Title:

Specialist clinicians' practice and views regarding methadone/buprenorphine supervision and contingency management: a national survey

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Methadone supervision and contingency management

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Aims and methods: The aim of the study was to determine the current models of supervised consumption of methadone/buprenorphine practised, and to establish the extent to which contingency management is used, and in what forms. A postal questionnaire was sent to all lead specialist clinicians in the field of substance misuse in England in 2010 (n=194).

Results: The response rate was 66% (n=129). Clinicians generally supervised patients for a period of three months, though considerable flexibility was used depending on individual circumstances. The majority of patients consumed their methadone/buprenorphine on pharmacy premises six days per week. Supervised consumption arrangements were believed by respondents to cause a minority of patients to drop out of treatment, and prevent a minority from starting treatment. Contingency management is widely used throughout England, with the most common forms relating to changes in supervision or dispensing arrangements.

Conclusion: There is marked heterogeneity in clinicians’ practice of supervised consumption, suggesting uncertainty regarding the optimal approach. Further research, such as an RCT, is required.

Keywords: opiate dependence, supervised consumption, contingency management

# Specialist clinicians' practice and views regarding methadone/buprenorphine supervision and contingency management: a national survey

## Introduction

Heroin misuse presents a serious problem in the UK. The mainstay of treatment is maintenance therapy, usually in the form of methadone. Clinical guidance in the UK promotes the observation of methadone consumption on pharmacy or clinic premises by a pharmacist or member of clinic staff to ensure patients take their prescribed medication, and to prevent the diversion of methadone; this is known as supervised consumption or consumption on premises and is stipulated on the prescription as a condition of treatment However, there is a lack of research from which to establish the optimal practice in relation to the supervised consumption of opiate maintenance treatment medication, and the existence of varied guidelines by the Department of Health (DoH), Advisory Council on the Misuse of Drugs (ACMD) and the National Institute for Health and Clinical Excellence (NICE) in relation to the length of time for which supervised consumption should be carried out means that practice may vary markedly (Department of Health (England) and the devolved administrations 2007, Advisory Council on the Misuse of Drugs 2000, National Institute for Health and Clinical Excellence 2007). Supervised consumption reduces the risk of diversion and also protects the individual by reducing the risk of loss or theft of methadone. However, supervision policies may reduce treatment retention if perceived to be too restrictive. A few RCTs have been published investigating the effects of different frequencies of supervision. A US factorial design RCT comparing two days vs. five days per week and 50mg vs. 80mg of methadone found that participants who were supervised two days per week were significantly less likely to drop out of treatment compared to those supervised five days per week (Rhoades et al. 1998). An Australian RCT comparing supervised vs. unsupervised buprenorphine-naloxone (Suboxone) found no significant differences between the two groups for treatment retention or self-reported heroin use (Bell et al. 2007). The most recent trial was a pilot RCT conducted in the UK. After three months of methadone maintenance, sixty participants were randomized to receive daily supervision, twice weekly supervision, or no supervision. There were no significant differences in primary outcomes at three month follow-up, although retention decreased with increasing supervision, while illicit heroin use was least in those most supervised (Holland et al. 2012).

In addition to maintenance treatment, recent NICE guidance encourages the use of contingency management, which has a wide evidence base in the US. However the model of contingency management tested and found to improve treatment adherence has tended to be the use of monetary rewards/vouchers for either attendance and/or negative urine samples (Silverman et al. 1996). Gerra and colleagues (2011) compared daily supervision, contingent take-home methadone, and non-contingent early take-home methadone in a 12-month multicentre observational study in Italy. The contingent take-home methadone group received seven days of take-home medication if they showed clinical stabilisation and drug-free urine. The early non-contingent take-home group were required to visit once per week and given take-home methadone. Retention was significantly higher for those in the contingent take-group. Those in the non-contingent take-home group showed the highest risk of committing a crime, testing positive for illicit drugs and diverting methadone.

Despite NICE guidance, it appears premature to suggest such methods are transferable to the UK setting. It seems likely that cultural differences will exist, particularly differences in views of financial incentives in relation to healthcare. A survey was conducted of contingency management in relation to illicit crack/cocaine use during opiate maintenance treatment in England (Weaver et al. 2007). This found that no services offered monetary payments or vouchers as a form of contingency management in return for abstinence from illicit crack/cocaine in patients undergoing maintenance treatment (Weaver et al. 2007).

In 2009, a similar survey was conducted of all Scottish specialist clinicians working in substance misuse treatment (Anthony et al. 2011). It found there was a relatively cautious approach to relaxing supervision arrangements. The Scottish survey did not cover contingency management in detail. Given the relatively small number of Scottish clinicians it was felt it would be useful to expand this survey into England. It is this English survey that is reported here.

## Method

A cross-sectional survey in the form of a short postal questionnaire was used. Lead specialist clinicians in the field of substance misuse (i.e. consultant psychiatrists and specialist general practitioners) in England were identified through e-mail contact with Drug Action Team coordinators, whose details were available through the Home Office website, and through primary care and mental health trusts. Statutory treatment centres listed as providing prescribing treatment for opiate dependent patients in the DrugScope database (www.drugscope.org.uk) were contacted, with the questionnaire addressed to the specialist lead clinician in substance misuse. Statutory treatment centres are those provided by the National Health Service (NHS) and excludes charity-based organisations and those in the private sector.

The questionnaire was designed by the researchers and piloted in Scotland. It was then modified and re-tested on four clinicians based in England. The final questionnaire was sent to the 194 identified clinicians, along with an explanatory covering letter, in 2010. Two reminders were sent at fortnightly intervals to non-responders. The questionnaire comprised a mixture of closed and open-ended questions and covered aspects of supervised methadone and buprenorphine consumption, and the use of contingency management. Simple descriptive analysis (frequencies expressed as counts and percentages) and a McNemar test were performed using Statistical Package for Social Science version 17.0 for Windows.

Ethical approval was granted from the North of Scotland Research Ethics Committee as part of a wider application including the Scottish survey.

## Results

A response rate of 66% was achieved (n=129/194). Seventy-five respondents were male (58%), with females making up 36% (47/129) (remainder did not specify). Eighty-one (63%) had spent over ten years working in the substance misuse field.

### Current supervised consumption practice

Seventy-four (57%) clinicians had a standard period for which new clients were supervised. This standard period ranged from one month to six months, with three months being most common (86%, n=64). Ninety-nine (77%) clinicians said that the majority of their patients who received supervision were supervised six days per week. The second most frequent answer was five days per week, given by 23 (18%).

Eighty-six clinicians (67%) had a minimum period of time for supervising opiate consumption in new patients and 54 (42%) had a minimum period for patients restarting treatment. The minimum periods of time for both new patients and patients restarting treatment ranged from two weeks to three months. A period of three months was the most common, stated by 64 (74%) clinicians with a minimum time period for new patients, and by 32 (59%) with a minimum period for returning clients. The number of clinicians with a minimum period for which they supervised new patients entering treatment was significantly greater than those with a minimum period for patients re-starting treatment (McNemar test p<0.001).

Half of clinicians (50%, n=64) stated they discontinued supervision by gradually reducing the frequency of supervision, compared with 57 (44%) who would stop supervision immediately i.e. no requirement for supervision from a particular point in time. Eight (6%) indicated that they used both methods.

Eighty-three (64%) respondents indicated that they did not use a different approach for supervised consumption in patients undergoing buprenorphine maintenance treatment (BMT) compared to methadone maintenance treatment (MMT). A third (31%) reported using a different approach to supervised consumption. These different approaches included less frequent supervision for those receiving buprenorphine compared to methadone, and discontinuing supervised consumption sooner for patients receiving BMT compared to MMT.

### Management of a positive urinalysis in an unsupervised patient

Participants were asked in an open question how they manage a patient whose consumption is unsupervised upon the production of a positive urinalysis for illicit opiates. Responses were categorised and eight categories emerged. The three most frequent responses were: ‘through discussion with patient’, ‘review of care plan, medical review, or a change in care’ and ‘possibility of returning to supervised consumption with consideration of other factors’ (Table 1).

(Table 1)

### Perceived influence of supervision

Fifty clinicians (39%) reported that, in their experience, supervision arrangements had prevented patients from starting treatment. This only happened in a very small number of cases. The main reasons provided were: work commitments, mobility issues and childcare.

Clinicians’ perceptions of whether supervision arrangements had caused patients to drop out of treatment were almost evenly split. Just under half (62) perceived supervision arrangements to be a cause of drop-out, and 67 (52%) did not. Those who believed arrangements had caused patients to drop out were asked to estimate the proportion affected, and the reasons for this (Table 2).

(Table 2)

### Contingency management

Overall, 107 (83%) clinicians indicated that they used at least one form of contingency management. Participants were asked to select all forms used. The most frequent option noted was ‘a reduction in frequency of dispensing’ (i.e. a reduction is the frequency of visits required to collect medication), with 103 (96%) of those using contingency management using this. This was closely followed by ‘a reduction in frequency of supervision’ (i.e. a reduction in the frequency in which the maintenance medication is consumed under supervision), which was utilised by 85 (79%). Ten (9%) indicated ‘using free travel passes, seven (7%) reported using ‘vouchers’, and 11 (10%) selected the ‘other’ option. Of those choosing ‘other’, several stated that they had previously used vouchers for one-off interventions e.g. in return for receiving a Hepatitis B vaccine or attending overdose training. Some respondents added that although they used contingency management, it was not part of a formalised plan. In addition to the above options, ‘money’ was also listed as an option but was not used by any respondents. Nineteen clinicians (15%) did not use any form of contingency management.

Of the 107 clinicians who reported using contingency management, 71 (66%) indicated that they started this approach after a flexible period of time depending on clinical progress; a fifth (21) started immediately; 14 (13%) started it after a fixed period of time; and 2 (2%) chose ‘other’. Eleven (79%) of those respondents selecting the response ‘after a fixed period of time’, specified a time period of three months. One clinician gave a time period of a month and another said two weeks after titration. The remaining respondent did not provide a time period.

Participants were asked to indicate the criteria which influenced their decision to initiate clear rewards as part of overall contingency management. The most common criterion selected was ‘good treatment engagement and progress’, closely followed by ‘no use of illicit opiates’ and ‘no use of any illicit drugs’ (Table 3).

(Table 3)

Clinicians were asked to rank the two criteria which most strongly influenced their decision to begin contingency management, with ‘1’ being the most influential. The results showed that ‘good treatment engagement and progress’ was the most influential factor for clinicians deciding to implement contingency management, with 33 (35%) of those answering this question ranking it as the most important factor, and 20 (21%) ranking it second. The second most influential factor was ‘no use of illicit opiates’, closely followed by ‘no use of any illicit drugs.

## Discussion

The majority of substance misuse clinicians in England supervised patients for a minimum of three months, though a great deal of flexibility was evident depending on individual circumstances. Fewer patients were supervised for longer periods of time. Supervised consumption on premises took place six days per week for the majority of patients. Similar proportions of respondents discontinued treatment by gradually reducing it, and by stopping it immediately. Unsupervised patients who subsequently test positive for illicit opiates are generally managed with a medical review or increased support, with very few clinicians indicating an immediate return to supervision. Importantly, arrangements for supervised consumption were believed by clinicians to have dissuaded a minority from commencing treatment and to have caused a minority of patients to drop out of treatment. Contingency management in some form was widely employed throughout England, with the most common forms relating to changes in supervision or dispensing arrangements rather than monetary based forms.

The responses indicated that more clinicians in England had minimum and standard periods of supervision for new patients compared to clinicians in Scotland (minimum period used by 67% and 56% respectively; standard used by 57% and 28% respectively) (Anthony et al. 2011). For clinicians indicating that they had a minimum or standard period of time for supervising consumption in new or returning patients, three months was the most frequently stated time period. This finding is similar to that of the Scottish survey (Anthony et al. 2011), and is in line with DoH guidelines (Department of Health (England) and the devolved administrations 2007). Significantly fewer respondents had a minimum period for which patients returning to treatment were supervised compared to new patients entering treatment (42% and 67% respectively). A likely explanation for this may be due to the fact that DoH guidelines state that the duration for which returning patients are supervised is to be decided by local protocols (Department of Health (England) and the devolved administrations 2007).

The most frequent response given for the number of days the majority of patients were supervised was six days per week, which was also found by the Scottish survey (Anthony et al. 2011). This is most likely due to the opening hours of pharmacies, with many opening only six days per week (Neale 1999). In addition, clinics with on-site supervision facilities may only be open five days per week (Roberts et al. 1998). These findings are also similar to those of Cameron et al. who found that the majority of respondents in Scotland had most of their patients supervised daily (implying 5-7 days) (Cameron et al. 2002).

Clinicians who decreased supervision gradually, as opposed to altogether, generally stated that this was done via a reduction in dispensing frequency, with mixed responses regarding whether consumption was supervised on dispensing days. This demonstrates that the DoH guidelines regarding the discontinuation of supervision (i.e. to move to daily dispensing without supervision) are not being followed by all (Department of Health (England) and the devolved administrations 2007). Furthermore, a considerable proportion (44%) stopped supervision altogether rather than reduce it gradually. A possible explanation for this may be due to resource constraints as supervision places a considerable workload on pharmacies (Matheson, Bond and Tinelli 2007).

A third of respondents indicated that they used a different approach to supervision in relation to buprenorphine maintenance treatment (BMT), particularly in the form of Suboxone, which has been demonstrated to be safer than methadone (Meehan 2010), therefore the need for supervision is less pertinent. Fewer respondents chose the ‘not applicable’ option compared to the Scottish survey (3.5% compared to 9.4%), suggesting BMT may be more widely prescribed in England. Clinicians using BMT generally stated that the greater safety profile and longer time required by pharmacists to supervise its consumption compared to MMT was a major factor for using a different approach to BMT supervision. Strang et al. demonstrated similar findings, with a significantly higher number of patients on MMT being supervised than those on BMT (Strang et al. 2007).

Clinicians were asked whether, in their personal experience, supervision arrangements ever excluded any patients from starting treatment. The responses indicated that such exclusions happened in a minority of cases, for reasons such as employment commitments and difficulty getting to the location. Many of those who held the opinion that supervision arrangements did not exclude patients from starting treatment supplemented this with a comment stating that it was because they took a more flexible approach when faced with patients who would be negatively affected by supervision arrangements. In order for some patients to start treatment, programmes need to be tailored to the individual and their specific circumstances, which is precisely what some clinicians were doing.

Results revealed that supervision arrangements were believed by clinicians to cause a minority of patients to drop out of treatment. The most frequent reasons were ‘inappropriate take home demands’ and ‘employment/education commitments’. Similar results were found by Anthony and colleagues (Anthony et al. 2011). In the case of those in full-time employment, the fact that they are capable of remaining in employment suggests that they are more stable. The evidence suggests that in order to reduce the number of people dropping out of treatment, flexibility regarding supervision arrangements should be encouraged in genuine cases and according to the clinician’s discretion.

The study found that contingency management is widely practised. Similar results were found by Hart et al. in which approximately 80% of services stated that they used at least two forms of contingency management reinforcement methods to encourage abstinence from crack/cocaine (Weaver et al. 2007). Similarly to the study by Hart et al., none of the respondents indicated using money as a form of contingency management (Weaver et al. 2007). However a small number (5.4%) used vouchers/coupons. The difference between the results of the survey by Hart et al. and ours may have been because their survey specifically asked about contingency management in relation to abstinence from crack/cocaine, or changes in practice since their survey was conducted.

### Strengths and Weaknesses

A weakness of the study was the relatively low response rate (66%), therefore the results may not be representative of the entire population of drug misuse centres in England. Another methodological challenge was in ensuring the list of clinicians compiled through the range of methods used was complete. However, no definitive list existed therefore there was no alternative available. Choosing one particular group i.e. substance misuse specialists within the statutory sector limited the scope of the study. Including non-statutory voluntary organisations in the survey may have identified differences between the statutory and non-statutory sectors. However, we were not able to establish an up-to-date list of non-statutory treatment providers.

One strength of our sample was that all statutory drug misuse services were included, rather than a sample. A further strength is that our results could be directly compared to the recent Scottish survey as the questions were similarly framed.

## Conclusion

This study has shown that there is marked heterogeneity in clinicians’ practice of supervised consumption. This means that a patient’s experience of supervision will vary across the country. The striking variation between clinicians suggests uncertainty regarding the optimal approach to supervision. Further research, particularly in the form of RCTs, is necessary to determine the optimal approach in terms of length of supervision and techniques to discontinue supervision, so that practice regarding supervision arrangements can be evidence-based.

The findings indicate that many clinicians use a contingency approach to reducing supervision. Further research is necessary to determine if this is indeed the best technique to reduce supervision, or whether alternatives should be used.

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## Declaration of interest

This study was conducted as part of a final year honours thesis and formed part of a wider programme of work into the practice of supervision and contingency management in opiate maintenance treatment. The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

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Table 1. Clinical management of a positive urinalysis

|  |  |  |
| --- | --- | --- |
| Category of response | N | (%) |
| Possible return to supervised consumption with consideration of other factors, or attempts to reduce illicit use first | 49 | (38) |
| Return to supervision if persistent, or a warning to this effect | 31 | (24) |
| Return to supervision (with no mention of other considerations) | 6 | (5) |
| Discussion with patient | 51 | (40) |
| Depends on overall picture | 15 | (12) |
| Depends on care plan | 4 | (3) |
| Review of care plan, medical review, or a change in care | 52 | (40) |
| Other | 5 | (5) |

Table 2. Proportion of patients dropping out of treatment due to supervision arrangements and reasons, as perceived by clinicians (n=62)

|  |  |  |
| --- | --- | --- |
|  | N | (%) |
| Perceived proportion of patients dropping out due to supervision arrangements |  |  |
| Some (10-30%) | 12 | (19) |
| A few (<10%) | 48 | (77) |
| Missing | 2 | (3) |
|  |  |  |
| Perceived reasons for patients dropping out due to supervision arrangements |  |  |
| Employment/education commitments | 29 | (47) |
| Difficulty getting to location | 28 | (45) |
| Demanding take home when inappropriate | 27 | (44) |
| Dispensing arrangements too restrictive | 24 | (39) |
| Other | 12 | (19) |

Table 3. Factors influencing clinicians’ decision to begin contingency management (of clinicians practising contingency management) (n=107)

|  |  |  |
| --- | --- | --- |
|  | N  | % |
| No use of illicit opiates | 81 | (76) |
| No use of any illicit drugs | 76 | (71) |
| Physical health stability | 50 | (47) |
| Mental health stability | 52 | (49) |
| Employment/education commitments | 65 | (61) |
| Social/family support | 40 | (38) |
| Good treatment engagement and progress | 84 | (79) |
| Other | 13 | (12) |