

Drug misuse: psychosocial management of drug misuse

NICE guideline

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If you wish to comment on this version of the guideline, please be aware that all the supporting information and evidence is contained in the full version.

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Introduction

This guideline makes recommendations for people who misuse opiates, stimulants and cannabis in the healthcare and criminal justice systems. The patterns of use vary for these drugs, with cannabis the most likely to be used in the UK. This guideline will not deal with recreational drug use, although opportunistic brief interventions for drug users not in formal drug treatment are included. Cocaine is the next most commonly used drug in the UK, followed by other stimulants such as amphetamine. Opiates, although presenting the most significant health problem are, in comparison with cannabis and stimulants, less frequently used. It should be noted that a large proportion of people who misuse drugs are poly-drug users and do not limit their use to one particular drug.

Opiate misuse is often characterised as a long-term, chronic relapsing condition with periods of remission and relapse, so although abstinence may be one of a range of long-term goals of treatment, it is not always achieved. The patterns for cannabis and stimulant misuse vary considerably and are not as well understood.

Pharmacological approaches are the primary treatment option for opiate misuse, with psychosocial interventions providing an important element of the overall treatment package. Pharmacological treatments for stimulant and cannabis misuse are not well developed and therefore psychosocial interventions represent the mainstay of effective treatment.

Person-centred care

This guideline offers best-practice advice on the care of people who misuse drugs.

Treatment and care should take into account service users' needs and preferences. People who misuse drugs should have the opportunity to make informed decisions about their care and treatment, in partnership with their healthcare professionals. If service users do not have the capacity to make decisions, healthcare professionals should follow the Department of Health guidelines – 'Reference guide to consent for examination or treatment' (2001) (available from www.dh.gov.uk). From April 2007, healthcare professionals will need to follow a code of practice accompanying the Mental Capacity Act (summary available from www.dca.gov.uk/menincap/bill-summary.htm).

Good communication between healthcare professionals and service users is essential. It should be supported by evidence-based written information tailored to the service user's needs. Treatment and care, and the information service users are given about it, should be culturally appropriate. It should also be accessible to people with additional needs, such as those with physical, sensory or learning disabilities, and to people who do not speak or read English.

Carers and relatives should have the opportunity to be involved in decisions about the service user's care and treatment, unless the service user specifically excludes them.

Carers and relatives should also be given the information and support they need.

Key priorities for implementation

Provision of information and advice

- Healthcare professionals should, on initial contact with services and at subsequent formal reviews, involve people who misuse drugs in decision-making about their treatment and care. This should include options for abstinence-oriented, maintenance-oriented and harm-reduction interventions. **[1.1.1.1]**

Brief interventions

- For people in limited contact with services (for example, attendance at a needle and syringe exchange) and if concerns about drug misuse are identified by the service user or healthcare professional, opportunistic brief interventions should be offered. These interventions should:
 - be of a maximum duration of two sessions (normally ranging between 10 and 45 minutes)
 - offer appropriate information and feedback in an empathic manner.**[1.3.1.1]**

Self-help

- Healthcare professionals should routinely provide information about self-help groups for people who misuse drugs. The most established of such groups are those based on 12-step principles, for example, Narcotics Anonymous and Cocaine Anonymous. **[1.3.2.1]**

Contingency management

- Drug misuse services should introduce contingency management programmes to reduce illicit drug use and/or promote engagement in services for people undergoing methadone maintenance treatment. **[1.4.1.1]**

- Contingency management aimed at reducing illicit drug use for people undergoing methadone maintenance treatment or for people who primarily misuse stimulants should adhere to the following principles.
 - The scheme should provide incentives (usually privileges or vouchers) contingent on each presentation of a drug-negative screen (for example, free from cocaine or non-prescribed opiates).
 - The frequency of screening should be set at three tests per week for the first 3 weeks, two tests per week for the next 3 weeks and once weekly thereafter until stability is achieved.
 - If vouchers are used they should have monetary values in the region of £5 which increase in value with each additional, continuous period of abstinence.
 - Urinalysis is the preferred method of testing but consideration may be given to the use of oral fluids. **[1.4.1.3]**

Family-based interventions

- Family or couples-based interventions should be considered for people who are in close contact with a partner, family member or carer and continue to use illicit drugs when in opiate agonist maintenance treatment. These interventions should:
 - focus on the service user's drug misuse
 - consist of at least 12 weekly sessions
 - be based on cognitive behavioural principles. **[1.4.2.1]**

Interventions to improve physical healthcare

- For all people at risk of physical health problems (including transmittable diseases) resulting from their drug misuse, the use of modest material incentives (for example, shopping vouchers, up to £10 in value) should be considered to encourage specified harm-reduction objectives. Incentives should be delivered on a one-off basis or over a limited duration, contingent on compliance with or completion of each intervention, in particular:
 - hepatitis B/C and HIV testing
 - hepatitis B immunisation schedule
 - TB test. **[1.4.4.1]**

1 Guidance

The following guidance is based on the best available evidence. The full guideline ([add hyperlink]) gives details of the methods and the evidence used to develop the guidance (see section 5 for details).

1.1 General principles of care

1.1.1 General recommendations for the care of all people who misuse drugs

1.1.1.1 Healthcare professionals should, on initial contact with services and at subsequent formal reviews, involve people who misuse drugs in decision-making about their treatment and care. This should include options for abstinence-oriented, maintenance-oriented and harm-reduction interventions.

1.1.1.2 Healthcare professionals should ensure, when assessing and developing a care plan, that the following are considered:

- a full assessment of medical, psychological, social and occupational needs
- the history of drug use
- the experience of previous treatment (if any)
- the clarification of the service user's goals in relation to his or her drug use
- the service user's treatment preferences.

1.1.1.3 Healthcare professionals who are responsible for the delivery and monitoring of an agreed care plan should ensure that:

- an appropriate therapeutic relationship is established and sustained
- the service user is helped to identify situations or states in which he or she is vulnerable to drug use and to consider alternative coping strategies

- full access to a wide range of appropriate healthcare services is available to all service users
- maintaining engagement with services remains a major focus of the care plan
- effective liaison and collaboration with other care providers is maintained.

1.1.1.4 Healthcare professionals should provide during routine contacts and opportunistically (for example at a needle and syringe exchange) information and advice to all people who misuse drugs about reducing their exposure to the transmission of blood-borne viruses including the reduction of sexual and injection risk behaviours, and if appropriate offer testing for such viruses.

1.1.1.5 Healthcare professionals should not routinely provide separate group-based psychoeducational interventions for people who misuse drugs designed specifically to provide information and advice about reducing exposure to blood-borne viruses, including the reduction of sexual and injection risk behaviours.

1.1.1.6 Healthcare professionals should be aware that service users are at high risk of losing contact with services at points of transition between services and should ensure that clear and agreed plans are in place to ensure effective transfer through services. This could be achieved through the use of agreed care plans, identified professionals and appropriate assessment systems.

1.1.1.7 All interventions for people who misuse drugs should be delivered by trained staff who are competent in delivering the intervention and are in receipt of appropriate supervision.

1.1.2 General recommendations for the support of families and carers

1.1.2.1 Healthcare professionals should explore with people who misuse drugs whether to involve their families and carers in assessment

and treatment plans, ensuring that the service user's right to confidentiality is respected.

- 1.1.2.2 When in contact with family members or carers of people who misuse drugs, all healthcare professionals should:
- enquire about family and carer concerns in relation to the impact of drug misuse on their lives and relationships
 - provide verbal and written information and education on the impact of drug misuse on service users, families and carers.
- 1.1.2.3 Healthcare professionals should make themselves accessible to family members and carers if appropriate. The needs of family members and carers should be taken into account, including:
- the welfare of dependent children, siblings and vulnerable adults
 - a regular assessment of carers' personal, social and mental health needs.
- 1.1.2.4 Families and carers should be informed of, and if appropriate offered, services to specifically address their needs. These may include:
- the use of guided self-help
 - support groups – for example, self-help groups solely for families and carers, which are focused on addressing carers' needs.
- 1.1.2.5 If families and carers have been offered but not benefited from guided self-help and/or support groups and continue to have significant family problems, consideration should be given to providing formal psychosocial interventions. These should:
- provide information and education about drug misuse
 - help identify sources of drug-misuse-related stress
 - explore and promote effective coping behaviours
 - normally consist of at least five weekly sessions.

1.2 Identification and recognition of drug misuse

1.2.1 Routine clinical questions

1.2.1.1 Healthcare professionals in mental health and criminal justice settings where drug misuse is known to be prevalent should routinely ask service users questions about recent legal and illicit drug use including whether they have used drugs and:

- of what type and method of administration
- in what quantity and
- how frequently.

1.2.1.2 In settings such as primary care, general hospitals and accident and emergency departments, enquiry about recent drug use should be considered in presentations in which drug misuse may be implicated, for example in:

- acute chest pain in a young person
- acute psychosis
- mood and sleep disorders.

1.2.2 Biological tests

1.2.2.1 Healthcare professionals should use biological testing (for example, urine or oral fluid samples) as part of a comprehensive assessment of drug use, but they should not rely on it as the sole method of diagnosis and assessment.

1.3 Brief and low-intensity interventions

Brief interventions of up to two sessions conducted opportunistically among people who misuse drugs and are not in formal drug treatment can be used in a variety of different settings for people not in contact with drug treatment services (for example in mental health, general health and social care, accident and emergency) and for people with minimal contact with drug treatment services (needle and syringe exchanges, community pharmacies).

1.3.1 Brief interventions

1.3.1.1 For people in limited contact with services (for example, attendance at a needle and syringe exchange) and if concerns about drug misuse are identified by the service user or healthcare professional, opportunistic brief interventions should be offered. These interventions should:

- be of a maximum duration of two sessions (normally ranging between 10 and 45 minutes)
- offer appropriate information and feedback in an empathic manner.

1.3.1.2 For people not in contact with drug misuse services and if concerns about drug misuse are identified by the service user or healthcare professional, opportunistic brief interventions should be offered. These interventions should:

- be of a maximum duration of two sessions (normally ranging between 10 and 45 minutes)
- offer appropriate information and feedback in an empathic manner.

1.3.2 Self-help

1.3.2.1 Healthcare professionals should routinely provide information about self-help groups for people who misuse drugs. The most established of such groups are those based on 12-step principles, for example, Narcotics Anonymous and Cocaine Anonymous.

1.3.2.2 If a person who misuses drugs has expressed an interest in attending 12-step self-help groups, healthcare professionals should consider facilitating the person's initial contact with the groups.

1.4 *Structured psychosocial interventions*

1.4.1 Contingency management

Contingency management provides a system of incentives to change behaviour. The emphasis in contingency management is on offering incentives for behaviours such as abstinence or reduction in illicit drug use, and engagement or participation in health promoting interventions.

For example, incentives are provided when a service user submits a biological sample (for example, urine or oral fluid) that is negative for the specified drugs. For contingency management to be effective, healthcare professionals need to discuss with the service user which incentives are to be used so that they are perceived as genuinely reinforcing by those participating in the programme. Incentives need to be provided consistently, and as immediately as possible after submission of the sample. Limited increases in the value of incentives with successive periods of abstinence also appears to be effective.

A variety of incentives have proved effective in contingency management programmes including privileges (for example, take-home methadone doses), vouchers (which can be exchanged for goods or services of the service user's choice) and monetary incentives.

For more information please see appendix C.

1.4.1.1 Drug misuse services should introduce contingency management programmes to reduce illicit drug use and/or promote engagement in services for people undergoing methadone maintenance treatment.

1.4.1.2 Drug misuse services should introduce contingency management programmes to reduce illicit drug use, promote abstinence and/or promote engagement in services for people who primarily misuse stimulants.

1.4.1.3 Contingency management aimed at reducing illicit drug use for people undergoing methadone maintenance treatment or for

people who primarily misuse stimulants should adhere to the following principles.

- The scheme should provide incentives (usually privileges or vouchers) contingent on each presentation of a drug-negative screen (for example, free from cocaine or non-prescribed opiates).
- The frequency of screening should be set at three tests per week for the first 3 weeks, two tests per week for the next 3 weeks and once weekly thereafter until stability is achieved.
- If vouchers are used they should have monetary values in the region of £5 and increase in value with each additional, continuous period of abstinence.
- Urinalysis is the preferred method of testing but consideration may be given to the use of oral fluids.

1.4.1.4 When delivering contingency management programmes, healthcare professionals should ensure that:

- the target goal is agreed in collaboration with the service user
- the service user fully understands the relationship between the desired behaviour change and the incentive schedule
- incentives are individualised, with choice available so that the incentive is perceived as such by the service user (not just the healthcare professional) and supports a healthy/drug-free lifestyle.

1.4.2 Family-based interventions

1.4.2.1 Family or couples-based interventions should be considered for people who are in close contact with a partner, family member or carer and continue to use illicit drugs when in opiate agonist maintenance treatment. These interventions should:

- focus on the service user's drug misuse
- consist of at least 12 weekly sessions

- be based on cognitive behavioural principles.

1.4.2.2 Behavioural couples therapy should be considered for people who are in close contact with a partner, family member or carer and who misuse cocaine, heroin and/or have completed opiate detoxification. These interventions should:

- focus on the service user's drug misuse
- consist of at least 12 weekly sessions
- be based on cognitive behavioural principles.

1.4.3 Cognitive behavioural therapy

1.4.3.1 Healthcare professionals should consider the use of individual cognitive behavioural therapy for people who present with problematic cannabis use. The cognitive behavioural therapy should be focused on drug use and should:

- consist of at least 12 weekly sessions
- focus on the identification of situations or states in which the service user is most vulnerable to drug use
- focus on skills training to help the service user to cope in such situations or states.

1.4.3.2 Cognitive behavioural therapy should not be routinely provided for people presenting for treatment of stimulant misuse or for people receiving methadone maintenance treatment.

1.4.3.3 Cognitive behavioural therapy should be considered for the treatment of comorbid disorders such as anxiety and depression (in line with existing NICE guidance for the treatment of these disorders) for people who misuse cannabis, stimulants and opiates.

1.4.4 Interventions to improve physical healthcare

1.4.4.1 For all people at risk of physical health problems (including transmittable diseases) resulting from their drug misuse, the use of modest material incentives (for example, shopping vouchers up to

£10 in value) should be considered to encourage specified harm-reduction objectives. Incentives should be delivered on a one-off basis or over a limited duration, contingent on compliance with or completion of each intervention, in particular:

- hepatitis B/C and HIV testing
- hepatitis B immunisation schedule
- TB test.

1.4.5 Interventions to improve compliance with naltrexone

Naltrexone is an opiate antagonist that eliminates the positive experiences associated with opiate use. Naltrexone may have some benefit in sustaining abstinence among people who have completed opiate detoxification, and psychosocial interventions can improve compliance with naltrexone.

1.4.5.1 For people on naltrexone maintenance treatment to prevent relapse to opiate dependence, healthcare professionals should consider the use of the following psychosocial interventions:

- for all service users – contingency management
- for people in contact with a partner, family member, or carer – family or couples-based interventions.

These interventions should be based on the same principles as those used for people on methadone maintenance treatment.

1.5 *Residential, prison and inpatient care*

1.5.1 Inpatient and residential settings

1.5.1.1 Psychosocial interventions in inpatient settings should consist of the same range of interventions offered in community settings and would normally include contingency management, family interventions, cognitive behavioural interventions and encouragement to participate in self-help programmes. Treatment in inpatient settings should normally be reserved for those who require a high level of medical and nursing support because of

comorbid physical or severe psychiatric problems, and may be associated with a detoxification programme.

1.5.1.2 Residential treatment may be considered for people who have comorbid physical, psychiatric, or social (for example, housing instability) problems and/or have not benefited from previous community-based treatment. Treatment is often associated with a detoxification programme and may be followed by a period of community-based aftercare.

1.5.1.3 People who have relapsed to opiate use during or after treatment in an inpatient or residential setting should be offered an urgent assessment and considered for prompt access to alternative community or inpatient support including maintenance treatment.

1.5.2 Criminal justice system

1.5.2.1 For people who misuse drugs, access to and choice of treatment should be the same whether they participate in treatment voluntarily or are legally required to do so.

1.5.3 Prison

1.5.3.1 For people in prison with drug misuse problems, treatment options offered should be broadly equivalent to those available in the community. Healthcare professionals should take into account additional considerations specific to the prison setting, which include:

- length of sentence or remand, and the possibility of unplanned release
- risk of self-harm, death and post-release overdose.

1.5.3.2 People in prison with significant drug misuse problems should be offered access, if appropriate, to a therapeutic community developed for the specific purpose of treating drug misuse within the prison environment.

- 1.5.3.3 For people who have made an informed and appropriate decision to receive drug treatment after release from prison, community-based residential treatment should be arranged as part of an overall care plan.

2 Notes on the scope of the guidance

NICE guidelines are developed in accordance with a scope that defines what the guideline will and will not cover. The scope of this guideline is available from www.nice.org.uk/page.aspx?o=275101.

This guideline is relevant to adults and young people who misuse opiates, cannabis or stimulants (for example, cocaine or amphetamines) and will be of relevance to the NHS and related organisations, including prison services and inpatient and specialist residential and community-based treatment settings. Although the guideline may comment on the interface with other services, such as those provided by the voluntary sector, it will not provide specific recommendations directed solely at non-NHS services, except insofar as they are provided under contract to the NHS.

The guideline does not specifically address:

- people with dual diagnoses
- people who misuse alcohol, prescription drugs or solvents
- diagnosis or primary prevention
- pregnancy
- people younger than 16 years.

This guideline should be read in conjunction with 'Drug misuse and dependence: guidelines on clinical management', which provides advice to healthcare professionals on the delivery and implementation of a broad range of interventions for drug misuse including those interventions covered in this guideline. Further information is available from www.nta.nhs.uk

How this guideline was developed

NICE commissioned the National Collaborating Centre for Mental Health to develop this guideline. The Centre established a Guideline Development Group (see appendix A), which reviewed the evidence and developed the recommendations. An independent Guideline Review Panel oversaw the development of the guideline (see appendix B).

There is more information in the booklet: 'The guideline development process: an overview for stakeholders, the public and the NHS' (second edition, published April 2006), which is available from www.nice.org.uk/guidelinesprocess or by telephoning 0870 1555 455 (quote reference N1113).

3 Implementation

The Healthcare Commission assesses the performance of NHS organisations in meeting core and developmental standards set by the Department of Health in 'Standards for better health', issued in July 2004. Implementation of clinical guidelines forms part of the developmental standard D2. Core standard C5 says that national agreed guidance should be taken into account when NHS organisations are planning and delivering care.

NICE has developed tools to help organisations implement this guidance (listed below). These are available on our website (www.nice.org.uk/CGXXX).

[NICE to amend list as needed at time of publication]

- Slides highlighting key messages for local discussion.
- Costing tools:
 - costing report to estimate the national savings and costs associated with implementation
 - costing template to estimate the local costs and savings involved.
- Implementation advice on how to put the guidance into practice and national initiatives which support this locally.
- Audit criteria to monitor local practice.

4 Research recommendations

The Guideline Development Group has made the following recommendations for research, based on its review of evidence, to improve NICE guidance and patient care in the future.

4.1 *Implementation of contingency management*

For people who misuse drugs, what methods of implementing contingency management (including delivering and ceasing incentives) and in what settings (including legally mandated, community-based and residential), compared with one another and standard care, are associated with longer periods of continued abstinence, reduced drug use and maintenance of abstinence/reduction of drug use at follow-up?

Why this is important

Although the efficacy of contingency management for drug misuse has been extensively investigated, there is a lack of large-scale and well-conducted implementation studies. The implementation of contingency management programmes in the UK would be aided by research assessing specific components of the programme.

4.2 *Testing within contingency management programmes*

For people who misuse drugs and are receiving contingency management, are urinalysis, sweat and oral fluid analyses alone and in comparison with one another sensitive, specific, cost-effective and acceptable to service users?

Why this is important

There is a lack of data comparing sensitivity and specificity, cost-effectiveness and acceptability to service users of these methods of identification of drug use. Identifying drug use during treatment is an important aspect of contingency management; therefore assessing which method(s) are more effective on the above outcomes is an important issue for health and social care settings intending to implement contingency management programmes.

4.3 *Psychosocial interventions within needle and syringe exchange programmes*

For people who use injected drugs, do needle and syringe exchange programmes with greater psychosocial content (including staff distribution of syringes and needles and/or provision of psychoeducation on reducing blood-borne virus risk) compared with those with minimal psychosocial content (including machine dispensing of syringes and needles and minimal or no information on reducing blood-borne virus risk) reduce injection and sexual risk behaviours and seroprevalence blood-borne virus rates associated with drug use?

Why this is important

There is extensive literature assessing whether needle and syringe exchange programmes reduce injection and sexual risk behaviour and HIV seroprevalence rates. However, there is very little research that seeks to distinguish the impact of the provision of sterile needles from the psychosocial interventions often offered in such programmes. Psychosocial contact and interventions in needle and syringe exchange programmes require a great deal of resources, therefore it is important to assess whether these additional psychosocial elements are clinically and cost-effective.

4.4 *Residential treatment*

For people who misuse drugs, is residential treatment associated with better outcomes than community-based care, as measured by higher rates of abstinence or reduction in drug use?

Why this is important

There have been some studies comparing residential treatment with community-based treatment. However, these studies are often based on small sample sizes, lack methodological quality and have produced inconsistent results. Residential treatment requires significantly more resources than community-based treatment, so it is important to assess whether residential treatment is more effective.

5 Other versions of this guideline

5.1 *Full guideline*

The full guideline, 'Drug misuse: psychosocial management of drug misuse', contains details of the methods and evidence used to develop the guideline. It is published by the National Collaborating Centre for Mental Health, and is available from [NCC website details to be added], our website (www.nice.org.uk/CGXXXfullguideline) and the National Library for Health (www.nlh.nhs.uk). **[Note: these details will apply to the published full guideline.]**

5.2 *Quick reference guide*

A quick reference guide for healthcare professionals is also available from www.nice.org/CGXXXquickrefguide

For printed copies, phone the NHS Response Line on 0870 1555 455 (quote reference number NXXXX). **[Note: these details will apply when the guideline is published.]**

5.3 *Understanding NICE guidance: information for patients and carers*

Information for people who misuse drugs and their carers ('Understanding NICE guidance') is available from www.nice.org.uk/CGXXXpublicinfo

For printed copies, phone the NHS Response Line on 0870 1555 455 (quote reference number N1XXX). **[Note: these details will apply when the guideline is published.]**

6 Related NICE guidance

Anxiety: management of anxiety (panic disorder, with or without agoraphobia, and generalised anxiety disorder) in adults in primary, secondary and community care. NICE clinical guideline 22 (2004). Available from www.nice.org/CG022

Depression: management of depression in primary and secondary care. NICE clinical guideline 23 (2004). Available from www.nice.org/CG023

Self-harm: the short-term physical and psychological management and secondary prevention of self-harm in primary and secondary care. NICE clinical guideline 16 (2004). Available from www.nice.org/CG016

Schizophrenia: core interventions in the treatment and management of schizophrenia in primary and secondary care. NICE clinical guideline 1 (2002). Available from www.nice.org/CG001

NICE is developing the following guidance (details available from www.nice.org.uk):

- Drug misuse: opiate detoxification drug misusers in the community, hospital and prison. NICE clinical guideline. (Publication expected July 2007.)
- Methadone and buprenorphine for the management of opioid dependence. NICE technology appraisal guidance. (Publication expected January 2007.)
- Naltrexone for the management of opioid dependence. NICE technology appraisal guidance. (Publication expected January 2007.)
- Substance misuse interventions: an assessment of community-based interventions to reduce substance misuse among the most vulnerable and disadvantaged young people. NICE public health intervention guidance. (Publication expected March 2007.)

7 Updating the guideline

NICE clinical guidelines are updated as needed so that recommendations take into account important new information. We check for new evidence 2 and 4 years after publication, to decide whether all or part of the guideline should be updated. If important new evidence is published at other times, we may decide to do a more rapid update of some recommendations.

Appendix A: The Guideline Development Group

Professor John Strang (Chair, Guideline Development Group)

Professor of Psychiatry of Addictions; Director – National Addiction Centre, Institute of Psychiatry; Honorary Consultant Psychiatrist, South London and Maudsley NHS Trust

Mr Stephen Pilling (Facilitator, Guideline Development Group)

Joint Director, The National Collaborating Centre for Mental Health; Director, Centre for Outcomes, Research and Effectiveness, University College London; Consultant Clinical Psychologist, Camden and Islington Mental Health and Social Care Trust

Dr Eliot Ross Albert

Service-user representative

Ms Janet Brotchie

Clinical Psychology Advisor, Quality Team, National Treatment Agency for Substance Misuse; Lead Psychologist, Central and North West London Mental Health NHS Trust Substance Misuse Service

Dr Alex Copello

Clinical Director, Substance Misuse Services and Addictions Research and Development Programme Director, Birmingham and Solihull Mental Health NHS Trust; Senior Lecturer in Clinical Psychology, University of Birmingham

Professor Colin Drummond

Professor of Addiction Psychiatry, St George's Hospital Medical School, University of London; Honorary Consultant Psychiatrist, South West London and St George's NHS Trust

Mr Mark Gilman

North West Regional Manager, National Treatment Agency for Substance Misuse

Ms Sarah Hopkins

Project Manager, The National Collaborating Centre for Mental Health (2006–2007)

Dr Christopher Jones

Health Economist, The National Collaborating Centre for Mental Health (until 2006)

Ms Rebecca King

Project Manager, The National Collaborating Centre for Mental Health (2005–2006)

Mr Tim Leighton

Head of Professional Education, Training and Research, Clouds; Director of Studies, University of Bath Foundation Degree and BSc (Hons) Degree in Addictions Counselling

Mr Ryan Li

Research Assistant, The National Collaborating Centre for Mental Health

Dr Ifigeneia Mavranezouli

Senior Health Economist, The National Collaborating Centre for Mental Health

Mr Peter McDermott

Service-user representative

Dr Nicholas Meader

Systematic Reviewer, The National Collaborating Centre for Mental Health

Ms Poonam Sood

Research Assistant, The National Collaborating Centre for Mental Health

Ms Sarah Stockton

Information Scientist, The National Collaborating Centre for Mental Health

Mr Andy Stopher

Borough Services Assistant Director (Camden), Substance Misuse Services

DRAFT FOR CONSULTATION

Dr Clare Taylor

Editor, The National Collaborating Centre for Mental Health

Mr Ian Wardle

Chief Executive, Lifeline Project, Manchester

Mrs Tina Williams

Carer representative

Dr Nat Wright

Clinical Director for Substance Misuse, HMP Leeds, Leeds Primary Care
Trust

Appendix B: The Guideline Review Panel

The Guideline Review Panel is an independent panel that oversees the development of the guideline and takes responsibility for monitoring adherence to NICE guideline development processes. In particular, the panel ensures that stakeholder comments have been adequately considered and responded to. The Panel includes members from the following perspectives: primary care, secondary care, lay, public health and industry.

[NICE to add]

Appendix C: Contingency management – key elements in the delivery of a programme

Contingency management has been used to reinforce a variety of behaviours including abstinence from drugs (Higgins et al. 1993), reduction in drug use (Elk et al. 1995), promoting engagement with psychosocial interventions (Petry et al. 2006) and ensuring compliance with physical health interventions (Malotte et al. 1998). Although the principles of contingency management are relatively straightforward, implementing such a programme in practice requires careful organisation. The different types of incentives that can be used and key implementation issues will be discussed below. All the interventions have a strong base in psychological theory (Domjan et al. 2003).

Reinforcement schedules

There are four main methods for delivering incentives that have been applied to drug treatment: clinic privileges, vouchers, monetary incentives and award draws.

Clinic privileges

Trials assessing privileges within treatment have focused on contingency management for people undergoing MMT. Privileges used for reinforcement include take-home methadone doses (Stitzer et al. 1992). Privileges are commonly provided in drug treatment in the UK but tend not to be used consistently. Their use more formally within a contingency management programme may have a significant impact on particular target behaviour. Other examples of privileges that may be used include access to a rapid dosing line, reserved parking space for a specific duration or a special food item in a clinic cafeteria (Petry et al. 2002).

Voucher reinforcement

Service users receive 'vouchers' of various monetary values for each biological sample (usually urine) that is negative for the tested drugs. Each voucher usually escalates in value as the number of uninterrupted negative samples increases. For example the first negative sample earns £1.50, the Drug misuse: psychosocial NICE guideline DRAFT (January 2007) Page 27 of 33

next £3, the third £5 etc. If a positive sample is submitted no voucher is given and the next voucher earned for a negative sample is reset to £1.50.

One advantage of the voucher system is that it allows for individual preferences, with service users able to spend their vouchers on a variety of items. In some programmes, a staff member purchases the items chosen by the service user and they can veto certain requests that may not support a healthy drug-free lifestyle; other trials have used on-site stores where the items can be purchased directly. Voucher systems seem to have a high level of acceptability among service users, with fewer than 5% refusing to participate in these trials (Petry 2000).

Monetary incentives

There have been a few studies, mainly on offering incentives for compliance with physical health interventions (Malotte et al. 1998; Malotte et al. 1999; Seal et al. 2003), that have assessed the use of monetary incentives. It appears that low value (for example, £1.50/\$3) incentives are as effective as higher value (for example, £10/\$20) incentives.

Awards

This is more formally referred to as the 'variable magnitude of reinforcement procedure' (Prendergast et al. 2006). Participants receive the opportunity to participate in draws, often from a number of slips of paper kept in a bowl, for providing a negative biological specimen. Often the number of draws increases with the submission of continuous negative samples (Petry 2005b). Provision of a specimen indicating recent drug use results in the withholding of draws and the number of draws earned for a negative sample is reset to one.

The awards available typically range from £1 (for example, in the form of a food voucher) through £20 (for example, a choice of a discman, watch, phone credits) to £100 (for example, a TV, stereo, MP3 player). Service users are given a choice of prizes within a particular category to ensure they receive something they perceive as reinforcing. The chance of winning is inversely related to prize costs. For example, there may be a 1 in 2 probability of

winning a £1 prize, and 1 in 250 probability of winning a £100 prize (Petry 2000).

The evidence suggests that all the above reinforcement systems can be effective, with some evidence to suggest a slight but not significant advantage for monetary incentives over the other methods. However, in the NHS it may prove easier to implement contingency management through the use of privileges and vouchers, because of their potentially greater acceptability to services.

Key issues in implementing a contingency management programme

Kellogg and coworkers (2005) summarised five key aspects of implementing contingency management.

- Incentives should be given frequently.
- It should be very easy to earn incentives at the start.
- Incentives need to include material goods and services that are of use and value to service users.
- The connection between incentives and behaviour should be clear.
- The emphasis should be on incentive-oriented rather than punishment-oriented approaches.

Frequency and ease of earning incentives at the start

The first two issues discussed by Kellogg and coworkers (2005) are closely linked. In order to strengthen the connection between the incentive and the behaviour it is important that the incentives are provided frequently. However, for incentives to be earned frequently the target behaviour must not be too difficult, particularly at the start of the programme. Abstinence from drugs can be a difficult target for many people who misuse drugs, so some trials use 'successive approximation' – a system in which service users receive reinforcement for approximations of abstinence. For example, Elk and coworkers (1995) reinforced reductions in benzoylecognine metabolites to encourage initial attempts at abstinence.

Providing early access to incentives is an important aspect of establishing contingency management programmes. A common method is 'priming' – service users are provided with reinforcement for the first time they attend the clinic. For example, Higgins (1993) provided service user with their choice of a restaurant voucher or cinema tickets for their first session. Similarly, Petry and Martin (2002) offered participation in a draw on the first day of treatment. The aim of priming is for service users to experience the reinforcements available in attending treatment and to encourage them to continue with the intervention.

Material goods and services

The use of material goods and services as incentives in contingency management programmes has been extensively examined in trials and implementation studies. A key point to emphasise in providing such incentives is that the items provided should be perceived as genuinely reinforcing by the service user participating in the programme. For example, vouchers or clinic privileges should all be chosen in conjunction with the service user.

Connection between incentive and behaviour

Incentives are likely to be more effective if their distribution is directly connected to specific and observable behaviours and if the service user receives them immediately after they exhibited the behaviour (for example, attending a therapy session). The greater the delay in receiving the reinforcement, the weaker its effect is likely to be.

Incentive-oriented rather than punishment-oriented

One major advantage to contingency management is its emphasis on providing incentives for positive target behaviours, whereas some aspects of current practice can focus on a more negative approach such as the loss of privileges and discharge from services. Almost all trials showing the efficacy of contingency management have been incentive-oriented (for example, Higgins et al. 1993; Stitzer et al. 1992). Furthermore, adding a punitive aspect (reduction in methadone dose when testing positive for illicit drug use) to a contingency management incentive-oriented treatment has not been found to

be effective (for example, Iguchi et al. 1988). This suggests a shift away from punishment-oriented to incentive-oriented treatment may be beneficial in changing drug users' behaviour.

Maintenance of behaviour after reinforcement

A final important issue not mentioned by Kellogg and coworkers (2005) is how to maintain the target behaviour once the reinforcement schedule has been completed. Firstly, it would be good clinical practice not to terminate a contingency management programme until the service user is stabilised. Secondly, a number of studies have reduced the frequency and value of incentives towards the end of treatment in order to lessen the impact after the primary contingency management programme has been completed. For example, Higgins (1993, 1994) after 12 weeks of voucher reinforcement with escalating incentives provided \$1 lottery tickets for each negative urine sample over a further 12 weeks. Petry (2004, 2005b) gradually reduced the number of prize draws available from three times a week in the first 3 weeks, to twice a week in the next 3 weeks, to finally once a week for 6 weeks.

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