measures of amphetamine, cannabis, cocaine, and heroin use and dependence were obtained via self-report.

Results. Logistic regression analyses indicated that first use of amphetamines or cocaine before the age of 16 and severe cannabis or cocaine dependence were related to an increased risk of psychosis. In contrast, severe dependence on heroin was associated with a reduced risk of this classification.

Conclusions. Severe dependence on cannabis and psychostimulants is associated with a higher risk of psychosis in contrast to severe dependence on heroin, which has a negative relationship with psychosis.

Published paper

Boys, A., Farrell, M., Bebbington, P., Brugha, T., Coid, J., Jenkins, R., et al. (2002). Drug use and initiation in prison: Results from a national prison survey in England and Wales. *Addiction*, 97, 1551–1560.

Aims. To investigate heroin and cocaine use in a sample of British prisoners and to explore the characteristics of inmates who use these drugs for the first time while in prison.

Design and participants. A cross-sectional survey of all prisons in England and Wales conducted as part of a major national study of psychiatric morbidity. A total of 3,142 prisoners (88.2% of those selected) completed a structured interviewer-administered questionnaire.

Measurements. Interview measures of personal demographics, social history, psychiatric morbidity, and drug use. Personality disorders were diagnosed via the Structured Clinical Interview for DSM-IV (SCID-II) and neurotic symptoms were assessed using a revised Clinical Interview Schedule (CIS-R).

Findings. Over 60% of the heroin users and cannabis users reported that they had used these drugs in prison compared with less than a quarter of the lifetime cocaine users. Over a quarter of the heroin users reported that they had initiated use of this drug in prison. The extent of an individual's experience of prison was more consistently related to heroin or cocaine use in and out of prison than other personal background, social history, or psychiatric variables assessed.

Conclusions. The findings indicate that prisons are a high-risk environment for heroin and other drug initiation and use. Although related to drug use, psychiatric variables were not generally associated with initiation in prison which was dominated by prison exposure. There is a need to explore ways of reducing heroin initiation in prison as part of a broader risk prevention strategy.

Published paper

Boys, A., Farrell, M., Taylor, C., Marsden, J., Goodman, R., Brugha, T., et al. (2003). Psychiatric morbidity and substance use in 13–15 year olds: Results from the child and adolescent survey of mental health. *British Journal of Psychiatry*, 182, 509–517.

Background. Psychoactive substance use is strongly associated with psychiatric morbidity in both adults and adolescents.

Aims. To determine which of three psychoactive substance types (alcohol, nicotine, and cannabis) is most closely linked to psychiatric disorders in early adolescence.

Methods. Data from a representative sample of 2,624 13–15 year olds were drawn from a national mental health survey of 5–15 year olds conducted in 1999. The relationship between psychiatric morbidity and smoking, drinking, and cannabis use (while controlling for potential confounding factors) was examined via logistic regression analyses.

Results. As expected, having a psychiatric disorder was associated with an increased risk of substance use involvement. Furthermore, greater involvement with any one particular substance carried an increased risk of other substance use. Analyses of the interactions between smoking, drinking, and cannabis use indicated that the main relationship between substance use and psychiatric

morbidity was primarily explained by regular smoking and to a lesser extent regular cannabis use.

Conclusions. In this sample, links between psychoactive substance use and psychiatric disorders in early adolescence were primarily driven by smoking. The strong relationship between this behaviour and other forms of substance use is likely to be due to a combination of underlying individual constitutional factors and drug-specific effects resulting from consumption over the period of adolescent development and growth.

Farrell, M. (2003). Tobacco, alcohol and drug use and cessation of use at follow-up. In N. Singleton & G. Lewis (Eds.), *Better or worse: A longitudinal study of the mental health of adults living in private households in Great Britain*. London: Stationery Office.

Conclusion

There is now a significant body of work across different countries and different time periods indicating a robust relationship between tobacco, alcohol, and drug dependence and other psychiatric disorders. Service interventions appear to be limited in scope and effect with regard to the related problems. A longer-term strategic approach would require a broader prevention, education, and treatment model with strong involvement of primary care to ensure maximum effect. Overall there is now greater awareness of the issues of psychiatric co-morbidity than existed a decade ago and there is increasing attention to addressing these needs within different settings.

Endnote

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A national epidemiological study of co-morbid substance abuse and psychiatric illness in primary care between 1993–1998 using the General Practice Research Database

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Data from 1.4 million patients in 230 practices in England and Wales were used to determine the nature and extent of co-morbidity (psychiatric and substance abuse) in primary care in England and Wales from 1993–1998. These practices contribute to the General Practice Research Database (GPRD). Co-morbidity was defined by the co-occurrence of substance abuse and psychiatric disorders as recorded by a general practitioner. Most patients identified as co-morbid cases within the database had the two conditions recorded within a 1-year period.

Findings

During the study period 1993–1998, we estimate that there were at least 195,000 co-morbid patients and 3.5 million GP consultations involving co-morbid patients in England and Wales. An unanticipated finding was that 80–90% of patients consulting for both substance abuse and mental illness in any year are doing so for the first time, and about 50% of co-morbid cases continue to receive treatment for substance abuse or psychiatric illness. We addressed concerns that substance abuse and psychiatric illness might not be recorded in general practice records. A concurrent validation study indicated that over 90% of patients treated for substance abuse or psychiatric illness in secondary care settings are known to their general practitioner. Our figures paint a picture of a significant problem in terms of primary care workload. The numbers of individuals newly developing co-morbidity in primary care is increasing year-on-year. It is clear from our data that the impact on health services is far in excess of that for mono-morbid patients; co-morbid individuals have an extra consultation frequency for all problems, estimated as an excess of 1,115,751 consultations in England and Wales from 1993–1998. Compared to age and sex matched controls, the number of excess consultations is 2,285,922.

Despite the reluctance of many primary care physicians to accept responsibility for the care of substance abusers, it is difficult for primary care as a whole to avoid the implication that co-morbidity is placing high demands on the profession. Our data indicate that the active early recognition of co-morbidity may lead to better outcomes. Co-morbid patients who had contact with secondary care psychiatric services had fewer A & E visits. This at least suggests the potential of active engagement to reduce the need for crisis care. A critical issue is the extent to which the increase in co-morbidity can be attributed to substance abuse. During the 6-year study period, the annual co-morbidity rate increased

by 62% but rates of co-morbid schizophrenia, paranoia, and psychoses increased by 128%, 144%, and 147%, respectively. These data indicate that substance abuse may be precipitating more serious forms of co-morbidity, although it is by no means clear that this is the case. For example, nearly all diagnoses of co-morbid schizophrenia precede substance abuse. Further work is required to test this hypothesis.

The Government's Mental Health Czar Professor Louis Appleby has recently expressed concerns over continuing benzodiazepine dependence and how it can be monitored. In this study, the rate of co-morbid licit dependence increased from 1993–1995 by 65% but from 1995–1998 fell by 66% to 1993 levels. Although benzodiazepine dependence is decreasing, it remains the most prevalent form of substance abuse among people aged 55 plus. In comparison to drug misuse and treated mental illness, co-morbidity displays more widespread social and regional variation. In the Northern and Yorkshire region the rate was more than 300% higher than the rate in the West Midlands. The co-morbidity rate in practices in the most deprived areas was also more than 300% higher than in practices in affluent areas. However, there are indications that co-morbidity is spreading to relatively "immune populations" as co-morbidity is increasing more rapidly in affluent areas and regions such as South Thames and Trent where the rate was previously low.

The level of co-morbidity is increasing at a higher rate among younger patients which indicates that co-morbidity may increase, perhaps at a faster rate than observed in the study period, in future years. The findings on transition from mono to co-morbidity have major implications for understanding and preventing co-morbidity. They suggest that individuals with co-morbidity may be qualitatively different in the form of their mono-morbidity than those who remain mono-morbid. Early development of co-morbidity suggests that there may be characteristics already present at the mono-morbid stage, which may predict the likelihood of developing co-morbidity. Identifying such characteristics in future research might contribute to the early management or prevention of co-morbidity in primary care.

Issues arising from the study

We cannot ascertain whether the increase in co-morbidity reported here represents an actual increase in the prevalence of co-morbid conditions or reflects the medicalization of social, economic, or personal problems. The latter are issues that are outside the scope of an epidemiologically focused study, although they may be informed by epidemiological analyses. The report provides prevalence data on the basic forms of co-morbidity, but there is a need to further examine health care utilization pathways in relation to distinct forms of co-morbidity. We also need to examine paths between what might be classed as mild and severe forms of co-morbidity. For example, does co-morbid neurosis predict co-morbid psychosis?

The database affords the opportunity for longer-term follow-up. Specific questions that might be addressed include: Is treatment effective for co-morbid patients? If so, are some types more effective than others? What is the role of medication in co-morbidity? How important is contact with secondary care services? Is methadone being prescribed in adequate dosages?

Assuming that the trends observed from 1993–1998 continued, the number of GP consultations with comorbid patients probably exceeded 1 million by 2003. This figure is a minimum estimate, as every year 80–90% of co-morbid patients are newly diagnosed and about 50% of existing co-morbid cases are still be treated.

Recommendations

The recognition of the scale of co-morbidity and its impact should lead to the following:

- More training in the management of co-morbid patients in both primary and secondary care.
- More studies on the likely impact of early recognition and care on improving outcome; more studies on different interventions in primary and secondary care.
- Experiments with increased resources and new models of care in selected general practices in order to improve the early detection and management of co-morbid patients.
- Longer-term follow-up of individuals identified in primary care as having co-morbidity in order to determine the impact and outcome of chronic co-morbidity and their use of medication and health services.
- Regular monitoring of the incidence and prevalence of co-morbidity and also exploitation of the extensive information on co-morbidity available on the full national General Practice Research Database (such as the variable which links household members).
- A series of focused GPRD studies on (a) benzodiazepine dependence, (b) methadone prescribing, (c) transition from mild to severe co-morbidity, and (d) the impact of secondary care contact.

Endnote

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The psychosocial consequences of drug misuse: A systematic review of longitudinal studies

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The aims of this project were:

- To identify evidence derived from longitudinal studies on the psychosocial consequences of illicit drug use by young people in the general population.
- To assess the strength of this evidence.
- To suggest how future longitudinal studies could fill any important gaps in the current evidence base identified.

Policy relevance

This review is intended to strengthen the evidence base informing policies to reduce drug-related harm as experienced by individuals and communities. There are many examples of drug-related harm. However, some health and social problems associated with drug use may not be caused by drug use. Rather they may reflect differences between people who do use illicit drugs and people who do not. Policies to prevent illicit drug use will not prevent harm that is not caused by drug use but is merely associated with it. Drug policy itself may have wider social consequences. These, along with other aspects of the socio-economic environment that drug use occurs within, should also be considered in assessments of the consequences of drug use and of the most effective means to reduce the most harm.

Background

More young people appear to be using illicit drugs and to be initiating that use at younger ages. The probable consequences of this are unclear. Popular wisdom and evidence from clinical populations suggest an almost inevitable association between illicit drug use and severe health and social impairment. Portrayals of drug use and drug users in popular media are often misleading, and atypical individuals with multiple problems may be over-represented in treatment populations. Evidence from the general population also suggests that the use of illicit drugs by young people can be associated with several kinds of “psychosocial harm.” Longitudinal research that follows individuals over time can identify

harms that are preceded by drug use and therefore may be causally related to use. It is important to establish the extent, consistency, and strength of current longitudinal evidence.

Research design and methodology

A systematic review of longitudinal research on the psychosocial consequences of illicit drug use by young people was undertaken. Evidence was identified through searches of general biomedical and specialist addiction related electronic and paper databases and through contact with relevant experts. Publications not in English were translated. Publications were included if they were general population based, prospective in design, measured illicit drug use in people aged 25 years or younger, and related this to any psychosocial outcome measured subsequently. Two reviewers discussed the strengths and weaknesses of studies meeting all these criteria. All evidence identified is reported in this review to allow independent appraisal. Only that evidence considered to be of relatively high quality is discussed in detail.

Some notes on interpretation

A consistent association between drug use and harm could reflect a causal relation. Alternatively, it could indicate a consistent influence of one of the two types of methodological problem complicating interpretation of observational studies; bias or confounding. Bias is a consequence of systematic misinformation. For example if people who over-report their personal drug use also over-report their experience of psychosocial problems it will appear, spuriously, that drug use leads to harm. Since most studies use uncorroborated self-reported measures of drug use, and often relate these to similarly uncorroborated estimates of harm, their results may be biased. Confounding arises when the association between two things (drug use and harm for example) is not causal; rather it is completely explained by the fact that both are related to a third thing. For example, people who drink more coffee tend to have a higher risk of lung cancer, not because drinking coffee causes lung cancer but because both drinking coffee and risk of lung cancer are related to smoking. Preventing coffee drinking will not prevent lung cancer. Both drug use in adolescence and the experience of psychosocial problems in young adulthood are related to early psychological and social problems and early social disadvantage. Studies that do not take this into account may wrongly attribute causality to an association between drug use and harm arising purely because both share common antecedents. In observational studies, the issue of confounding can be addressed through measurement of potential confounding factors and statistical adjustment of effect estimates for these measures. In experimental studies, random allocation of subject exposure category should ensure that confounding factors are evenly distributed among study subjects such that their influence on effect estimates is minimized.

Summary of findings

From over 6,000 initial publications, 46 relevant studies were identified all with an observational design. Several were not published in English. Thirty studies were assessed as providing relevant evidence that was nonetheless limited in its ability to clarify causal questions due to methodological limitations. Sixteen studies were assessed as providing the current best available evidence. None of these were from the UK, most reported possible consequences of cannabis use. Cannabis use showed consistent associations with lower educational attainment, increased risk of use of other drugs, and increased reporting of psychological problems. The relative consistency of these associations does not confirm a causal relation. All measures of cannabis use in these studies were uncorroborated, as were many of the psychosocial outcome measures use was related to. Most studies were limited in their ability to adjust for possible confounding factors in their analyses, particularly those relating to early life adversity. The association between cannabis use and the early transition to adult roles was also consistent though problems associated with this varied. Use (both of cannabis and of other illicit drugs) was occasionally associated with outcomes that could be construed as “positive.” These included higher wages in early adulthood. It is unlikely that such associations are causal; again they illustrate the influence of confounding. Consistently, cannabis use in early adolescence was associated with greater problems than use in late adolescence. Use was inconsistently associated with antisocial and criminal behaviour. Again, it seems likely that all these associations will have been influenced by biases resulting from measurement imprecision and by confounding resulting from an inability to fully consider the covariance of drug use with early childhood adversity. In general, the associations reported in studies reviewed were considerably attenuated when adjustment was made for potential confounding factors. Since most studies had only limited measures of these factors, residual confounding is likely to have remained. Given these considerations, it is possible that much of the reported association between cannabis use and psychosocial harm is non-causal.

A few studies reported consequences of cocaine use, and smaller numbers reported consequences of opiate use. These studies suggested a deleterious effect of relatively heavy use over relatively long periods on general health but few other adverse consequences. The contrast between the range and magnitude of effects of cocaine and opiate use in these general population studies with those seen among clinical populations is probably partly a consequence of the effective exclusion of the most marginalized and problematic individuals from general population studies.

There appears to be no longitudinal, general population evidence regarding the possible effects of certain illicit drugs that are used by a significant (albeit smaller than that using cannabis) proportion of young people. The most important example of this latter group was MDMA (ecstasy). Given suggestions of possible long-term toxicity of MDMA, this lack of evidence is concerning.

It is important to recognize that certain effects of illicit drug use may be mediated through social, rather than pharmacological, mechanisms, and that

such effects include those of drug policy. Drug prohibition creates entrepreneurial opportunities for criminals. It may also criminalize some young people who would not otherwise have broken the law, with consequences for their subsequent life trajectory that may be similar, or even greater, in magnitude than those of drug use. The relatively robust association between cannabis use and use of other drugs may reflect the current legal status of cannabis. It is possible that if cannabis were not only available through illegal drug markets, where other drugs are sold, that this association might be weakened. These issues deserve empirical examination.

Recommendations for future research

Given the extent of youthful drug use, the uncertainties regarding the public health consequences of this and the current lack of relevant UK data, there is an urgent need for further UK-based research. Longitudinal studies able to provide the evidence needed must examine general population samples of young people across their whole developmental life course, ideally from birth and certainly from before their initiation of drug use. They must collect such early life data as to enable the important issue of confounding to be addressed, and they must consider consequences of drug use in the context of general psychosocial development. Studies meeting these criteria could be initiated now. Large UK studies of appropriate design focused on general child development already exist. Funding to enable these studies to also undertake objective assessment of drug use (both licit and illicit) and possible psychosocial consequences of this would represent a timely and cost-effective approach to filling the current evidence gap. Measurement of drug use should extend to substances other than just cannabis, and should utilize instruments other than those completely reliant on uncorroborated self-report.

In addition to the collection of new observational evidence in this way, an experimental approach is possible. This is through randomized trials of interventions to prevent or reduce drug use. If reductions in drug use are accompanied by reductions in harm in such trials then this strongly suggests that the relation between drug use and harm is causal. Future investment in drug prevention should therefore be contingent on interventions being evaluated by appropriate research designs, in most cases randomized controlled trials. These trials should include evaluation both in terms of effects on drug use but also effects on harm. As well as confirming public value for money and ensuring that young people are not exposed to unintended ill effects, such an approach would also provide strong scientific evidence as to any true causal relations between drug use and harm.

Conclusions

Drug use by young people is associated with various forms of psychosocial harm. Current evidence does not clarify if this association is causal, neither does it

demonstrate that drug use is harmless. Better evidence is needed to answer these important questions and allow the aspiration of an evidence-based drugs policy to be realized.

Endnote

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An evaluation of a brief intervention model for use with young non-injecting stimulant users

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This report describes the rationale, implementation, and efficacy evaluation of a brief, motivational intervention for young users of cocaine, crack cocaine, and ecstasy not in contact with treatment services. The intervention was developed so it could be used by peer and other drug workers. The evaluation was a two-condition, multi-site, randomized controlled trial with a single 6-month follow-up.

Background

Illicit stimulant drug use is widespread in the UK. The lifetime prevalence of cocaine, crack, and ecstasy use among 16–19 year olds in England and Wales is 6%, 2%, and 7%, respectively, and policy makers and treatment agencies recognize that appropriate, tailored interventions are needed to encourage young users to reduce harm and health risk. To date, “harm reduction” interventions targeting young stimulant users have focused on communicating balanced and factual information about “safer” drug use. There is increasing interest in the study and application of brief, “motivational” counselling methods that encourage young people to appraise their drug use and make suitable changes. It is thought that since young stimulant users represent a low contact treatment group they are more likely to accept and participate in a “person centred” brief intervention. This present study is the first UK evaluation of a brief intervention model that was specifically tailored for young, out-of-treatment, stimulant users.

Trial conditions

There were two conditions in the trial. Consenting participants in the experimental condition completed a Drug and Lifestyle Assessment Questionnaire (DLAQ) which gathered baseline information. They then took part in a personal Advice, Information, Motivation, Support (AIMS), interview based on the methods of “motivational interviewing” administered by a trained worker. Participants in the control condition completed the DLAQ only. Both experimental and control groups were also given pamphlet information about stimulant use and about local support services. As part of quality control procedures, each AIMS interview was tape-recorded and monitored by the research team.

Trial hypotheses

A total of 17 directional research hypotheses were set. The headline hypothesis was that: there would be a significantly greater reduction in the change in *overall frequency* and *typical daily intensity* of individual use of crack, cocaine, and ecstasy between baseline and follow-up among participants in the experimental condition versus those in the control condition. The other hypotheses concerned the perceived harmfulness of stimulant use, other drug use, health, offending, awareness of local services, engagement with support services, participation in educational and training courses, peer drug involvement, involvement in non-drug related activities, social problems related to drug use, and the perceived likelihood of injecting and using heroin. Several other objectives were set relating to investigating acceptability of the intervention and the suitability and experiences of the peer workers in its delivery.

Trial participants

Participants were 16–22 years old. They identified themselves to be primary (i.e., regular) users of cocaine hydrochloride, crack cocaine, or ecstasy and were subsequently assigned to these primary stimulant groups for analysis. No participant had been in treatment during the previous 12 months and none had a treatment history for opiate dependence or injecting. Block randomization was used to cross-stratify participants in each of the two trial conditions by gender, age, stimulant type, and frequency of use.

Procedure

Trial participants were recruited in 11 sites in Greater London and Kent using detached outreach, specific advertising campaigns, and by participant-driven snowball-sampling methods. All participants were invited to provide both personal and other friends and family “locator” contact details to facilitate follow-up and all received brief administrative contacts by the study team at 8, 16, and 22 weeks prior to taking part in an independent, researcher administered follow-up interview.

The sample

A total of 369 young stimulant users were screened for eligibility and 342 were randomized to one of the two trial conditions; 166 (48.5%) were randomized to the experimental group. The number of participants in each primary stimulant group were as follows: cocaine ($n = 73$), crack ($n = 67$), and ecstasy ($n = 202$). The crack users reported taking the drug on 24 days in the 90 days before recruitment; the ecstasy users had consumed the drug on 20 days in the same period and the cocaine users used once a week on average. A comprehensive research assessment battery recorded use of alcohol and other drugs, severity of dependence, and problems in health, social, financial, and legal domains. Objective validation of

self-reported drug use using oral fluid tests was incorporated as part of the follow-up assessment, and study resources permitted the testing of 90 participants, randomly sampled from each of the two trial conditions ($n = 45$) and equally from each of the primary stimulant groups ($n = 15$). The concordance between self-report and the test result in each stimulant group ranged between 86% to 88% and this did not differ between trial condition.

Results

Implementation results. Six-month follow-up interviews were successfully conducted with 299 participants (87% of those recruited). The participant recruitment methodology used in the trial was successful, showing that longitudinal, experimental studies with young out-of-treatment drug users are quite feasible. The crucial drivers of successful retention were a multilevel outreach strategy, participant referral, primary and secondary expense payments, having access to suitable local sites, a sufficient number of flexible and motivated personnel, and multiple contact points. The motivational intervention was acceptable to the participants, with the majority reporting that it was of value to them. There was evidence that peer workers can successfully deliver a brief motivational intervention, although in practice the majority of workers are likely to require good supervision and support by committed supervisors.

Efficacy results. There were a range of positive changes reported by participants in both the experimental and control conditions. The “headline” differences between the trial conditions were as follows:

- There was significantly greater overall reduction in the frequency of using cocaine, crack, and ecstasy among the experimental condition. On average, the experiment group used these stimulants on 21 fewer days in the past 3 months and the control group on 18 days fewer days.
- There were reductions in the typical intensity of stimulant use in both conditions, and no difference for a greater reduction among the experimental group.
- There was a significant difference in the rating of the quality of health among those primary crack users in the experimental condition.
- There were significant reductions in offending in both trial conditions, and evidence for a relatively greater reduction among primary ecstasy users in the experimental group only.
- There was a significantly greater increase in awareness of local services among participants in the experimental condition. Those in the experimental condition were more than twice as likely to apply for a job or education course and more than one and a half times as likely to have started work or an education course.

Conclusion and recommendation

Brief motivational interventions are of value for use with young stimulant users and can be successfully delivered by trained and well-supported workers. In the

present trial, there was some evidence that the AIMS intervention was significantly better than a basic assessment of drug substance use and lifestyle questionnaire in encouraging young people to reduce harmful or risky stimulant use, there was not sufficient separation between the two conditions to provide a clear recommendation that brief motivational interventions should be delivered in practice without further development.

Endnote

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Dexamphetamine substitution as a treatment of amphetamine dependence: A two-centre randomised controlled trial

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The aims and objectives of this study were:

- To investigate the impact of dexamphetamine prescribing for the treatment of amphetamine dependence.
- To assess the practicalities of a research methodology for studying dexamphetamine prescribing in UK clinical settings.
- To assess the effectiveness of dexamphetamine substitution on recognized best available treatment of amphetamine dependence.
- To describe the nature and extent of any benefits or harms on the mental or physical health of those receiving dexamphetamine.
- To contribute to the development of guidelines for best practice in the management of amphetamine dependence.

Policy relevance

After cannabis, amphetamine is the second most widely used illicit drug in the UK. Most amphetamine use is recreational, but a proportion of amphetamine users develop significant dependence. Amphetamine is often injected, and injectors have been shown to be at higher risk of infection with blood-borne viruses than heroin injectors. Amphetamine dependence is also associated with high levels of criminality. Several generic and symptomatic treatments are potentially of relevance to amphetamine users, but there is little research into treatment effectiveness and services have generally failed to attract users into treatment. If parallels can be drawn between amphetamine and opiate dependence, then prescribing dexamphetamine as a substitute treatment could confer benefits similar to methadone, the benchmark treatment for heroin dependence.

Introduction

Evidence suggests that dexamphetamine is widely prescribed for the treatment of addiction. In England and Wales at any one time, between 900 and 1,000 amphetamine users are being prescribed dexamphetamine and 60% of specialists in drug dependence consider that dexamphetamine has a role in treating amphetamine dependence. There are a small number of studies from the UK and Australia on prescribing dexamphetamine to amphetamine users. They have shown that management results in increased retention in treatment and

reductions in illicit amphetamine use, injecting, and offending behaviour. The potential to receive a prescription for dexamphetamine also encouraged amphetamine users to present for treatment. Prescribing dexamphetamine remains controversial because benefits have not been demonstrated in randomized controlled trials and because of the possible risks to physical and mental health.

Research design and methodology

The study was a randomized, two-centre (Manchester and Cardiff) parallel group design comparing the effect of dexamphetamine prescribing and best available treatment (DEX) to best available treatment alone (BATA) for the treatment of amphetamine dependence. Study participants provided written consent and the study had local ethical approval.

BATA included provision of literature on amphetamine, motivational style interviewing, review of recent behaviour using a retrospective drug diary, discussion of cues, coping, and lapse management, advice on healthy lifestyles, harm minimization advice including advice on safer injecting and use of syringe exchange schemes, referral to appropriate non-drug agencies for other health or social issues, symptomatic prescribing for depression, anxiety, and insomnia, and the possibility for inpatient admission for detoxification if clinically indicated. The DEX treatment arm included all the above and dexamphetamine tablets up to 100 mg daily, dispensed on a daily basis through a community pharmacist.

After treatment randomization, participants received weekly clinical appointments for the first 4 weeks and then fortnightly clinical appointments until 7 months, at which point the treatment phase of the study finished. During the first 4 months, DEX participants received maintenance dexamphetamine prescribing. After 4 months, participants in the DEX group were gradually withdrawn from dexamphetamine according to a predefined schedule over the next 3 months. Independent research assessments took place at entry into treatment, 1 month, 4 months, 7 months, and 9 months (i.e., 2 months after treatment ended). The research interviews included standardized questionnaires on drug use, physical and psychological health, social functioning and quality of life, offending behaviour, and satisfaction with treatment.

The two treatment groups were compared during the course of the trial based on research interviews and clinical monitoring data. For the research data, this involved two sets of statistical analyses, the first of early outcome combining assessment for months 1 and 4 (equivalent to the dexamphetamine maintenance phase), and the second of longer-term outcome using assessment at 7 and 9 months (dexamphetamine withdrawal phase). A similar approach was used with the clinical monitoring data, analysing responses for the first 16 weeks and weeks 17–28 separately. Statistical analysis followed the principle of intention-to-treat, that is, data was analysed according to the way we intended to treat participants, not the way in which they were actually treated.

Findings

Fifty-nine individuals fulfilling DSM IV criteria for amphetamine dependence were recruited from the two centres in Manchester and Cardiff. Randomization was computerized and eligible participants were allocated to DEX or BATA using minimization controlling for treatment centre, gender, and injecting status. Thirty-two participants were randomized to DEX and 27 to BATA. Among the study sample, 71% were male, 56% were injecting on entry to the study, the mean illicit amphetamine use was 19.3 g over the previous 7 days, and polydrug use was common with alcohol, tobacco, and cannabis being the most frequently used other substances.

DEX participants attended a median of 7 in 16 scheduled clinic appointments and BATA clients a median of 5. Research interview follow-up rates were 78% at 1 month, 69% at 4 months, 56% at 7 months, and 59% at 9 months.

Prescribing dexamphetamine did not significantly reduce illicit amphetamine use compared with BATA, with both groups reporting reductions. Dexamphetamine did not have a positive impact on reducing injecting behaviour compared with BATA. There was evidence to support reduced polydrug use in the late outcome period ($p=0.08$) for those prescribed dexamphetamine.

Participants prescribed dexamphetamine showed significant improvement in physical health outcomes during the first 4 months of treatment (maintenance phase; $p=0.01$) with some evidence to support this being sustained over the later outcome period ($p=0.08$). There was a statistical trend showing improvements in psychological health in the DEX group compared with the BATA group in both the early and late outcome periods.

Blood pressure was increased in the DEX group during weeks 17 to 28 of clinical monitoring but the mean blood pressure for the DEX group remained within the normal range. Body weight reduced in the DEX group compared with the BATA group during maintenance treatment (weeks 1–16) and increased during the reduction phase (weeks 17–28). Overall, both groups gained weight.

Prescribing dexamphetamine did not have adverse effects on the physical or psychological health of participants. There was only one episode of psychosis when a participant was in receipt of a dexamphetamine prescription. This was in the context of severe emotional stress and during the dexamphetamine reduction phase.

Future research

Future randomized controlled trials into the treatment of amphetamine dependence based on the methodology of the current study should be achievable within clinical settings. They must be designed using power calculations based on more modest outcomes than previously expected, and will have to overcome difficulties in recruiting and retaining participants encountered in this study. There are likely to be subsets of amphetamine users who benefit more from dexamphetamine prescribing than others and this should be considered by future research. Psychosocial treatments also clearly require further research, both as treatments within their own right and as components of an overall treatment

package that includes dexamphetamine prescribing. The management of stimulant dependence in clients with severe and enduring mental illness is a particularly difficult therapeutic area that also requires further research. There is pressing need in the UK for effective interventions for crack use and combined crack and opiate use. Dexamphetamine may have potential as an agonist therapy in the treatment of cocaine dependence. The need for a larger randomized controlled trial that provides definitive outcomes and allows comparisons of subgroups should not detract from further uncontrolled studies, but these should use more stringent and better-validated outcome measures than hitherto has been the case.

Best practice in managing amphetamine dependence

The study provides modest support for the benefits of prescribing dexamphetamine. Concerns that dexamphetamine confers significant risk to the physical and mental health of patients were not substantiated. The study also showed that amphetamine users will present for treatment when there is no certainty that they will receive a prescription for dexamphetamine and that they can engage in treatment and benefit substantially from such treatment. The evidence supports the Department of Health's current clinical guidelines that dexamphetamine substitution should remain a specialist treatment intervention carried out by experienced practitioners. When offered, dexamphetamine should be part of a complete treatment package incorporating psycho-social interventions and providing clinical monitoring procedures that include urine drug screening with the ability to differentiate prescribed from illicit amphetamine, blood pressure checks, and mental state reviews.

Endnote

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Preteens and illegal drugs: Use, offers, exposure and prevention

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In this report we outline the results of research into legal and illegal drug use and drug exposure among children aged 10 to 12 in Glasgow and Newcastle. Research carried out in the USA has indicated that the earlier the age at which young people start to use illegal drugs the greater is the likelihood of their developing problems associated with longer term drug use. The connection between early onset of illegal drug use and later drug problems is particularly strong where the drug use occurs alongside other behavioural problems. The research we carried out aimed to identify the extent to which 10 to 12 year olds in Glasgow and Newcastle had been exposed to legal and illegal drugs, the extent of such drug use, and the individual and contextual factors associated with drug use and drug exposure. In addition, the research also aimed to make recommendations for services in contact with preteen drug misusers.

Research methods

This research involved a combination of qualitative and quantitative methods. We undertook a survey of 2318 children aged 10 to 12 in Glasgow and Newcastle. In addition we undertook qualitative, face to face, interviews with 216 children spread across three groups: (a) children who had already used illegal drugs, (b) children who have been exposed to illegal drugs (exposure was defined as having been in situations where people were using illegal drugs or having been offered illegal drugs), and (c) children who had neither been exposed to illegal drugs nor used illegal drugs. We also sought information from a range of service providers in both cities on their experiences and views of preteen drug misuse.

Drug use

Overall, 30.7% (711) of the 10 to 12 year olds had been exposed to illegal drugs and 9.2% (213) had been offered illegal drugs; 3.9% (91) of preteens had used illegal drugs in the past and 1.5% (34) had done so within the last month. Illegal drug use was more common among preteens in Glasgow (5.1% past use) than in Newcastle (2.7% past use). In both cities, cannabis was the illegal drug most widely used: 1.8% of preteens in Newcastle reported having used cannabis in the past compared to 4.7% in Glasgow. Use of other illegal drugs

was under one percent of preteens surveyed. On the basis of our results, we would estimate there to be in the region of 621 10 to 12 year olds in Glasgow that have used illegal drugs in the past and 207 who have done so within the last month. In the case of heroin, we would estimate that approximately 60 10 to 12 year olds in Glasgow will have used the drug in the past and 25 will have done so within the last month. In Newcastle we estimate that there are approximately 236 10 to 12 year olds who have used illegal drugs in the past and 113 who have done so within the last month. We also estimate that around 34 10 to 12 year olds in state schools in Newcastle will have used heroin in the past and 17 will have done so in the last month. The relatively low level of illegal drug use among preteens identified in this study was in stark contrast to the level of alcohol use among young people.

Factors associated with illegal drug use

Illegal drug use, and exposure to illegal drugs, was associated with gender (more common among boys than girls), age (more common among 12 year olds than 10 year olds), deprivation, use of licit drugs, having someone in the family who had used illegal drugs, having run away from home on more than two occasions, living in a step family, living with parents who exercised a low level of supervision, having been involved in a range of problem behaviours, having friends who had initiated illegal drug use, and having friends who were older than themselves and who also had been involved in a range of the problem behaviours.

Knowledge and attitudes towards illegal drugs

Almost all of the pupils articulated a negative view of illegal drugs as a whole. In particular, the anti-heroin messages of recent years seem to have been well absorbed by this age group. However, when invited to elaborate on their views, the majority revealed a knowledge of individual drugs that was vague, limited, and frequently erroneous. A number of factors may lie behind the children's confused and restricted perceptions of drugs including: the amount of drug education received and its effectiveness; the perceived irrelevance of the topic for some children; the intellectual limits of the age group; and the fact that they are likely to hear about a wide array of drugs from a variety of sources, many of which may appear contradictory.

While around a quarter of our interviewees could make little or no distinction between different drugs in terms of the severity of their effects, the rest were, to varying degrees, able to differentiate between different substances. In particular, a high proportion of the children distinguished between cannabis and other illicit drugs with the former commonly being regarded as relatively benign. This distinction was especially evident as far as those who had used cannabis were concerned, although a tolerant attitude towards the drug was by no means exclusive to this group. With the exception of cannabis, there were no substantial differences in the views expressed by users, exposed, and non-exposed children in their general attitudes to drugs.

Drug offers

Among survey participants, just under 10% had been offered illegal drugs. Our study has shown that the closer the relationship between the child and the person making the offer, the more likely they were to accept it. There were two aspects to this. First, refusing an offer from a friend or relative was much more difficult than turning down offers from people with whom they had a more distant relationship. A prominent aspect of this was the young person's fear that rejecting friends in this way and distancing themselves from some of their activities could put a strain on the relationship and could even prove fatal to it. Second, offers from people to whom they were socially close had an enhanced authority because of the element of trust that is common in such relationships.

The most effective defence against an unwelcome offer was to have a good reason for not accepting it. The most effective reasons were those which were either able to point to the inherent dangers involved in taking a particular drug or which justified non-participation in terms of some valued activity or ambition. However, children frequently struggled to produce acceptable explanations for refusing an offer of drugs and the reasons they gave were often weak or inappropriate. Their difficulty was particularly evident in relation to "softer" drugs such as cannabis. The fact that these drugs are generally perceived as being less dangerous than certain other drugs makes it much more difficult for a young person to justify their decision not to try them. These findings highlight the importance of providing children and young people with effective explanations for refusing an offer of drugs. In particular, they need to be provided with good arguments for why they should not take cannabis when it is being presented to them as being innocuous by people whom they trust.

Initial use of illegal drugs

Individual choice and pressure are both involved in pre-teenage children's decisions to accept the offer of drugs. Based on our study, the belief that drug use is very largely the product of peer pressure acting upon passive and compliant adolescents is almost certainly wrong. Rather there is a complex dynamic in operation whereby choice and different forms of pressure sometimes operate simultaneously in relation to the same individual. What this means is that acceptance of an offer can be the product of an intricate combination of curiosity, attempts at persuasion, and the child's own desire to conform to the group.

Drug use on the part of family members

Overall, 13.8% (297) of the surveyed preteens reported having someone within their family who had used or was using illegal drugs. Preteens who reported having someone in their family using illegal drugs were more than five times more likely than their peers to have initiated illegal drug use themselves. Among the 216 pupils with whom we undertook semi-structured interviews,

43.9% (95) reported having someone within their family who had used or were using illegal drugs.

It was clear from our interviews that many of the preteens were concerned about their relatives' drug use. While children were most concerned by a pattern of problematic drug use (drug injecting, use of heroin) on the part of adult relatives (particularly parents), some children were also very concerned about what appeared to be a pattern of more recreational drug use on the part of other family members. Children's concerns regarding their relative's drug use centred around three broad areas: concern as to the impact of the drug use on the person, concern over the impact of the drug use on the family, and finally concern over the reactions of other people outside of the family.

It seems likely that the impact of family drug use on preteens will be influenced by the nature of the drug use in question and the family relationship involved. In this respect it may be significant that while young people described illegal drug use on the part of their adult relatives in largely negative terms they were much more ambivalent about illegal drug use on the part of siblings and cousins. It may be that it is illegal drug use on the part of cousins and siblings rather than their adult relatives that may be associated with an increased risk of illegal drug use on the part of some preteens.

Views of drug education

It was evident from our interviews that many preteens would have liked more information on certain topics and many of them had clear preferences in relation to the delivery of drug education. As far as their desire for additional information was concerned, the pupils wanted to know more about the effects of different drugs, how to recognize them, and how to deal with situations in which they might be exposed to drugs or offered them. A number of the children expressed alarm at the prospect of being confronted by an offer of drugs and indicated that they felt ill equipped to deal with it. On the basis of this, there would seem to be a convincing case for including the development of appropriate life and refusal skills in the drug education which pre-teenage children receive in school.

A considerable number of the pupils expressed a preference for non-directive approaches. In other words, they wanted to be provided with information on which to base informed choices as opposed to a "just say no" approach. Their preference for interactive methods was also pronounced. Those who had been involved in discussions had found them useful and some were critical of events where they had not been actively involved.

Those pupils who expressed a view over who should deliver drug education had a clear message on this topic: while teachers have a role to play, outsiders with more specialist or personal knowledge of drugs are also required for the task of improving children's awareness of the effects and seriousness of different substances. Real life tales of drug use and presentations by former users were especially valued. Most of the pupils who offered an opinion thought that drug

education would be better delivered by someone they did not know, primarily to minimize feelings of inhibition.

The fact that teachers are regarded by some pupils as lacking in knowledge and experience of drugs or as potentially inhibiting certain discussions should not be taken as a criticism of the way in which teachers carry out the work of drug education. Indeed, many of the pupils commented favourably on their input. Instead, what this argues for is a need for a range of different people to be involved in drug education in schools.

Views of service providers

There was a clear view among the small number of service providers contacted in this research that preteen illegal drug use was on the increase. Despite this consensus, very few service providers indicated that they were in contact with children of this age using illegal drugs. The sense in the majority of comments we received from service providers was of a problem that they felt was increasing but which they themselves were not directly engaging with. There was a wide range of suggestions from service providers as to the sorts of things that they felt needed to be implemented to reduce the extent of preteen drug use. Suggestions included “better guidance and training for staff,” “better awareness on the part of staff,” “greater availability of projects for young people,” “appropriately trained staff in schools,” “more leisure facilities for young people,” “clearer messages from government,” “parenting skills classes,” “better joint working between agencies,” “family support services,” and “instilling a greater sense of belief in the future on the part of young people.” The clear consensus in these comments was that developments on various fronts needed to be implemented if the level of illegal drug use among preteens is to be reduced. Very few service providers were aware of joint protocols between children’s services and drug treatment services in their area. Nevertheless, service providers were roughly evenly split between those who felt that they were reasonably well equipped to respond to preteen drug misuse and those who felt that they were seriously under-equipped to meet the needs of preteen drug misusers. The majority of those who replied to our questionnaire felt that drug services in their area were child friendly. In the main, such positive comments had to do with service providers views as to how accessible drug services in their area were to young people rather than indicating that such services had clearly worked out procedures for dealing with children using illegal drugs.

Conclusions

This study has shown that, by age 12, a small proportion of pupils will have already started to use illegal drugs, and that, while illegal drug use at this early age is principally confined to cannabis, for some pupils this early age of onset of illegal drug use involves other drugs. Our research has also shown that early age of onset of illegal drug use is often combined with involvement in a wide

range of problem behaviours on the part of the young people involved. On the basis of our research, there is a clear need to better equip young people to deal with drug offers. Differences in the context in which offers take place and in the child's relationship with the person or persons making the offer require a range of strategies which are capable of dealing with that complexity. The child needs to be prepared for a variety of eventualities including how to deal with pressure or other forms of encouragement, how to cope if they find themselves isolated in a group, what to do about the situation in which a friend or relative is making the offer, and how to justify refusing an offer. There *may* be a particular role here for life skills approaches to drug education. The life skills and values approach seeks to promote individuals' social skills, to inculcate positive values, and to enhance their self-esteem. The life skills approach to drug education is focussed on enabling young people to resist the unwelcome entreaties on the part of other people. As we saw, however, drug use is as much, if not more, a matter of choice on the part of young people as it is about responding to external influences. To address the volitional element of preteens drug use it will be necessary to do a range of things. There is a need, for example, to support children who are already declining drug offers and who are seeking to avoid using illegal drugs. There will need to be a conscious effort to present the choices these children are making in a positive light and to emphasize that there is nothing inevitable about young peoples' use of illegal drugs. This will require that illegal drugs are by no means seen to be the only "appealing," "exciting," "attractive," "fun-filled," or "risky" activities open to young children. In this sense, non-drug use must not be seen as boring by young people, rather we need to ensure that there are equally appealing alternatives to getting involved with illegal drugs. In addition to ensuring that there are alternatives to illegal drugs, there may also be a need to address issues to do with the morality of illegal drugs. If we are to address the volitional dimension of preteen illegal drug use, it may be necessary to directly engage with issues to do with the morality of illegal drug use in much the same way as has been the case with sex education. The aim here would need to be one of imparting information about illegal drugs, their effects, and the like, within a clear moral context in which the use of illegal drugs is seen as less morally sanctioned than the non use of illegal drugs. It is evident from our research that, even at this young age (10 to 12 years old), children differ markedly in their knowledge, attitudes, interest in, exposure to, and use of legal and illegal drugs. The range of young peoples views and experiences spans those who do not feel that illegal drugs has any relevance to them to those who have started to use heroin. One of the main challenges for drug education is to develop materials and approaches which are as relevant to those young people who do not have any interest in or knowledge about illegal drugs at the same time as meeting the rather different needs of those pupils who have already started to use illegal drugs. This will require an approach to drug education that is tailored to individual children's needs. This, however, raises the difficult problem of how one avoids stigmatizing certain pupils in the process of providing individually tailored drug education. While this will be a difficult challenge for school based

drug education, the use of computer-based learning may offer a way of developing individually such an approach to drug education that does not stigmatize certain pupils. On the basis of our research there does not, at present at least, appear to be a need to develop specialist addiction-based services for preteens. In most cases, the illegal drug use which preteens are involved in is not of the addictive, chaotic type. What is needed is to ensure that more generally focussed support services can be provided to preteens where there are indications that they are at risk of initiating illegal drug use at a particularly young age or have already done so. Since illegal drug use on the part of preteens is often associated with illegal drug use on the part of peers and family members there is clearly going to be a need to ensure that such support can encompass both peer and family relationships.

This research was carried out in a single city in England and a single city in Scotland. It is not possible to say whether the findings in this research would apply to other areas within England and Scotland, although there are no clear indications why these findings would not have a wider applicability.

Endnote

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Accessing drug services: Needs and views of drug service users

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We are indebted to the service users, user advisors, and staff at drug agencies who enthusiastically participated in the study. Without their assistance and generous cooperation this study would not have been possible. Particular thanks go to Johanna Clark, Helen Fletcher, Dave Pennington, and service users preferring to remain anonymous, who provided us with invaluable comment, feedback, and guidance during the course of the study.

This research was focused on understanding the nature of needs of drug users presenting to treatment services across the North of England. The background literature suggests that drug users can have problems in multiple areas of life functioning and that treatment efforts may be needed to address other problems that are functionally related to drug use. The purpose of this study was: to examine the range of interventions offered to presenting clients by drug treatment services in the North of England; the pathways, enablers, and barriers to access as experienced from the clients' perspective; and the extent to which drug users receive provision in relation to their needs.

There were three main parts to the study:

- Part 1: Examination of pathways and access into services, encompassing user views regarding service development and involvement.
- Part 2: Retrospective data collected at five drug treatment agencies examining the needs of and services provided for newly presenting clients seen at tier 3 drug services.
- Part 3: Development and application of a schedule for the assessment of needs of drug users, examination of the extent to which user needs were met by treatment services, and consideration of client satisfaction in relation to provision for needs.

Part 1: Pathways and access into services

This part of the study involved a series of semi-structured interviews carried out with 46 service users and 51 drug service providers at different locations across the North of England. The interviews were undertaken in the period

November 2001 to March 2003. The study area covered 10 county areas or part-areas: Cheshire, Derbyshire, Greater Manchester, Lancashire, Lincolnshire, Merseyside, Nottinghamshire, South Yorkshire, Staffordshire, and West Yorkshire. A total of 174 statutory and non-statutory drug treatment services were identified as providing services within the study area. There was very wide variation in their catchment areas. In rural parts, particularly in Derbyshire and Lincolnshire, there were a few services each covering a large geographical area, whereas in parts such as Merseyside and Greater Manchester there were many services covering smaller areas. As there was such wide variation in catchment areas, the aim was to recruit at half of the services in those county areas with small number of services and at one third of the services in areas with larger numbers.

Service provider interviews were undertaken with the agency manager or the deputy in a few cases when the manager was unavailable for extended period. Only one manager declined to be interviewed on the grounds that she was too busy. Prescribing interventions were a core activity: 88% of statutory services provided community detoxification programmes and 85% provided maintenance prescribing, compared with 39% and 11%, respectively, for non-statutory services; 55% of the agencies also provided treatment for alcohol problems but only 18% reported provision in relation to cigarette smoking cessation interventions; 12% of agencies said they would like to provide help in future for smoking, but the majority did not want to provide these.

A large percentage of the agencies reported that they provided counselling (84%), motivational interventions (82%), and CBT (66%). Provision of relapse prevention work, either in group sessions or on a one-to-one basis, was reported by 90% of the services. Complimentary therapies were provided by 76% of services: acupuncture (52%), massage (39%), electrostimulation therapy (30%), reflexology (20%), and arts therapy (14%). Half of the agencies provided employment and training advice, and just less than half provided social activity and leisure counselling. Debt counselling was provided by about a third of agencies.

The main desired service developments identified by the service providers were: increasing provision of complementary therapies, psychological interventions, and structured counselling; increasing overall resources and staffing; and increasing shared care provision. The level of service user involvement reported was quite low overall, with 16% of services having no service user involvement at all. The most frequently reported type of involvement was satisfaction questionnaires, but only one third of the agencies had utilized these. Just over a quarter of the services had user groups. Four services mentioned "user involvement in choosing treatment or care" as a type of user involvement. It seemed that these service providers had confused user involvement in services with user involvement in decision-making about their own treatment. The aspirations of the service providers regarding user involvement were also quite low. Less than half of the services expressed desire to have service users working as volunteers, helpers, or staff members, and only one third of the agencies desired user groups, user involvement in service away-days, and as participants in staff interviews.

The service user interviews were focused on the reported experiences of drug users in accessing services. It was a requirement of the multicentre ethical committee that the researchers should not approach clients directly but should contact via service staff. This requirement may possibly have resulted in recruitment of a higher proportion of service users already active in user groups and service user involvement. The service users reported on 165 service access episodes within a 2-year period prior to interview. These covered all of the tiers described in *Models of care* (Department of Health, 2002), other than tier 4b (highly specialized non-substance misuse services such as liver units, specialized forensic services, etc.). The main concerns of service users in accessing services across all tiers were in relation to waiting times, flexibility in application of service rules, and staff attitudes. They were critical of services requiring long waiting times and highly praised others in relation to short waiting times. Service location, transportation access, and good opening hours were also very important. Those service users who had been on DTTOs recognized that they had jumped waiting lists for treatment, and they appreciated the faster access to treatment that the criminal justice pathway had facilitated. At the same time, they recognized that it was unsatisfactory that they had not been able to access intervention prior to committing a crime.

Service users valued staff accessibility, particularly in relation to being able to get in contact with their worker by telephone, and the importance of reception and administrative staff in facilitating access to drug workers was also recognized. Positive staff attitudes, mainly encompassing respectfulness and treating clients as equals, were identified as extremely important in facilitating access to treatment. Service users felt that many services applied their rules too strictly, and those services that took more flexible approaches were appreciated. Difficulties such as lapses and poor attendance were often indicative of clients “hitting a bad patch,” and the service users felt that more support at such times would be helpful. By contrast, the actions of some services in response to lapses were quite punitive, such as stopping clients’ scripts. Service users reported that this made it difficult to be honest with keyworkers regarding open discussion of lapses or relapse.

The majority of the clients interviewed had received prescribing interventions. Only a few clients had received structured interventions such as cognitive-behavioural therapy, motivational interventions, 12-step programmes, or relapse prevention. The main client concerns in relation to service improvements were improved waiting times, increased staffing and resources, and increased availability of psychological counselling and aftercare provision. Service users had high level of desire for user and ex-user involvement in services, compared with the low aspirations expressed by service providers.

Part 2: Five agencies retrospective data collection

This part of the study examined access pathways for all new clients seen at five tier 3 drug services within a 6-month time frame. The data were taken from

examination of 1418 case note files. The main access routes into the services were referral by GP and self-referral, with significant numbers of clients also referred by probation services and from other drug services. Few clients were seen within the context of shared care or GP liaison. The majority of presenting clients were taking heroin, with just over half using two or more drugs, and they were mostly identified as needing assistance in reducing reliance on drugs, generally through a detoxification programme, or as needing prescribing treatment for maintenance or stabilization. Surprisingly only 6% of clients were identified by the treatment service as needing help for relapse prevention.

Logistic regression analyses were used to examine factors which contributed to likelihood of uptake of assessment appointment with drug worker and retention in treatment. Uptake of assessment appointment was not affected by waiting time, client age, gender, or service agency. However, clients referred by probation services were significantly less likely to attend compared with those clients who self-referred.

Retention in treatment at 3 months post-assessment was influenced by the following factors: site or agency, referral pathway, primary drug problem, and gender. Waiting time, age, and fast tracking did not have an effect on likelihood of being retained in treatment. Clients at some agencies were more likely to be retained in treatment than at others. The agency with the best retention rate had five times more clients remaining in treatment at 3 months than the agency with the poorest retention rate. The service user feedback given to the researchers from different parts of this study indicated that the agency with the highest retention rate had a particularly friendly and “laid back” atmosphere, and this may be at least part of the reason for effective retention of clients in treatment.

Clients who were referred from mental health or general hospital referrals were eight times less likely to be retained in treatment than those who self-referred. Those whose primary drug problem was heroin were more than four times as likely to be retained in treatment as those clients whose primary problem was a substance other than heroin. Women were found to be more than twice as likely to be retained in treatment as men. The length of time that clients had to wait for treatment did not have a significant effect on retention.

Part 3: Problems and needs of drug users

This part of the study focused on examining the needs of drug users newly-presenting at tier 3 drug services. The Drug Users Needs Assessment schedule (DUNA) was developed using a staged model of need decision-making which utilizes the type of procedures that drug service professionals might use in their everyday practice. It incorporates the views of drug users directly into the assessment process. It covers 16 potential problem areas which were derived from a review of the literature and feedback from service users and providers interviewed in part 1 of this study. Ratings of importance of the problem areas

showed considerable similarity for service users and providers, and supported the inclusion of the problem areas in the assessment schedule.

Seventy newly-presenting clients were recruited during the period July to September 2003 at the five tier 3 drug services which participated in part 2 of this study. These clients completed the DUNA at the time that they were initially seen at the treatment service and were then tracked at 3-months follow-up in relation to the interventions they had received and satisfaction with treatment provided. Data concerning interventions provided was available in all cases from case notes, and 44 clients responded to requests to complete a follow-up interview.

The needs assessment showed that drug users presenting for treatment have multiple needs. Not only are they looking for help with reducing reliance on drugs or maintenance/stabilizing prescribing, but also in relation to broader needs and concerns arising from and impacting on extent of drug use. Although a majority of the drug users were offered prescribing interventions, few reported receiving any other structured intervention. This was particularly evident in relation to relapse prevention work, where help offered to clients was not always appropriately targeted and fell well short of being an adequate structured intervention.

No relationship was found between client satisfaction and the level of client needs that had been met at 3-months follow-up, but this may reflect the very low levels of client needs met by services other than for prescribing interventions. Those clients who had most needs identified at initial presentation to services were least satisfied 3 months after. These clients were looking to drug services to provide more than just a script, and were less satisfied as these other needs were generally not met.

Conclusions and policy implications

The study found that there are a number of factors which impact on retention in treatment. Primary opiate users were more likely to be retained in treatment, and this may reflect services having less to offer to stimulant or other drug users. The agency itself makes a difference in retention of clients in treatment, and further research to examine why some agencies are better than others at retaining clients in treatment is clearly warranted, particularly in relation to key aspects of agency working and style. A main service user concern was long waiting times, and this is now being addressed through clear guidance on drug service waiting times and monitoring by the National Treatment Agency for Substance Misuse. The other main service user concerns were negative staff attitudes and that service rules were applied too rigidly. Service users recognized and endorsed the need for services to have rules, but it was the manner of their implementation and disregard for individual circumstances that have caused most concern. The key seems to be achieving a balance between the needs of services and the needs of users, with sufficient flexibility to accommodate individual circumstances. Increasing service user involvement in drug treatment services

may help to facilitate this balance. An increased focus on staff training to improve communication of positive regard and understanding of client concerns, for example training in motivational interviewing style or client-centred counselling, may also help in facilitating client engagement and equipping staff with skills to effectively diffuse difficult interactions. While prescribing interventions are important to drug users, this study has shown that clients are looking to drug service agencies to provide more in relation to broader needs and concerns. Shame and negative emotions about drug use was a key area of concern for many service users who wanted help in finding different ways of coping with these feelings. Although the majority of drug agencies reported that they already provided psychological and counselling interventions, by contrast the service user interviews, the retrospective analysis of case records, and the needs assessment interviews all indicated that these were only offered to a very small proportion of service users. The inadequacy of current provision for structured psychological and counselling interventions was recognized by service users who included these in a “wish list” for service developments.

Many drug service clients expressed interest in getting help for relapse prevention but few were offered help, and what help was offered rarely constituted an effective structured intervention. Although relapse prevention has long been regarded as standard work for drug treatment services, there is still a need to ensure that all drug workers receive effective training and support in delivering these interventions in day-to-day service work.

Endnotes

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Pilot UK-Injectable Methadone Trial (Pilot UK-INJECT)

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Oral methadone maintenance is the standard treatment for opioid dependence and has proved to be effective. Some opiate dependent injecting drug users (OD-IDUs), despite repeated treatment with oral methadone, fail to make any health and social gains and continue to inject illicit drugs and participate in criminal activity. These OD-IDUs have been clinically identified as potentially benefiting from receiving injectable methadone. There is little consensus of opinion on how best to manage these treatment resistant OD-IDUs, and the effectiveness of prescribing injectable methadone remains untested in the UK or elsewhere. Injectable methadone is three times costlier than oral methadone treatment, and would need to have advantage over oral methadone to justify its use.

Aims and objectives of the pilot study

This report describes the results of a pilot feasibility study for a multi-centre randomized controlled trial to compare the outcomes and costs of offering and prescribing injectable versus oral methadone to a selected group of OD-IDUs in the treatment of opioid dependence. The objectives of the pilot study included: (a) identify the number of patients potentially eligible for a randomized controlled trial; (b) assess the feasibility of recruiting and randomizing OD-IDUs to the trial; (c) assess recruitment rates; (d) develop data collection forms and procedures; (e) observe compliance with follow-up at 6 months; (f) assess the reliability of researchers and clinic staff to record data; (g) determine the feasibility of obtaining follow-up data; (h) assess the feasibility for collation and checking of data; (i) determine whether the primary outcome measure relates to other outcome measures; (j) assess the feasibility of procedures for trial co-ordination and monitoring; (k) assess clinic staffs' compliance with the study protocol; (l) assess the feasibility of implementing supervised injectable methadone treatment; and (m) identify any practical problems.

Methods

Design. This was a multi-site randomized controlled trial conducted between December 2000 and November 2001. OD-IDUs enrolled at five drug treatment centres were screened to determine numbers of eligible patients interested in participating in the trial. Those from three of the centres were further assessed to confirm eligibility and invited to participate in the pilot trial.

Recruitment and sample. The study aimed to recruit 40–60 patients at three centres over 4 months. The target population were treatment-resistant entrenched OD-IDUs presenting for treatment. A two stage screening process was established. During usual patient assessment, those who were potentially eligible for the trial were identified and, if interested, they were referred for a full eligibility assessment.

Treatment. Consenting patients were randomized to receive either the offer and prescription of injectable methadone or oral methadone and followed-up for 6 months. The consumption of oral and injectable methadone was supervised daily (Monday to Friday with weekend takehome) for the first 3 months in treatment.

Data collection. Data collection forms were developed to collect outcome data (illicit drug use, HIV risk behaviour, health, and social functioning), other measures at baseline, service delivery measures, and cost data. Follow-up assessments were conducted at 2 and 6 months.

Results

Patient screening and recruitment. Over a 7-month period, 903 OD-DUs presenting to five clinics were screened for eligibility for the trial. Eleven percent (101) of OD-DUs presenting to the five clinics were identified as potentially eligible. Sixty percent of OD-DUs failed to fulfil items on the eligibility criteria around injecting; 60% (541) had not injected at least once a day in the 4 weeks prior to screening; 60% (543) had not injected for 9 out of the previous 12 months; 59% (532) had not been injecting for a minimum of 3 years; and 54 per cent (486) had not previously received oral methadone treatment continuously for at least 6 months. At the five treatment centres, 32% of potentially eligible patients were interested in participating in the trial. At the three participating treatment centres, 19 patients were randomized to the trial: 2% (19/765) of patients screened and 22% (19/88) of potentially eligible patients.

Treatment received. Of the 19 patients randomized, 11 were allocated to receive oral methadone and 8 to receive injectable methadone. One patient allocated to injectable methadone chose to receive oral methadone.

Outcome measures

Proportion of patients followed up at 2 and 6 months. Three patients dropped out after randomization. Fourteen patients were successfully followed-up at 2 months, and 12 patients were followed-up at 6 months.

Completeness of data obtained. Researchers and clinic staff reliably recorded data.

Compliance with trial protocol. The trial protocol was well adhered to. There was only one violation of trial protocol.

Supervised injectable methadone

Suitable rooms to be used as injecting rooms had to be identified and extra resources were needed to equip rooms for this purpose. Staff had no training on supervising the injection of prescribed methadone ampoules. The great majority of patients attended for supervision every day and returned their used ampoules. Patients took between 5 and 15 minutes to inject but the length of time for supervision ranged between 30 and 60 minutes. Clinic staff reported that patients were not injecting safely. No serious adverse events were recorded.

Conclusions

Recruitment of newly presenting opiate dependent drug users into the trial proved not feasible. The study was unable to recruit a sufficient number of OD-DUs presenting for treatment.

Trial eligibility criteria excluded the majority of patients presenting for treatment. The majority of OD-DUs presenting to treatment were either not injecting, injecting infrequently, or had only recently started injecting. A high proportion had either never received oral methadone treatment, or had received it for less than 6 months. The target population does not appear to be presenting to treatment.

Conducting multi-site RCT proven to be feasible. Viable procedures were developed for screening and randomization. The screening procedures were successful but monitoring them was time consuming. The randomization procedure was successfully conducted by an experienced team independent of the treatment staff and research team. Good procedures for data collection, and the collation and checking of data were developed. Follow-up rates would be higher if three patients had not dropped out immediately after randomization. Data were reliability recorded by researchers and clinic staff. Compliance with the study protocol was good. Each site recruited a clinical coordinator to manage the clinical aspects of the trial. There was good adherence to the trial protocol. The trial was well organized and managed. The management of the trial was conducted by a research team independent of the treatment sites.

Implementing supervised consumption of injectable methadone was proven to be feasible. An injecting room was established, and clinic employees were

able to supervise patients injecting their ampoules. However, supervising injecting was time consuming, needs extra resources, and may restrict access to treatment for some drug users. There were no existing guidelines for supervising injecting.

The UK-INJECT multi-disciplinary group is a viable collaborative treatment research grouping. UK-INJECT comprises a group of academics, consultant addiction psychiatrists, and experts in clinical trials and health economists who are in a good position to undertake research on drug treatment effectiveness.

Recommendation: An injectable trial with modified research design

Modify eligibility criteria. The eligibility criteria including previous treatment and current injecting frequency could be modified to include those new to treatment and those with shorter injecting careers or those injecting less frequently. The target population should be recruited from OD-DUs currently receiving oral methadone treatment. A further pilot study should be conducted to assess the feasibility of recruiting from this population.

Provide adequate resources to conduct a two-stage screening process. A two stage screening process should be adopted.

Reduce the likelihood of drop-out. Future studies should consider using a cross-over design instead of a usual RCT. Patients should be randomized after they have completed their dose assessment and when treatment commences.

Appoint two named clinical co-ordinators at each site. Each site would need two named clinical coordinators to undertake the clinical aspects of the trial and supervise injecting.

Further related studies

Practicalities and benefits of supervised injection. Future research should assess the cost effectiveness of supervising oral and injectable methadone (and heroin) and produce guidelines on the supervision of injectable prescriptions.

Survey of drug users presenting to UK drug clinics. Insufficient information is known about drug users presenting to drug treatment services. Research should be conducted to identify the characteristics and treatment needs of drug users presenting to treatment services in the UK.

Endnote

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Randomised clinical trial of the effects of time on a waiting list on clinical outcomes in opiate addicts awaiting outpatient treatment

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The study was a randomized clinical trial of drug users seeking outpatient treatment for opiate dependence in the London Boroughs of Lambeth and Southwark. The study's objective was to examine the impact of drug treatment waiting times on the likelihood of treatment entry (after the waiting period), treatment retention, and changes in client behaviour, in order to consider the potential benefits of reducing waiting times.

Specifically, the project aims were:

- To assess if the length of time spent on a waiting list is associated with successful treatment entry.
- To assess if the length of time spent on a waiting list is associated with an increased risk of patient drop-out after treatment entry.
- To assess if length of time spent on a waiting list is associated with changes in substance use, health, motivation, and criminal behaviour.
- To examine other factors which may be associated with treatment initiation and retention.
- To assess the early benefits of treatment entry compared to waiting list participation.

Methods

The study was conducted at an NHS outpatient drug treatment service in South London, providing maintenance and withdrawal programmes, predominately with the use of methadone. One hundred and eighty-two individuals dependent on opiates (heroin, non-prescribed methadone) were recruited to the study over a 28-month period at their initial treatment-seeking contact at the service. Patients were excluded from the study if were receiving an opiate substitute prescription from another source or if they met the prioritization criteria set by the service to receive quicker access to treatment (e.g., pregnant drug users, recent release from prison).

Voluntary participants were randomly allocated to one of two treatment-entry groups prior to the start of treatment: (a) accelerated treatment-entry group, clients entered treatment 2 weeks after initial contact with the service; or (b) standard treatment-entry group, clients were placed on the clinic waiting list and waited for a conventional treatment slot to become available (as would occur under normal clinical procedures), typically involving a 4–12 weeks wait.

Clients were tracked prospectively from the time of first contact with the service to treatment entry (assessment and prescription of medication) at the end of the waiting period using a series of semi-structured interviews developed to assess

substance use, health and psychological functioning, motivation, and offending at three different time points. Clients who failed to accept the offer of treatment after the waiting period were contacted for follow-up data. Clients who successfully entered treatment were monitored for an additional year in order to assess treatment retention.

Findings

Treatment initiation after the waiting period. Of the 182 patient recruited to the study, 68% entered treatment after the waiting period. Allocation to the accelerated group was associated with a greater number of clients entering treatment (77% of the accelerated group, 59% of the standard group). Fluctuations in treatment demand and treatment resources over the course of the study resulted in a significant variability of waiting times within the standard group (4–21 weeks). Despite this variation, there was no difference in the rate of treatment entry between shorter and more prolonged waiting periods within this group. This finding may suggest a threshold effect, according to which the beneficial effects of early treatment entry apply only up until a certain time. Patients who failed to enter treatment were more likely to experience a greater delay between initial service contact and scheduled treatment entry and were more likely to use crack cocaine, and more frequently, than patients who successfully entered treatment. Patients who entered treatment were also more likely to cite work reasons as important in their decision to seek treatment.

Treatment retention. Sixty-four percent of the sample that entered treatment were still attending 3 months later, and 49% continued beyond 6 months. At this point retention stabilized, with 48% of clients still in treatment at 9 months and 43% at 12 months. Accelerated treatment entry was associated with a slightly lower proportion of clients being engaged in treatment at each of the 3-monthly follow-up periods over the course of a year. The three-day dose assessment procedure, which occurred approximately 8 days after treatment entry, represented a risk period for treatment attrition, particularly for the accelerated group (28% of the accelerated group compared to 13% of the standard group failed to start or complete the procedure). Older age was the only consistent predictor of treatment retention at each interval studied over the 12-month period.

Changes in behaviours

Over the course of the waiting list. Of the 182 patients recruited to the study, follow-up data was obtained from 88% of the sample. For the sample as a whole, regardless of whether they entered treatment, treatment entry group randomization was associated with different patterns of changes in substance use in the two groups. The prolonged waiting periods of the standard group were associated with reductions in the frequency (days of use per week) of substance use, and the shorter waiting periods of the accelerated group, with fewer clients using smaller quantities. The accelerated group also demonstrated improvements in

health symptoms yet an accompanying decrease in motivation, which suggests that even short delays prior to treatment are associated with reductions in desire to change drug-using behaviours.

Treatment initiators and non-initiators. Comparisons of clients who entered treatment after the waiting period with those who did not found a greater number of improvements among the initiators, which were mainly confined to the accelerated group. These included improved drug abstinence rates and reduced quantities of substance use and improvements in psychological health (e.g., depression, anxiety). These improvements were accompanied by reductions in motivation to change substance-use behaviours over the waiting period. The clients who failed to enter treatment reported a relative stability of behaviours over the waiting period. The changes noted included reductions in the frequency of heroin and cannabis use among the standard clients. This may suggest a commitment to substance use change unrelated to clinical involvement.

Treatment versus waiting list. This study provides evidence of the early impact of treatment participation compared to being on a waiting list for a prolonged duration. The accelerated group, once in treatment, showed significant improvements in substance use, particularly in relation to heroin and non-prescribed methadone use. Treatment entry was also associated with physical and psychological health gains, reduced criminal activity, and improved motivation. Less pronounced improvements in heroin use and motivation were also reported among the standard group, although remaining on the waiting list for a comparable amount of time was associated with either consistent or worsening health.

Implications

The results indicate that while reducing delay was associated with successful treatment entry it did not improve treatment retention. This finding, in addition to the lack of improvements among clients who fail to enter treatment after the waiting period, all highlight the importance of engaging drug users in treatment as early as possible. The findings from this study point to several areas of potential improvements in service delivery. Structural factors (i.e., the waiting list) and clinical factors (i.e., crack cocaine use) can now be identified as related to poor attendance for some patients. Treatment providers and policy-makers can modify service delivery to high-risk patients in order to improve treatment initiation and retention. This could include the identification of high-risk subgroups at initial contact with the service, for whom special interventions might be developed. Initiatives which permit treatment-seekers to maintain contact with services during the waiting period may also be warranted to ensure that the service continues to be seen as a meaningful resource and to help maintain tenuous motivation. The removal of non-essential components of the pathway into treatment and the provision of enhanced support during these times may minimize attrition

at each of the different stages prior to receiving substitute medication. Efforts to re-establish contact with clients who fail to attend after the waiting period, or who drop-out of treatment, may enable clients to be brought successfully back into treatment. All of these factors may contribute to the development of services that are better prepared to engage and retain clients during the waiting period and in treatment.

Endnote

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Dual diagnosis in a Primary Care Group (PCG) (100,000 population locality): A step-by-step epidemiological needs assessment and design of a training and service response model

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The study was a multi-method needs assessment of dual diagnosis in a primary care sector in the London Borough of Bromley, which sought to address a range of research and applied issues. The study's objective was to develop a screening and assessment tool to identify dual diagnosis for use in routine clinical practice by using an educational outreach-training model, and to use this to assess the prevalence of dual diagnosis and related health, social, and lifestyle needs across a range of treatment services. Specifically, the project aims were:

- To determine the extent and nature of co-morbidity in the PCG 1 treatment services which serve a population of 100,000 in the London Borough of Bromley.
- To design an innovative training programme for local health and substance misuse staff based on the needs of dual diagnosis populations.
- To design and implement a method of screening and assessment for dual diagnosis for use by staff working within routine mental health and substance misuse settings.
- To identify the dual diagnosis characteristics, patterns of substance use, psychiatric profiles, and other related social, health, and lifestyle characteristics across the five populations served by (a) the CMHT, (b) the inpatient service, (c) the specialist substance misuse services, (d) the local forensic services, and (e) the PHCT.
- To develop a step-by-step dual diagnosis training and service response model that can be used in PCTs nationally.

Method

The study consisted of a number of stages embedded within a range of research approaches. This comprised the development of a screening and assessment tool for dual diagnosis, the development and implementation of an educational outreach-training model, and a cross-sectional needs assessment and prevalence survey. A repeated measures component was used to assess changes in a staff attitudes, knowledge, and awareness of dual diagnosis over the course of the study, in addition to a range of qualitative methods including focus groups, key informant interviews, and a mapping exercise of local services.

A two-tier assessment process was developed to assess prevalence, using measures suitable for use on clients attending each of the treatment agencies. A brief screen was constructed to identify at-risk dual diagnosis cases (positive screens) which takes around 7–10 minutes to complete. This screen can be completed by clinicians, regardless of professional background, and can be incorporated within standard assessment processes. Clients screening positive for at least one mental health and one substance use symptom then completed a comprehensive 45–60 minute assessment. This assessment identified dual diagnosis cases (i.e., those with concurrent substance use and mental health disorder as well as related social health and lifestyle needs).

Results

Prevalence of positive dual diagnosis screens. Of the 589 clients screened, 45% reported (potentially problematic) substance use and mental health symptoms, thereby screening positive for dual diagnosis. The highest rates were reported in the substance misuse agencies (93% in the alcohol service and 91% in the drug service), with 62% in the forensic service, 55% in the inpatient mental health service, followed by 37% in the Community Mental Health Team (CMHT), and the lowest rates reported among the primary care sample (24%). In terms of illicit drug use, clients from mental health and alcohol services were using mainly cannabis and cocaine powder. In contrast, substance misuse clients were using primarily opioids, crack cocaine, and cannabis. The most common mental health symptoms reported by substance misuse clients were depression, generalized anxiety disorder, and panic attacks. In terms of socio-demographic characteristics, those screening positive for dual diagnosis were more likely to be young, male, and unemployed, although no significant differences in ethnicity were observed.

Prevalence and multi-axial nature of dual diagnosis. Of the 265 people who screened positive, 191 (72%) were successfully followed up for a dual diagnosis assessment. Just under three quarters (73.2%) of the 191 clients assessed met research criteria for at least one mental health disorder and at least one substance use disorder. This meant that 27% of the total sample of 589 met the research criteria for dual diagnosis, 22% of them were also severely mentally ill, although this figure is distorted by the dropout group. This suggests that the two-tier screening mechanism was an effective method of identifying dual diagnosis status across service settings. In terms of estimated population prevalence, rates of dual diagnosis were highest in the substance misuse settings (83%), followed by forensic services (56%), then the psychiatric inpatient service (43%), followed by the psychiatric outpatient service CHMT (20%), with the lowest rates of dual diagnosis observed in primary care settings (8%). There were distinct differences in the profiling of mental health disorders across the service settings. Of the mental health clients who completed an assessment, just under half (48%) met the research criteria for alcohol use disorder and 48% for a drug use disorder (mainly cannabis and cocaine powder). Among substance misuse clients who

completed an assessment, neurotic disorders were particularly prevalent including generalized anxiety disorder (55%), agoraphobia (43%), and current depression (41%). The more complex psychiatric disorders (including psychosis and suicidality) were most prevalent among mental health clients (particularly those in forensic or inpatient settings). Dual diagnosis clients demonstrated significantly more complex and multi-axial needs in relation to elevated likelihood of personality disorder, physical health problems, risk/violence, lower quality of life, and overall level of disability. Similarly, these needs were increased further among those who fulfilled the research criteria for poly-substance use disorder in comparison to those with only one substance use disorder or no substance use disorder. A series of regression analyses demonstrated that the best predictor for dual diagnosis (excluding measures or symptoms relating to mental health or substance use) was the extent of overall disability, assessed using the Threshold Assessment Grid (TAG). Other predictive factors were criminal involvement, risk behaviour, and quality of life for both the mental health and substance misuse patients. Finally, the dual diagnosis screening tool proved to be a reliable and valid rapid identification tool for persons with dual diagnosis, particularly for more severe psychiatric disorders such as psychosis, mania, and suicide risk, as well as alcohol and drug use disorder quite considerably. However, overall, the screen had adequate sensitivity, identifying 72% of dual diagnosis cases, it was consistent over time (2 weeks), and the self-report drug component was valid against an objective measures of drug use.

Staff component (staff assessment and attitudinal monitoring)

This component of the study used a repeated measures design to assess changes in staff attitudes, experiences, and awareness of dual diagnoses over the course of the study. At the inception of the study, the prevalence of dual diagnosis was largely underestimated by 32 staff members across services. Staff showed a more positive attitude to dual diagnosis clients as the study progressed and considered themselves to have become more competent in screening and assessing dual diagnosis. The majority of the staff reported that the study had made a positive contribution to their working practice, but expressed the need for training in effective interventions and more specifically management of dual diagnosis cases.

Development of the service response model

Focus groups involving the full range of agencies and disciplines identified that there is a clear need for further training in dual diagnosis across services which are managing large numbers of clients with complex and multi-axial needs which are not at present being adequately addressed. The research has demonstrated that the educational outreach model of training has a high degree of support for training large numbers of practitioners to screen and assess dual diagnosis in the practice setting and involving entire teams. In terms of the service model,

the focus group findings suggest that there is a willingness to manage mild to moderate dual diagnosis cases within “mainstream” mental health and substance misuse agencies. However, for the most complex SMI cases, specialist teams, such as assertive outreach or dual diagnosis teams were advocated. The prevalence of the mental health and substance misuse problems is such that they must be seen as “core” needs for any client presenting to the services, rather than unusual needs, and therefore assessment must be routine. The development of inter-agency assessment and intervention care pathway and protocols were seen as pivotal to efficient use of resources and as a communication tool between agencies. Major clinical governance issues facing all medication prescribers in both primary and secondary care were identified. If dual diagnosis is to be successfully assessed and treated in primary care settings, the issues of stigma, the potential legal and social impact of being “diagnosed” as having a substance misuse or mental health problem, and the changes that this leads to in doctor–client relationships need to be openly acknowledged and solutions aired.

Implications and conclusions

The research findings generated a number of clinical practice and clinical governance implications and related issues for service design, training, research, and policy. The high prevalence rates of dual diagnosis across addiction, mental health, and related services necessitate the prioritization of training practitioners in both voluntary and statutory services in the identification and assessment of dual diagnosis. The implications for service modelling and staff training beyond a single PCG locality in South London needs to be tested and must be treated with caution, but consistency with the limited UK literature would suggest that the needs identified are generalizable, and can be adapted according to the training model developed. Furthermore, the research method employed has considerable relevance to the application of evidence based educational outreach within routine applied clinical settings and providing applied training with immediate relevance for local service development.

This study has pioneered an innovative approach to translating evidence-based practice into routine clinical settings in the field of dual diagnosis screening and assessment. The next logical step is to evaluate further the training and service response models which have emerged, both from the research findings and the consensus reached in the focus groups by the local agencies participating in this study.

Endnotes

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Co-morbidity of Substance Misuse and Mental Illness Collaborative Study (COSMIC): A study of the prevalence and management of co-morbidity among adult substance misuse and mental health treatment populations

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Each of the above named persons made vital contributions to the design, implementation, or analysis of the study.

The main aim of the study has been to estimate the prevalence of co-morbid substance misuse and mental health problems (co-morbidity) among current patients of substance misuse and mental health services. The study also set out to describe the range of co-morbid presentations among these populations, to assess the treatment needs (met and unmet) of co-morbid patients, and to assess whether there are differences between populations drawn from London and provincial urban areas, in terms of the prevalence and pattern of co-morbidity.

Method

The research was undertaken in four inner-city study centres. There were two London centres (Brent and Hammersmith & Fulham) and two provincial (non-London) centres (Nottingham and Sheffield). In order to address the

above aims we implemented a two-phase, cross-sectional prevalence survey and needs assessment. This comprised:

- A caseload census collected demographic, diagnostic data from keyworkers about all patients currently in treatment meeting study criteria. (Phase I.)
- A patient interview survey and case-note audit in a random sub-sample of cases (Phase II). We obtained the primary outcome measures (reference assessments of the presence of psychiatric disorders and substance use problems) through the self-reported patient data and the case-note audit.

This quantitative investigation was complemented by a qualitative study into the factors that contribute to substance misuse among mental health patients with severe mental illness.

Drug service treatment populations

Subjects. From a random sample of 266 cases we achieved complete matched case-based data (patient interview, keyworker survey, and case-note audit) in 216 cases (81.2% response rate); 67.1% of the sample was male, 32.9% female. The median ages for men were 35 and the median ages for women were 32. White UK patients made up a large majority of the sample (92.1%). There were significant differences in the demographic profile of the sample between London and non-London centres in terms of the gender and age distributions. Apart from a slight under-representation of black patients, the demographic profile of the sample closely matched the treatment population from which the sample was drawn.

Profile of substance misuse problems. A total of 88.9% reported use of heroin or opiate substitutes in the past year, most of whom (80.6%) also reported other poly-drug use. Non-opiate drug use in the past year was reported by 5.1%, while 6.0% reported abstinence in the past year. There were significant differences in the reported drug use of London and non-London patients. Overall, 33.3% reported hazardous or harmful alcohol use. The prevalence was significantly higher in London compared to non-London centres (41.2% vs. 28.2%, $p = 0.007$).

Prevalence of mental health problems. We completed reference assessments for the presence of psychotic disorders, personality disorders, and affective and anxiety disorders in all cases. The ratings for psychosis and personality disorder were subject to a specificity analysis. Prevalence was estimated as follows:

- Psychotic disorder: 7.9% (95% CI, 4.7 to 12.3)
- Personality disorder: 37% (95% CI, 30.6 to 43.9)
- Severe depression: 26.9% (95% CI, 21.1 to 33.3)
- Mild depression: 40.3% (95% CI, 33.7 to 47.1)
- Severe anxiety: 19% (95% CI, 14.0 to 24.9)
- Mixed depression and anxiety disorder: 18.5% (95% CI, 13.6 to 24.4)
- Depression or anxiety disorder: 67.6% (95% CI, 60.9 to 73.8)

Overall, 74.5% of patients were assessed to have one or more of the above disorders. A third of the sample (36.1%) had depression or anxiety without any other disorder, but 31.9% were assessed to have two or more disorders. Three out of four of patients with psychosis (76.5%) also had a personality disorder and rated positive for depression or severe anxiety.

There were no significant observed differences in the prevalence of psychiatric disorder between London and non-London centres. In an extended statistical analysis, we included centre, demographic, and casemix variables in a multiple regression model. This was suggestive of an increase in the adjusted odds ratio of psychiatric disorder in London compared to non-London centres, but the difference was not statistically significant. However, the adjusted analysis shows that the AOR for the presence of any psychiatric disorder in females is approaching three times the baseline rate of males.

Keyworker assessments of psychiatric disorder. We compared our reference measures of psychiatric disorder in sampled patients with the recorded diagnosis reported by each patient's keyworkers. When compared to the reference measures, keyworker assessments achieved consistently good specificity (>90%) but poor sensitivity (<35%) in relation to psychosis, personality disorder, and affective/anxiety disorder. Hence, the reporting of diagnosis recorded by drug services has limited utility as a valid method of identifying a co-morbid population.

Need and provision of drug misuse interventions. When compared to non co-morbid patients, co-morbid patients (especially those with personality disorder) have significantly poorer social function and a greater need for community care interventions. Co-morbid patients are perceived to be more chaotic and more aggressive by their keyworkers. Patients with personality disorders were rated as having relatively poor engagement with services. There were few differences in the provision of substance misuse interventions between co-morbid and non co-morbid patients. Co-morbid patients were more likely to receive counselling based interventions but despite this higher level of provision there was also a higher level of unmet need when compared to non co-morbid patients.

Provision of mental health interventions. Of the patients with a psychiatric disorder, 38.5% had no contact with any health services specifically for their mental health problem; 17.4% had contact with mental health services with the remaining patients managed by their GPs or substance misuse psychiatrists. Patients in contact with mental health services mostly received specialist assessment or monitoring and medication. Patients with psychosis were most likely to have contact with mental health services. The majority of patients with affective disorders had no contact with services specifically for their mental health problem. Overall, 18.1% of drug service patients exhibited psychiatric symptomatology and care needs associated with high potential for referral for CPA management. CPA management was implemented in less than half of such cases (43.8%).

Alcohol service treatment populations

Subjects. From a random sample of 87 cases we achieved complete matched case-based data (patient interview, keyworker survey, and case-note audit) in 62 cases (71.3% response rate); 62.9% of the sample was male, 37.1% female. The median ages for men were 42 and 39 for women. White UK patients made up a large majority of the sample (95.2%). The demographic profile of the sample closely matched the treatment population from which it was drawn.

Profile of substance misuse problems. A total of 91.9% of the sample reported harmful or hazardous alcohol use in the past year; 29.0% also reported drug use in the past year, 11.3% exhibited dependent drug use.

Prevalence of mental health problems. We completed reference assessments for the presence of psychotic disorders, personality disorders, and affective and anxiety disorders in all cases. The ratings for psychosis and personality disorder were subject to a specificity analysis. Prevalence was estimated as follows:

- Psychotic disorder: 19.4% (95% CI, 10.4 to 31.4)
- Personality disorder: 53.2% (95% CI, 40.1 to 66.0)
- Severe depression: 46.8% (95% CI, 34 to 59.9)
- Minor depression: 33.9% (95% CI, 22.3 to 47.0)
- Severe anxiety disorder: 32.3% (95% CI, 20.9 to 45.3)
- Affective or anxiety disorder: 80.6% (95% CI, 68.6 to 89.6)

Overall, 85.5% of patients were assessed to have one of more of the above disorders. A majority of patients (54.8%) had two or more of the above psychiatric disorders.

Need and provision of alcohol misuse interventions. When compared to non co-morbid patients, co-morbid patients with psychotic or personality disorder have significantly poorer social function. All co-morbid groups have greater need for community care interventions than non co-morbid. There was some evidence co-morbid patients were perceived to be more challenging to manage by their keyworkers and received higher levels of counselling based interventions and those related to relapse prevention.

There were few differences in the provision of substance misuse interventions between co-morbid and non co-morbid patients. Co-morbid patients were more likely to receive counselling based interventions but despite this higher level of provision there was also a higher level of unmet need when compared to non co-morbid patients.

Provision of mental health interventions. Overall, 32.3% of alcohol service patients exhibited psychiatric symptomatology and care needs associated with high potential for referral for CPA management. CPA management was implemented in nearly two thirds of such cases (65%). Half of the patients with a psychiatric

disorder reported consulting a psychiatrist and a third (37.7%) reported contact with mental health services.

Adult mental health service treatment populations

Subjects. Interviews were completed with 282 patients (achieved sample) from a random sample of 400 (70.5% response rate). These self-report data were matched with keyworker case assessments and a casenote audit. Hair and urine samples were obtained in 54 cases and tested for the presence of a range of drugs of misuse. Males represented a small majority of the study population (56.7%). The median ages for men were 36 and 43 for women. Differences in the ethnicity of the London and non-London study populations were significant. White UK patients made up 39.5% of the London centres study population and 83.3% in the non-London centres. The demographic profile of the achieved sample did not differ significantly from the total treatment population from which the sample was drawn.

Profile of mental health problems. Overall, 76.6% of the study population were reported to have a psychotic disorder, 39.4% had one or more personality disorder, 24.1% had a severe depression, 40.1% had mild depression, and 18.4% had a severe anxiety disorder. Psychiatric co-morbidity was highly prevalent, and 64.5% of patients had some co-occurrence of psychosis, affective or anxiety disorder, or personality disorder.

Prevalence of substance use, misuse, and dependence. Overall, 30.9% of the patients reported problem drug use in the past year (95% CI, 25.5 to 36.6). Hair and urine analysis suggested that these self-reported drug use data provided a reliable and valid basis for prevalence estimation. Cannabis was the most frequently reported drug (25.2%). Half of those reporting drug use used cannabis only (14.5%); 12.8% reported poly-drug use, including 5% who used opiates; 16.7% of patients were assessed as dependent on one or more illicit or non-prescribed drug (95% CI, 12.5 to 21.5). A quarter of patients (25.2%) reported hazardous or harmful alcohol use (95% CI, 20.5 to 31.0). Overall, 44% of patients self-reported problem use of drugs or were assessed to use alcohol at hazardous or harmful levels year (95% CI, 38.1 to 49.9).

The observed prevalence of problem drug use and drug dependence was significantly higher in London centres when compared to non-London centres (use: 43.9% vs. 22%, $p < 0.001$; dependence: 24.6% vs. 11.3%, $p = 0.005$). Cannabis, sedatives, and crack cocaine were all reported by a significantly higher proportion of patients in London centres. There was no significant difference in the prevalence of hazardous and harmful alcohol use.

We included demographic and casemix variables in a multiple regression model to compare problem drug use and alcohol misuse in London and non-London centres. This analysis showed a large and significant difference in the adjusted odds ratio for problem drug use in London (AOR = 2.52; 95% CI, 1.31

to 4.85). There was no marked or significant difference in the adjusted odds ratio for alcohol misuse in London over non-London centres (AOR = 1.05; 95% CI, 0.52 to 2.11).

Keyworker assessments of substance misuse. We compared our reference measures of drug use and alcohol misuse in sampled patients with assessments provided by each patient's mental health keyworkers. When compared to the reference measures, keyworker assessments achieved good specificity but poor sensitivity. Hence, the reporting of problem drug use and alcohol misuse by keyworkers has limited utility as a method of reliably identifying a co-morbid population.

Need and provision of mental health interventions. When compared to non co-morbid patients, co-morbid patients have significantly poorer social function, more severe symptomatology, and a greater need for community care interventions. Co-morbid patients are perceived to be more chaotic, more aggressive, and less compliant with their care plans than the non-co-morbid population by their keyworkers.

Need for substance misuse interventions. Less than 5% of mental health patients exhibited patterns of drug use likely to satisfy eligibility criteria for drug treatment programmes. The potential for referral to alcohol services appears greater given that 9.2% reported severe alcohol misuse. Fewer than 1 in 6 patients who use drugs and 1 in 5 who reported alcohol misuse received any substance-related interventions. Most received counselling based interventions (i.e., motivation, harm minimization education) through mental health services; 3.4% of drug users and 2.8% who misused alcohol had past year contact with specialist drug and alcohol services, respectively. Patients reporting opiate use were more likely to receive interventions than were patients with other drug use profiles. Intervention was also associated with patients expressing a need for intervention and keyworkers identifying the presence of drug use.

Qualitative investigation of drug use in patients with severe mental illness

A purposive sample of 14 patients who reported drug use was selected from respondents to the phase II survey in London mental health services (12 males, 2 females, 6 White, 4 Black British or Caribbean, 3 Black African, 1 Indian. Their ages ranged between 27 and 55).

Overview of substance use over the life course. The reported age of first drug use ranged between 10 and 18 years. Most subjects reported that cannabis was the first illicit drug they tried. The majority continued to use cannabis after initiation. Those reporting further experimentation most commonly used cocaine or crack. Most reported poly-drug use.

The reported pattern of drug use and the motivation to use and not to use, changed over their life course reflecting temporal shifts in lifestyles and attitude, life experiences, and personal assessments about how particular substances had

an impact upon them socially, physically, and mentally. Some drug use was occasional, and most reported periods of abstinence. Periods of heavy and chaotic use were also reported. A majority of subjects reported use of alcohol interrelated with drug use, and a significant minority reported drinking to harmful or hazardous levels. All of the subjects began using drugs before they started to experience mental health problems or psychiatric symptomatology.

Factors associated with initiation, changes in drug use, and cessation. Subjects identified a range of factors that contributed to their initiation into drug use and also their continuation, change, and cessation of drug use throughout the life course. Initiation included:

- Traumatic life events. These had particular impact when subjects were young. Drugs appeared to be used to block out the mental and emotional pain. The trauma and the enduring consequences of it were often seen by subjects to be the genesis of their mental health problems. Subjects acknowledged that drug use, once part of their solution to the trauma, could become a factor exacerbating their mental health problems.
- Friends, peer groups, and cultural identity were influences that featured prominently in many accounts of initiation. Use of substances provided social status.
- Curiosity and experimentation. In some cases, the desire to experiment was independent of social aspirations.
- Exposure to normalized drug use. Through local environments, friends, and peer groups or family.

Factors associated with changes in drug use included:

- Positive and negative experiences, perception of potential for harm. An important influence on changing patterns of use was the extent to which subjects viewed their experience of drug use to be beneficial or harmful. This assessment could be drug specific and may vary with time.
- Financing drug use. Most reported lack of financial resources was as a factor restricted drug use. Drug use was financed in a variety of ways: paid employment, sustaining frugal lifestyles, and careful budgeting of benefits to maintain a minimal supply of their drug of choice. A significant minority finance drug use in part or whole through criminal activity. This may be associated with spiralling consumption.
- Changes in social networks were cited as factors that could have an impact on drug use. Subjects described change in associates, friendship group, or significant relationship. They may also move physically from a particular living environment where there was exposure to normalized drug culture.
- Illegality of drugs was mentioned as a reason for not using.

Drug use and the onset of mental health problems

All subjects were using drugs when they started to experience mental health problems. However, type, quantity, and frequency of use at onset differed.

Subjects gave different accounts of the relationship between drug use and the onset of mental health problems. Some subjects saw drug use as a causal factor whereas others saw no connection. Most described a multifaceted relationship, and some felt that their drug and mental health problems stemmed from negative childhood experiences or trauma. Drug use was reported to alleviate mental health problems at times, but it was also reported that it could exacerbate them. Drug use impacted on mental state in different ways, ranging from relaxation through to inducement of manic, paranoid, or anxious states, or the exacerbation of violent tendencies. A significant proportion of subjects knew how their mental state could be affected by drug use and had become discerning users of substances both to manage mood and the physical pain or discomfort experienced as side effects of medication.

Factors influencing drug use post-onset

Drug use often changed post-onset, but this might include selective or periodic abstinence as well as more extensive or frequent use. Subjects did not seek out substances because they thought it would alleviate their mental health problems or the side effects of anti-psychotic medication. Any perception of positive impact in these spheres was reported as being discovered or arising “fortuitously.” Factors affecting use post onset included:

- Discerning drug use for relaxation or mood moderation. Reports described pleasurable use of drugs. Other specific uses included cannabis to relax, heightened sensory pleasure, awareness or imagination, cannabis and heroin to diminish violent mood, stimulants to provide energy, and ecstasy for participation in “raves.” Some subjects also reported drug use designed to achieve pleasurable delusional states.
- Social influences described in relation to initiation could also be a powerful motivating factor in the continued use of drugs.
- Escape from boredom and mundane lives was a factor, but not commonly cited.
- Countering medication side effects was a primary factor in use of specific drugs.

Experience of care and treatment

Subjects gave varying reports about the mental health care and treatment they received. The majority expressed some dissatisfaction. The principle concerns focused on the general ethos and approach of the service towards drug use, communication, cultural and racial awareness, continuity of care, medication, and hospitalization. A significant minority of the subjects had experience of statutory and non-statutory drug services. Drug services were perceived more favourably than mental health services by virtue of their more empathic approach towards drug use.

Discussion and implications for service development

Certain study limitations should be acknowledged:

- Reported prevalence rates should not be seen as generalizable to groups within the general population defined in terms of the same diagnostic or substance use categories we employed within current treatment populations.
- Due to small sample sizes, our 95% confidence intervals around some prevalence estimates are wide.
- Differences in prevalence between London and non-London centres were observed. We need to exercise caution in our interpretation of these findings. Further investigation is required before any definitive picture emerges about regional variation and prevalence in non-urban areas.
- The study adopted a cross-sectional design. This ensured patients with brief contact were not excluded from the study population. It may serve to under-estimate the extent to which co-morbid patients received treatment from more than one service on a “serial” basis. Among substance misuse patients some psychiatric syndromes may be consequent upon withdrawal, intoxication, or chronic substance use. The proportion of co-morbid patients with such aetiology can only be properly assessed using a longitudinal study design.

Despite these limitations, our findings suggest that a majority of patients in contact with statutory drug and alcohol services experience mental health problems. While a relatively high prevalence of psychosis was observed, most co-morbid patients have affective or anxiety disorders. There was extensive co-occurrence of other psychiatric disorders and secondary substance misuse problems. Close to half of the drug treatment population (and possibly an even higher proportion of those in treatment for alcohol problems) experience “multiple morbidity.”

To effectively meet the needs of co-morbid patients with psychosis, collaborative working between substance misuse and mental health specialists will be required. However, there are a large number of patients of the substance misuse services who do not meet the criteria for access to community mental health services. Opportunities to develop or enhance collaborative working with local psychotherapy services and GPs should be explored to enhance the management of this population. However, we also believe that resources need to be deployed which enable substance misuse services to implement evidence-based treatments to a much higher proportion of these patients.

Within the mental health population, the prevalence rate for all co-morbidity (problem drug or alcohol misuse) is higher than previously reported in comparable UK populations, a difference largely accounted for by the high level of problem drug use we observed. Co-morbid patients appear to be the core client group of mental health services in certain inner city areas where the prevalence is dramatically high. The sheer scale of the need presented by patients with psychosis and substance misuse co-morbidity is daunting. This need cannot be addressed by the creation of “dual-diagnosis” specialists. We believe there is a need for all mainstream mental health staff to be trained to manage co-morbidity

at some basic level. Collectively, the mental health service should also achieve capability in the management of the large group of patients who are unlikely to be appropriate cases for joint management with substance misuse services. There will need to be investment in research to help develop new service models and methods of intervention which are capable of achieving behaviour change in psychotic patients who misuse substances. Moves towards integrated team approaches favoured in the USA would be premature given the absence of evidence-based models, and possibly unrealistic given the current absence of close working between mental health and substance misuse services. However, mental health and substance misuse services should begin work to develop joint policies around assessment, intervention, and management.

Endnotes

- [26] We would also like to add a note of thanks to a number of other people who contributed greatly to the project: Anna Kolliakou, Maureen Sancaster, Emily Glorney, Sarah Miller, Luke Tierney, and Kevin Siddall all completed large numbers of fieldwork interviews in the London centres. We are also grateful to Kevin Siddall for helping with our literature review and to Ali Hobbs who worked on the data entry. Last but not least, we are indebted to the many clinicians, administrative staff and patients within the substance misuse and mental health services we studied. We made heavy demands upon clinical staff in particular, but they were almost always generous, helpful, and committed to the research. Without this level of co-operation the study would not have been possible. We very much hope that the findings of the study repay the investment they made in the project.
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**NHS/DH NATIONAL TREATMENT AGENCY FOR SUBSTANCE MISUSE.
RESEARCH SUMMARIES FOR PROVIDERS AND COMMISSIONERS.
SUMMARIES OF RESEARCH FUNDED BY THE DEPARTMENT
OF HEALTH**

August 2004

Co-morbidity of substance misuse and mental illness collaborative study (COSMIC): a study of the prevalence and management of co-morbidity among adult substance misuse and mental health treatment populations (Weaver et al., 2002).

November 2004

An evaluation of a brief intervention model for use with young non-injecting stimulant users: A two-group randomized controlled trial with outcomes at 6 months (Marsden et al., 2003).

November 2004

Randomized clinical trial of the effects of time on a waiting list on clinical outcomes in opiate users awaiting outpatient treatment (Strang et al., 2004).

DMRI PHASE TWO. ROUTES (RESEARCH ON UNDERSTANDING TREATMENT EXPERIENCES AND SERVICES). LIST OF PROJECTS

Barriers to the effective treatment of injecting drug users

J. S. Neale

Oxford Brookes University

Estimating and explaining early exit from drug treatment

A. Stevens

University of Kent

National survey of care co-ordination in drug treatment services: A multi-method observational study of implementation, model development, treatment, process and service-based outcomes

T. D. Weaver

Imperial College London

User involvement in efforts to improve the quality of drug misuse services: Factors that promote and hinder successful working

M. J. Crawford

Imperial College London

Cost and cost effectiveness of treatment as usual in drug misuse services

D. Raistrick

Leeds Addiction Unit

A randomised trial of an assessment led brief intervention with young people who use cocaine powder

J. Marsden

National Addiction Centre, Kings College London

Exploring young people's views and experiences of drug treatment services—a qualitative study

J. Lewis

National Centre for Social Research London

Interventions supporting and meeting the needs of children and young people who have drugs misusing carers

J. Corlyon

Policy Research Bureau London

Interventions for children and families where there is problematic drug use: The development and evaluation of an inter-agency model of good practice in Devon

B. Kroll

University of Plymouth

Good practice in working with family members: Disseminating and evaluating a model and methods in area and culture-based communities in Birmingham

J. Orford

University of Birmingham