REVIEW

ALCOHOL HOME DETOXIFICATION: A LITERATURE REVIEW

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Abstract — There are various definitions, aims and objectives of, and settings for, detoxification. Careful assessment is essential before any client can be detoxified at home. Scales and biological markers exist to aid this process. Close supervision (i.e. two or three home visits a day) is then required for at least 3 days. Supervision of clients can be done by the client's general practitioner (GP) or any member of a primary health care team as long as there is adequate specialist support. Clients can usually complete home detoxification within 9 days. It is safe and clinically effective for the vast majority of problem drinkers. Despite increasing the demand for detoxification, it is also cost-effective because it allows better utilization of in-patient facilities in the short term and should prevent more resources being required further along the treatment continuum. Home detoxification has wide support from both clients and their GPs. Indeed, there are many advantages for the client in detoxifying at home. However in-patient detoxification can never be replaced entirely. There will always be some problem drinkers for whom home detoxification is not a viable alternative (such as those with severe withdrawal symptoms and those lacking a suitable home environment).

INTRODUCTION

Traditionally clients wishing to detoxify from alcohol have done so in an in-patient setting (specialist or non-specialist). However, over the last 20 years, there has been an increasing desire to detoxify clients on a home or out-patient basis, partly to improve the effectiveness of detoxification and partly to try to reduce costs. While the suitability of out-patient detoxification has been examined by a number of studies spanning this time period (recently reviewed by Abbott et al., 1995), the number of studies on home detoxification has been far fewer. This paper examines the suitability of home detoxification on the basis of a structured review of the relevant literature (published and unpublished). Books and articles (written in English) were identified by searching the following computer databases: PsycLit, Medline, CINAHL, Bids, SSCI, and Socio File. Further references that were cited but not identified by the computerized search were also obtained and included in the review.
Thus, general practitioners (GPs) have a key role to play in home detoxification (Stockwell et al., 1986; Kaner and Masterson, 1996). However, it is important to back-up primary care with specialist advice and services. Indeed, specialist services are increasingly being seen as having a more indirect, advisory role in the provision of care (Edwards, 1987; Gilbody, 1992).

Much of the recent literature stresses that most problem drinkers can now be detoxified on a home or out-patient basis, but ‘the in-patient unit still has an important if revised place’ (Edwards, 1987). Essentially, in-patient detoxification is still required for problem drinkers who are either unsuitable for other types of detoxification, or who choose to be detoxified on an in-patient basis. Those unsuitable for home detoxification tend to be severely dependent problem drinkers (Webb and Unwin, 1988; Abbott et al., 1995; Mattick and Hall, 1996), although some studies have shown that even severely dependent drinkers can be detoxified at home (Stockwell et al., 1991) or on an out-patient basis (Collins et al., 1990; Klijnstra et al., 1995).

However, there is common agreement that a history of, or the likelihood of developing, poor physical or mental health, fits or delirium tremens (DTs) rules out the client for home detoxification (Stockwell, 1987; Beshai, 1990; Stockwell et al., 1990, 1991; Bennie, 1992a, b; Cooper, 1993, 1994, 1995). The same is generally true if the client is taking any other drugs (prescribed or otherwise) as these can increase the severity and duration of withdrawal symptoms. Similarly, a home environment in which the client is likely to create problems for others or unlikely to receive any social support means that, in general, home detoxification will be unsuitable. Sometimes, it may be important to relieve the family of the problem drinker for a short period. It is certainly advisable to admit a client with a history of violence, domestic or otherwise, to an in-patient setting. For these reasons, a thorough assessment of the client is essential.

ASSESSMENT AND SUPERVISION OF HOME DETOXIFICATION

The person responsible for undertaking the assessment must be able to identify withdrawal symptoms and know the appropriate interventions. Assessment for home detoxification should be conducted by whoever will be responsible for the supervision of home detoxification (Stockwell, 1987; Cooper, 1993).

Within the literature, a nursing-led approach to home detoxification has been observed or favoured (Stockwell, 1987; Stockwell et al., 1990, 1991; Bennie, 1992a, b; Cooper, 1993, 1994, 1995), although sometimes detoxification is carried out with a more prominent role for the GP (Stockwell et al., 1986; Kaner and Masterson, 1996). The nurse need not be a specialist in the alcohol field. However, in such cases, specialist supervision will be required, the level of which will depend on the nurse’s ‘clinical competence’ (Cooper, 1994).

Before undergoing home detoxification, consent must be gained from the client, their GP and, where applicable, a supporter (i.e. a close friend, relative, or partner). Before the client/supporter can give their consent, they must be informed about all aspects of detoxification, including medication, dosage, and side-effects (Cooper, 1995). The GP must also agree to take responsibility for prescribing medication (Stockwell, 1987; Stockwell et al., 1990, 1991; Cooper, 1993, 1994) which usually consists of benzodiazepines (chlordiazepoxide or diazepam) supplemented by vitamin tablets (to guard against the onset of Wernicke-Korsakoff syndrome).

Opinion as to who should hold the medication varies. Stockwell (1987) believes a nurse should take on board this responsibility, claiming it is dangerous and impractical for the client to hold their own medication. Others suggest a supporter can do this (Bennie, 1992a; Cooper, 1993). It has also been suggested that if the client holds the medication, this: ‘might be a positive part of the therapeutic process’ (Northumberland Community Substance Misuse Team, 1994).

However, not all patients will require benzodiazepines. These are only really required to prevent serious complications developing during withdrawal (Beshai, 1990). Whilst withdrawal appears to be uncomplicated in 95% of cases (Whitfield, 1980), for the severely dependent client life may be threatened if medication is not used (Chick, 1994). For clients undergoing detoxification at home, it is felt that, as a general rule, medication is not required for men whose alcohol consumption does not equal 16 units a day.
and women whose alcohol consumption does not equal 12 units a day (Stockwell, 1987; Cooper, 1994, 1995).

One condition of home detoxification is that the client should abstain from alcohol during detoxification. To ensure this, clients may be breathanalysed at each visit. However, if a client has been drinking, it need not necessarily be the case that the client should be excluded from the scheme: ‘Each case is taken on its merits and occasionally a patient may feel that the level of medication has been insufficient to completely control the onset of withdrawal symptoms. However, continued positive breath readings may call into question the patient’s commitment towards treatment’ (Bennie, 1992a). The breathalyser is also used for safety reasons and to help determine whether any change in the medication dosage is required.

At both assessment and during home visits, blood pressure, pulse, and severity of withdrawal symptoms need to be checked. Typically, a home detoxification lasts between 5 and 9 days (Stockwell et al., 1991; Bennie, 1992a,b; Cooper, 1993, 1995; Bartu and Saunders, 1994). During the first 3 days, at least, regular home visits are needed (i.e. two or three times a day) (Bennie, 1992a,b; Cooper, 1993).

SCALES TO AID ASSESSMENT

A number of scales exist to aid assessment. These are all scored by the person responsible for assessing the suitability of home detoxification. However, it is important to stress that scales cannot replace good clinical judgement — hence the importance of the person carrying out the assessment being adequately trained or supervised.

By far the most commonly used scale to assess severity of dependence is the Severity of Alcohol Dependence Questionnaire (SADQ) (Stockwell et al., 1979, 1983). Shown to be both valid and reliable, it is advocated by Bennie (1992b), Cooper (1993, 1994, 1995), Stockwell (1987), and Stockwell et al. (1990, 1991). The SADQ contains 20 items measuring five areas of alcohol consumption and withdrawal, each rated 0–3. If a client scores more than 30, he/she can be classified as severely dependent.

The Symptom Severity Checklist (SSC) (Murphy et al., 1983) has been advocated for assessing the severity of withdrawal symptoms (Stockwell, 1987; Stockwell et al., 1990, 1991; Cooper, 1993, 1994). It contains 14 items, of which 12 are ‘closed’ and rated 0–3. A score of 18 or more indicates severity at a level indicating concern. The SSC is based on the Selected Severity Assessment (SSA) (Gross et al., 1973) which has been widely used, either in its original form, or in other modified forms. Shown to be both valid and reliable, the SSA is a clinical rating scale containing 11 items. More recently, Metcalfe et al. (1995) have developed the Windsor Clinic Alcohol Withdrawal Assessment Scale (WCAWAS), a 10-item scale which is again based on the SSA. The WCAWAS not only has high inter-rater reliability and concurrent validity, but takes less than 5 minutes to administer.

Scales can also be used to determine the extent of a client’s alcohol-related problems and also to measure the suitability of the home as a detoxification setting. For instance, the Alcohol Problems Inventory (Stockwell et al., 1990) can be used to assess legal, financial and social problems; the Home Environment Assessment (Bennie, 1992a,b) can be used to evaluate the domiciliary detoxification setting. Biological markers are also required, particularly the blood-alcohol concentration and full blood count. The breath-alcohol level can also be useful, both in assessment and in subsequent visits and, if possible, a liver function test should also be carried out (Stockwell, 1987; Stockwell et al., 1990, 1991; Bennie, 1992a,b; Cooper, 1993, 1994).

With regard to blood tests, it is important to look out for raised γ-glutamyl transferase (GGT) and mean corpuscular volume (MCV) which can help in detecting severity of dependence when used in conjunction with the other assessments. A raised GGT has been reported in 60–80% of people dependent on alcohol, and a raised MCV has been reported in 50–60% of people dependent without anaemia (Bolger, 1992). Furthermore: ‘Analysis using blood variables (GGT and MCV) revealed that these predicted complicated withdrawal (P < 0.05) and this was due to the effects of MCV’ (Metcalfe et al., 1995).

THE CLINICAL EFFECTIVENESS OF HOME DETOXIFICATION

There have only been a handful of studies examining the clinical effectiveness of home
detoxification, none of which was randomized-controlled nor employed a sample size of more than 41 clients. These are obvious limitations. Nevertheless, the results have been illuminating.

In the UK, Stockwell et al. (1990) interviewed 41 clients of the Exeter Community Alcohol Team (CAT) and, where applicable, their supporters. Around half the clients had a SADQ score in the severe alcohol dependence range and two-thirds of those tested had abnormally raised GGT or MCV. Overall, alcohol consumption ranged from 56 units a week to 714 units a week (mean = 174.6) and clients had, on average, 4.6 alcohol-related problems prior to home detoxification. Most clients had also been detoxified at least once before in the past. Therefore, it was apparent that clients severely dependent on alcohol were being presented for home detoxification.

Most of the 33 clients who completed their detoxification were engaged in ongoing support, whilst most of the eight clients who were non-completers were not. Where clients had continued to drink, the impression gained was that family tensions had been the most important causal factor for this continued drinking. This emphasizes the importance of assessing the home environment prior to home detoxification. Indeed, many clients (n = 21) who completed their detoxification also had a supporter involved in ongoing support. Attendance at follow-up by client or supporter was found to be a good predictor of having a better outcome. However, it is not clear whether engagement in follow-up treatment actually resulted in a better outcome or if it indicated a greater level of commitment on behalf of the client.

After 2 months, sufficient data were available to categorize all but one of the clients into one of three outcomes: ‘good’ (n = 13), ‘improved’ (n = 13), or ‘not improved’ (n = 14). The majority (two-thirds) were thus at least improved. It was found that having a below average Alcohol Problems Inventory score significantly increased the likelihood of a superior outcome. This is noteworthy, because many of the clients included in studies on in-patient detoxification outcomes, for example those listed in Orford and Wawman (1986), were socially disadvantaged, or criminally active, and thus likely to have had more problems. This makes comparisons with other studies difficult.

Thus, Stockwell et al. (1991) attempted to make a direct comparison by retrospectively matching the 41 clients with an in-patient comparison group from a Hospital Detoxification Unit based in another UK Health District (Murphy et al., 1983). In order to control for differences in the severity of alcohol dependence, a subsample of 35 in-patients was used. Subjects in this subsample were individually matched on three key variables, age, sex, and the degree of alcohol dependence. Significantly higher SSC scores were noted in the in-patient subsample, perhaps explaining why they were also administered significantly greater medication dosages than those undertaking home detoxification. However, because matching was retrospective, it is not possible to ascertain whether these differences in withdrawal severity were ‘real’ or as a result of inadequate matching. Because there were no significant differences between individuals detoxified at home and as in-patients, a tentative conclusion reached by Stockwell et al. (1991) was that home detoxification appears to be just as safe and effective for severely dependent drinkers as in-patient detoxification. However, this is not to say that home detoxification will be suitable for all problem drinkers (such as those with more severe withdrawal symptoms).

In an Australian study, Bartu and Saunders (1994) also compared home detoxification and in-patient detoxification outcomes. A quasi-experimental design was utilized in which the first 20 clients accepted for home detoxification at the time of the study were selected and the same number of in-patients at a specialist unit during the same period were also selected. Subjects in both groups were matched by age, sex, the presence of a supporter, the absence of medical complications, and the severity of withdrawal symptoms. Because of this matching, the group of in-patients was not representative of those patients who are usually admitted for detoxification. But it did allow for a direct comparison between settings for those individuals who are considered most suitable for home detoxification. It was found that in-patients drank significantly more alcohol on average than home detoxification clients and individuals detoxified at home reported that both their health and the quality of relationships were maintained, or improved.

Furthermore, it is noteworthy that studies of
out-patient detoxification have produced very similar findings (Abbott et al., 1995; Klijnsma et al., 1995). However, with the exception of two papers in which patients were randomly assigned to out-patient detoxification (Alterman et al., 1988; Hayashida et al., 1989) and which have been described as 'seminal' by Bischof et al. (1991), research has again failed to utilize either a randomized or controlled design. Nevertheless, there is a strong body of evidence to support the claim that detoxification is as safe and effective for the majority of patients on a home, out-patient, or other similar basis. As the authors of one outpatient study noted: 'While our service is based in a psychiatric emergency clinic, there seems to be no reason why similar services should not operate out of general accident and emergency departments or general practice surgeries involving the practice nurse' (Collins et al., 1990).

THE COST-EFFECTIVENESS OF HOME DETOXIFICATION

Whilst there have been a number of studies showing out-patient detoxification to be more cost-effective than in-patient detoxification (e.g., Hayashida et al., 1989; Berg and Dubin, 1990), there have been very few studies actually examining the cost-effectiveness of home detoxification. The only real attempts to examine cost-effectiveness have been made by Bartu and Saunders (1994) and Cooper (1994). In the Australian study conducted by Bartu and Saunders (1994), the cost of home detoxification was estimated to be between 12% and 26% of the cost of detoxification in a specialist unit and between 4% and 10% of the cost of detoxification in a general hospital. In the UK, Cooper (1994) undertook a 3-month bed occupancy study of two mental health wards in North East Essex in 1988. On average, it was found that there were three detoxification patients a day occupying beds. In financial terms, these accounted for 308 bed-days, the costs of which were regarded to 'be sufficient to set up and run a home detoxification service with one nurse specialist and support staff for three years' (Cooper, 1994).

But this does not necessarily mean that home detoxification will cost the health service less. For example, Stockwell et al. (1990) and Cooper (1995) found that home detoxification created more demand than in-patient detoxification. However, as Cooper (1994) noted, further savings would be made because of the ability of the nurse specialist to visit three or four times as many patients a day. Furthermore, by reaching more clients at an earlier stage, this should reduce costs further along the treatment continuum as fewer individuals should become chronic problem drinkers. Thus, home detoxification does appear to be more cost-effective.

SUPPORT FOR HOME DETOXIFICATION

Cooper (1995) has noted the 'rapid' increase in the provision of home detoxification in the UK. During the first year of home detoxification services, the number of detoxifications carried out each week has been found to vary from 3.1 (Stockwell et al., 1990) to as many as 9.9 (Cooper, 1994). A few UK studies have also looked at the support for home detoxification. Whilst these few studies cannot possibly be described as being representative of all home detoxification services in the UK, or indeed, outside the UK, they do nevertheless provide useful insight.

In July 1985, Stockwell et al. (1986) sent a questionnaire to every GP practising in the Exeter Health District. From the 86% (145) of GPs who responded, it was estimated that 230 patients had required detoxification. Of these, one-half were estimated to be done at home, but around two-fifths of these were carried out with no supervision. In all, 36% of GPs were sceptical as to whether they could accept medical responsibility for home detoxification. A preference for home detoxification was positively correlated with the belief that the GP could take medical responsibility.

As part of the Stockwell et al. (1990) study, those GPs who indicated their willingness to take part in a follow-up study were surveyed about the home detoxification service. In all, 117 (89%) GPs responded. GPs who had ever had a patient detoxified at home were asked if they were happy to take medical responsibility. Of this admitted more selective subsample, nearly all said they were happy to do so — a much greater proportion than in the previous survey. The vast majority of GPs were also satisfied with the service provided.

Winters and McGourty (1994) surveyed all GPs
in Chester and Ellesmere Port. Over one-half (63) returned a completed questionnaire. Nearly three-fifths of these GPs said that they were able to provide home detoxification within their practice. But one-tenth believed that an in-house detoxification specialist was required. Follow-up telephone interviews with 10 GPs found that only a few instances of successful home detoxifications were believed to have occurred. Problems highlighted included the lack of support available at weekends and a lack of motivation on behalf of the client. This indicates the importance of a thorough client assessment as part of a well-organized service.

Also in 1994, Kaner and Masterson (1996) posted questionnaires to all Northumberland GPs. Around one-half (88) of the GPs responded. It was found that just over two-fifths of these had carried out home detoxification in the last 12 months, whereas two-thirds had carried out one previously. Over one-half had carried out a home detoxification in conjunction with another worker, usually a nurse (in three-quarters of such instances). Over one-half were also satisfied with home detoxification outcomes. However, one-third were not. Nearly all GPs wanted someone to be available for daily supervision of patients, four-fifths wanted more information on local alcohol agencies and three-quarters requested guidance on assessing patients suitable for home detoxification. Again this emphasizes the importance of a well-organized service. Indeed, following this study, the Northumberland Community Substance Misuse Team produced its home detoxification pack (Northumberland Community Substance Misuse Team, 1994). It was intended that a nurse would be appointed to help train and support GPs and primary care workers and to look at improving referrals for ongoing support.

Finally, Stockwell et al. (1990) examined the views of clients and their supporters in Exeter. Nearly three-quarters of clients stated that their home was their preferred location for detoxification. Furthermore, over two-fifths were unwilling to be detoxified in a psychiatric hospital, and one-third were unwilling to be detoxified in a general hospital. The support from the CAT nurse was the most liked aspect of the home detoxification by clients and supporters alike. Breathalyser checks were also highly rated, as was the medication received. Supporters also liked the telephone number they could ring for advice and clients also liked the support received from their supporters. Familiar surroundings, privacy and confidentiality, and being with the family were the other aspects of home detoxification that clients said they liked most.

Overall then, there appears to be a large degree of support in the UK for home detoxification amongst GPs, clients, and supporters alike. Where there was an organized service already available (Stockwell et al., 1990), support appeared to be greater.

ADVANTAGES AND DISADVANTAGES OF HOME DETOXIFICATION

One of the main advantages of home detoxification is that there is no need to sever regular routine and social ties, allowing the individual to detoxify within a familiar background, with family support, and still continue to work (although it may sometimes be advisable for the client to take time off from work). Other family members can also be supported. Home detoxification is also less stigmatizing than attending or being admitted to specialist clinics/units and can thus attract women and other 'sensitive' client groups. Indeed, it has been found that between one-quarter and one-third of clients detoxified at home are women (Bennie, 1992a,b; Cooper, 1994). Similarly, more clients aged under 35 years are being reached (Bennie, 1992a,b). Home detoxification is therefore attracting problem drinkers to seek help earlier than they might otherwise have done, thus making it easier for them to be successfully treated in the long term. It appears that home detoxification is also more cost-effective, not only in the short term but also in the long term, when it is considered that many of the new client groups will be helped at an earlier stage, requiring less expenditure on alcohol services for these clients later. Home detoxification has also been found to be preferred to inpatient detoxification by many clients and GPs. Thus home detoxification should enable local communities to receive services more tailored to their own needs.

As well as advantages, home detoxification undoubtedly also has disadvantages. For some, the presence of a partner/relation/friend may lead to domestic tensions and thus a return to drinking — as has appeared to be the case for some non-
GENERAL CONCLUSIONS AND COMMENTS

The lack of studies evaluating home detoxification is probably largely down to: ‘Limited resources and demands on these new services’ (Cooper, 1995). Further research into the effectiveness of home detoxification would be welcome. This research should utilize a randomized-controlled design and involve a larger number of subjects than the home detoxification studies to date. Nevertheless, it is apparent from the literature that, as long as all necessary precautions are taken, home detoxification is not only safe, but also both clinically-effective and cost-effective for the vast majority of problem drinkers who require it. It is also apparent that there are many advantages for the client in detoxifying at home.

However, there is no evidence that in-patient detoxification can be replaced entirely. In fact, there is overwhelming evidence that in-patient detoxification still has an important role to play. As a rule, the home is likely to be a suitable setting only for those with moderate to mild withdrawal symptoms, strong social support, and no medical or psychiatric complications. But in deciding on the suitability of the home, a thorough and accurate assessment is always required. This should be undertaken by the health professional responsible for supervision, i.e. a suitably trained/ supervised nurse or GP.

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REFERENCES


