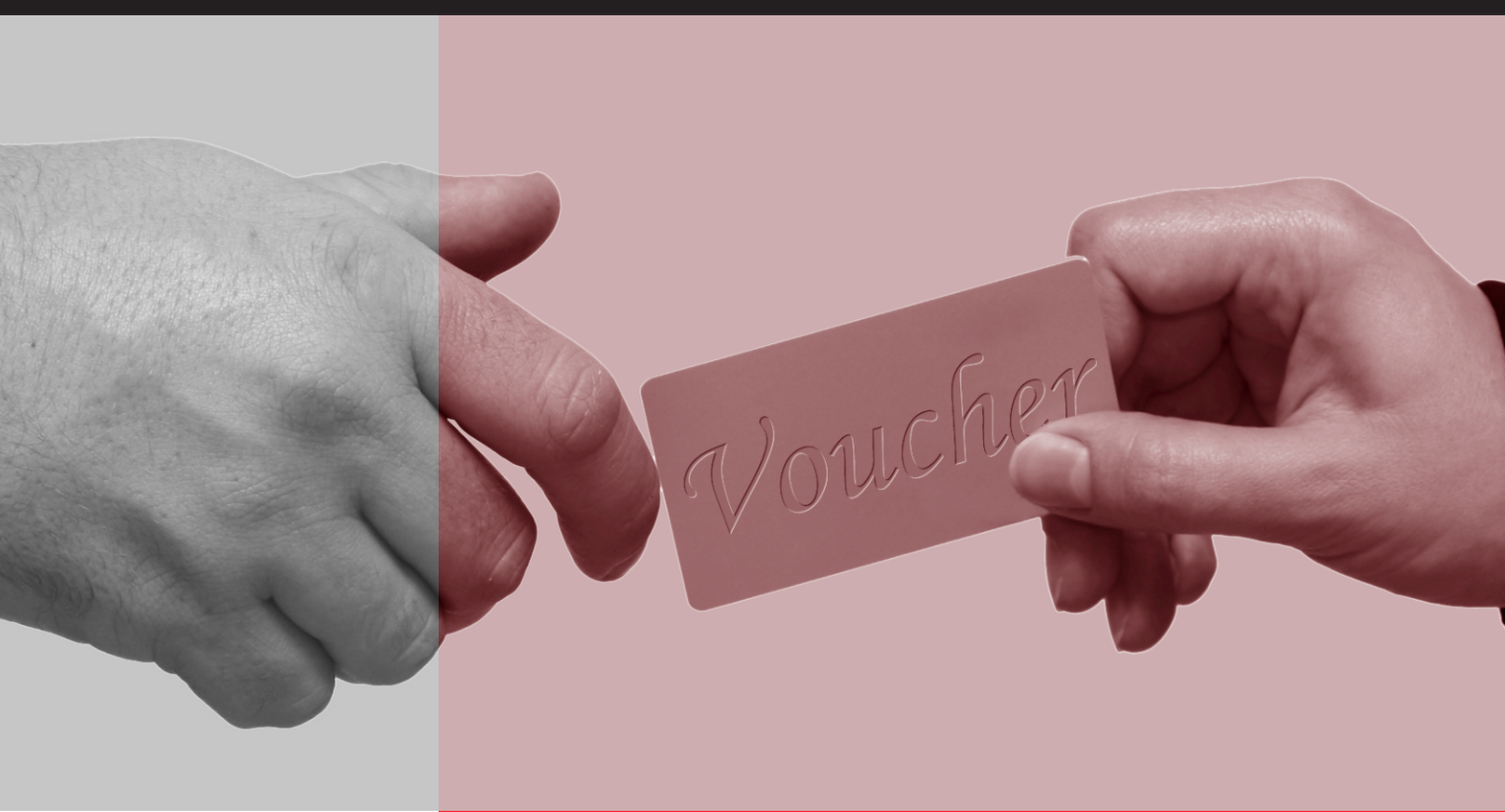
National Treatment Agency for Substance Misuse

Are contingency management principles being implemented in drug treatment in England?



Small grants publications

This series of publications was commissioned in 2005, to short timescales.

Contributors were asked to contribute research that increased our understanding of effective treatment and harm reduction.

Tim Weaver, Jo Hart, Jeffrey Fehler, Nicky Metrebian, Tony D'Agostino and Piers Benn

April 2007 > > Research briefing: 33

In brief

Background and aims

There is evidence from the US that contingency management can be effective in reducing crack and cocaine use among opiate-dependent patients receiving opiate substitution therapy. This study tried to find out whether contingency management (or variants of it) were being applied in England and what clinicians thought about its potential. We also described the approach and the experience of two services that were using contingency management principles.

Design

The research involved a national survey of services providing opiate substitution therapy and a qualitative study in two services of staff using contingency management principles.

Findings

A range of positive reinforcement methods such as praise, use of take-home privileges and eligibility for increased dose are used routinely by most services. However, no services were identified that used contingency management models conforming to the evidence-based approaches described in the US literature.

Many respondents were uncertain about the effectiveness of contingency management in domestic drug treatment settings and believed its use raised major ethical issues.

Despite the concerns of a majority, there were a small number of respondents who planned to introduce contingency management into their practices. We looked at two such services in detail and highlighted a number of problems concerning its implementation, including finance, limited staff experience, anxieties about the impact on client-keyworker relationships, the absence of practice guidance and the need to undertake evaluation.

Main implications

The implementation of strict, protocol-driven contingency management methods represents a significant change and challenge to the current culture of English services providing opiate substitution therapy. There needs to be a debate about the ethical status of contingency management.

Services that are actively developing contingency management should be supported in order to learn about practical problems and to help researchers design a definitive trial.

Introduction

This is a summary of the publication An Exploratory Study to Assess the Feasibility of a Randomised Controlled Trial of Contingency Management for the Treatment of Crack and Cocaine Misuse in Opiate-Dependent Clients Receiving Opiate Substitution Therapy (NTA, 2007).

Study aims

There are no evidence-based medical interventions for crack and cocaine that are clinically effective or promote retention in treatment. However, there is good evidence from US research that contingency management can achieve significant reductions in crack and cocaine use among opiate-dependent patients receiving substitution therapy.

Despite this evidence base, there has been no research into the feasibility or effectiveness of contingency management or incentive-based treatment programmes in English drug treatment settings. Moreover, the extent to which the principles of contingency management have been implemented into drug treatment in England is not known.

The aims of our study were:

- To measure the extent to which incentives are currently employed in opiate substitution treatment in England
- To assess the attitude of clinicians towards contingency management
- To investigate the issues and implications for practice raised for clinics by current examples of incentive-based treatment programmes.

Study methods

We addressed the study aims using a survey of English drug treatment services that provided opiate substitution therapy. The questionnaire was sent to the responsible medical practitioner at each service. The survey was sent to 273 clinics of which 191 replied (70 per cent).

We then observed the practice in two services, where contingency management interventions using vouchers were being developed or considered. Focus groups and qualitative interviews were completed with clinicians in order to assess the impact of incentive-based treatment programmes on clinic regimes and ethical practice. They also aimed to identify any clinical, organisational and ethical issues which would need to be addressed in extending the practice of contingency management, and of staging a trial of its effectiveness.

Findings

Opiate substitution services

Extent of crack and cocaine misuse

The reported prevalence of regular crack misuse within the current caseloads of clients receiving opiate substitution therapy varied widely, but the median figure was 40 per cent.

What is contingency management?

Contingency management is based upon principles of behaviour modification. It involves providing positive reinforcement (in the form of clinic privileges, vouchers or payment) when clients achieve specified behaviours or treatment goals. There are four key tenets which are common to all evidence-based models of contingency management:

Defining a target behaviour

The treatment team must clearly identify what outcome it wants the client to achieve. Examples are abstinence from a specified drug, compliance with clinic appointments and social activities consistent with a drug-free lifestyle.

Regular monitoring of target behaviours

The treatment team must ensure that the behaviours being targeted are regularly and unambiguously assessed – for example, if the target behaviour is abstinence from a particular drug, regular urine analysis would be undertaken.

Reward contingent on attainment of target behaviours

Rewards such as clinic privileges, payments, or vouchers or tokens redeemable for goods and services consistent with a drug-free life, are given to clients at pre-defined levels and frequencies when target behaviours are demonstrated (for example a negative urine test for cocaine). Rewards are withheld when target behaviours are not achieved (for example a positive urine test for cocaine).

Reinforcement

In addition to rewards for clients achieving the target behaviour, there should also be positive reinforcement through brief counselling.

How do services respond to clients using crack and cocaine?

Motivational interviewing, relapse prevention therapy and other cognitive behaviour therapies are the first choice responses for the majority of services when clients test positive for crack. Negative reinforcement sanctions, such as reducing doses of opiate substitutes are less commonly used. However, a quarter of respondents said that clients at their clinics might at least be warned about possible discharge, if they provided a number of positive urine samples for cocaine.

Types of positive reinforcement

The survey revealed that a range of positive reinforcement methods are used routinely by services. Virtually all clinics praised clients who provided clean urine samples. Of the more tangible forms of reinforcement, eligibility for take-home privileges and eligibility for holiday treatment privileges were most commonly reported.

Just under a third of clinics told us that clients might be made eligible for consideration for increased doses of opiate substitute, while over a quarter said that providing urine samples negative for cocaine would possibly make clients eligible to choose the type of opiate substitute prescribed.

Less commonly reported forms of positive reinforcement contingent on clean urine samples included progress from supervised consumption to take-home privileges, fortnightly clinic attendance instead of the standard weekly, prescribing anti-depressants and eligibility for a detoxification programme.

Overall, eight out of ten services reported using at least two of the positive reinforcement methods described above.

Similarities between UK and US services

The study did not identify any opiate substitution therapy services that were using models of contingency management that conformed to the evidence-based approaches described in the growing US literature.

- No services were identified that offered either vouchers of cash value or cash payments to clients contingent on the provision of clean urine or the attainment of other behaviours
- Monitoring of urines for cocaine is relatively infrequent when compared to that practised in the context of evidence-based models of contingency management
- Significant proportions of respondents who reported that positive reinforcement was employed in their clinical practices, told us that rewards or privileges earned through abstinence would not necessarily be withdrawn (even after repeated positive tests). This suggests that the use of reinforcement methods may currently exhibit ambiguity and offer scope for negotiation, both of which would be inconsistent to the principles of contingency management.

Opinions among clinicians

Our findings reveal a high degree of uncertainty among clinicians about the effectiveness of contingency management. A majority of respondents felt the use of contingency management raises major ethical issues. Nevertheless, around one in five respondents felt contingency management was (or could be) effective in their clinics and around a third felt that the ethical issues raised were no more than ”minor” in nature.

Despite the concerns of a majority, there was a small number of respondents who indicated they have plans to introduce contingency management into their practices, and a larger proportion indicated a desire to learn more about the practice and effectiveness in English settings.

Findings from two incentive-based treatment programmes

Two services, referred to here as A and B, employed a range of positive reinforcement methods and proposals for contingency management interventions were being developed.

Types of positive reinforcement

Both services provided rewards contingent on the provision of clean urine but the type, level and frequency of reward was determined on a case-by-case basis. The following incentives were employed:

- Both services used praise as positive reinforcement. At service A, some token-based reinforcement was employed involving distribution of rewards such as travel tickets and leisure passes
- Supervision of consumption – daily supervised consumption of methadone could be changed to three unsupervised pick-ups a week
- Take-home privileges – take-home treatment privileges were used in both services as a reward for being stable or to promote non-drug-related activities such as looking for a job or visiting relations
- Increased prescription doses – under some circumstances clients may receive increased doses of opiate substitute. Both services had debated the use of diamorphine (medically prescribed heroin) as a reward.

While positive reinforcement was employed, this was not practised on the basis of any formalised policies or protocols, and took place largely in the context of one-to-one care co-ordination. Reinforcement was individualised, responsive to client circumstances and therefore negotiable within the context of the client-keyworker relationship. There were suggestions that staff perceived positive reinforcement as having greatest value in its

potential to enhance the engagement of the clients with their keyworkers, providing a more fertile basis for counselling-based interventions. This is consistent with the finding of the survey that a variety of rewards were more likely to be won by progress towards treatment goals, than lost by non-compliance or relapse.

Proposals for extending contingency management

Service A was considering implementing a 12-week, voucher-based scheme as a pilot project to encourage abstinence among crack and cocaine users. Its target population was a small sub-group of difficult-to-engage female sex workers. Urine testing would be conducted three times a week. Each negative sample would be rewarded with a voucher redeemable at shops such as Boots. There would be incremental increases (from a starting rate of £2.50) for every subsequent negative sample produced. However, if a positive sample was provided then no voucher was given and the value of the next voucher earned would return to the starting rate.

Service B was also assessing the feasibility of a contingency management intervention using vouchers. The intervention would be targeted at clients using crack during the initial 3-6 month phase of methadone maintenance treatment, when clients are often chaotic and are required to attend for daily dispensing. Some flexibility to tailor the treatment to individual need was recognised in relation to the type of voucher, and also the outcome being targeted. Monitoring of crack use was seen as a problem because the clinic did not have the resources to routinely test urine samples more than once a week. For this reason, other measures of compliance had been considered such as engagement with treatment, attendance at appointments, attendance for collecting prescriptions or dispensing and engaging with other services.

Issues

Services encountered several issues in using incentive-based management and in planning for token-based contingency management. There may be limited knowledge and experience about the management of crack and cocaine use among staff working in opiate substitution services. There was seen to be a need for enhanced staff training in these areas.

At both of the services the implementation of contingency management had been delayed by uncertainty over a number of operational issues and a lack of evidence about best practice. Staff were aware of evidence from the US but were uncertain whether the models described in the literature were applicable to England.

Key areas of uncertainty for staff included operational issues such as the definition of target behaviours, eligibility criteria, intervention duration and the level and type of reward to be offered. In relation to each of these issues staff appear to be grappling (sometimes with limited success) with an ever-present need to reconcile clinical objectives, ethical considerations and the need for evaluation.

Staff were very unclear about how clients might react to voucher-based contingency management. There was concern that the incentives would become the focus of treatment, rather than an adjunct to existing interventions. Some felt clients might feel manipulated by the scheme or patronised. There was also concern that vouchers may undermine the client-keyworker relationship, particularly when rewards might be lost or withheld. Some staff were concerned that this might be demotivating to some clients and might actually operate as reverse reinforcement. This could be counterproductive to clients who generally do well, albeit with occasional lapses.

The financing of contingency management also presented a barrier to implementation. Once again, the discussions about funding (particularly in relation to the rewards given to clients) took place within the context of an ethical or (more problematically) a moral debate. More prosaic, but nevertheless difficult, issues in relation to finance concerned the necessary increase in the frequency of urine analyses. As the survey revealed, few services implement weekly urinalysis, let alone the thrice-weekly testing employed by US services where effectiveness has been demonstrated.

Practice implications of the study

Strict, protocol-driven reinforcement methods that characterise evidence-based models of contingency management might represent a significant change and challenge to the current culture of English services providing opiate substitution therapy.

Contingency management is unlikely to be embraced by a majority of professionals working in drug treatment without a debate on its ethical status. There needs to a consensus concerning the ethical case for conducting one or more domestic trials.

In order to develop trials, those services that are actively developing contingency management should be supported. This should ensure that their practices are consistent with evidence-based approaches and that information about the treatment process, acceptability, impacts on the clinic regime and treatment outcomes are obtained and used to inform the development of a definitive trial.

For contingency management to be successfully implemented at a local level – with a level of fidelity that enables a valid assessment of effectiveness to be undertaken – it will also likely require;

- Careful logistical planning
- A strong commitment from service management

- A commitment to make available additional resources to fund the intervention and its evaluation.

Study limitations

The survey achieved a good response rate and provided valuable evidence about the extent and type of reinforcement methods currently used. However, it focused on the views of medical practitioners working in services providing opiate substitution therapy and the findings should not be generalised to other treatment settings and may not represent the views of other professions working in drug treatment.

Both of the services we studied were in the process of developing contingency management and had not yet fully implemented their proposals. Consequently, the findings from this aspect of the study focused on issues concerned with design, implementation and the management of certain clearly anticipated problems. Data about the actual operation of contingency management and the experience of participants needs to obtained as these proposals are implemented, progress and mature.

To a large degree, the ambivalence workers expressed about the value of contingency management reflected uncertainty about how clients might respond to changes in clinic regime, and how this might impact on the client-keyworker relationship. It is therefore a significant limitation that we were unable to gauge the views and experiences of service users. This must be a key focus in future research.

The National Treatment Agency for Substance Misuse

The National Treatment Agency for Substance Misuse (NTA) is a special health authority within the NHS, established by Government in 2001, to improve the availability, capacity and effectiveness of treatment for drug misuse in England.

Treatment can reduce the harm caused by drug misuse to individuals' well-being, to public health and to community safety. The Home Office estimates that there are approximately 250,000–300,000 problematic drug misusers in England who require treatment.

The overall purpose of the NTA is to:

- Double the number of people in effective, well-managed treatment between 1998 and 2008
- Increase the percentage of those successfully completing or appropriately continuing treatment year-on-year.

Reader information

Document purpose	To investigate whether contingency management, which has been found to be effective in US research, is being practiced in drug services in England
Title	Are Contingency Management Principles Being Implemented in Drug Treatment in England?
Lead author	Tim Weaver, Jo Hart, Jeffrey Fehler, Nicky Metrebian, Tony D'Agostino and Piers Benn
Publication date	April 2007
Target audience	Primarily providers and commissioners of drug treatment services in England.
Circulation list	Managers and commissioners of treatment services Co-ordinators and chairs of local partnerships (e.g. drug action teams and crime and disorder reduction partnerships) Service user and carer groups Commissioners of pharmaceutical enhanced services local pharmaceutical committees Regional government department leads on drugs Central government department leads on drugs.
Description	This document summarises the full report of a feasibility study into the delivery of contingency management techniques for crack and cocaine misuse among people receiving substitute prescribing treatment for opiate dependence.
Contact details	Dr Tim Weaver, Centre for Research on Drugs and Health Behaviour (CRDHB), Department of Social Science & Medicine, Department of Psychological Medicine, Imperial College Faculty of Medicine, Charing Cross Campus, The Reynolds Building, St Dunstan's Road, London W6 8RP
Gateway/ROCR approval	The NTA is a self-regulating agency in relation to the Department of Health Gateway

National Treatment Agency for Substance Misuse

8th floor, Hercules House, Hercules Road, London SE1 7DU

Tel 020 7261 8573. Fax 020 7261 8883

Email: nta.enquiries@nta-nhs.org.uk Website: www.nta.nhs.uk

Publications

All NTA publications can be downloaded from www.nta.nhs.uk. To order additional copies of this report, complete the online order form at www.nta.nhs.uk. Alternatively, email nta@prolog.uk.com or telephone 08701 555 455 and quote product code RB33

If you require this publication in an accessible format, please email nta.enquiries@nta-nhs.org.uk