Opiate detoxification in an inpatient setting

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Key findings

Outcomes
Studies on inpatient opiate detoxification and its outcomes are relatively rare. In general, they report higher rates of successful completion of treatment than outpatient-focused studies.

Client group served
There is a reasonable level of clinical consensus regarding the types of clients that may benefit from inpatient treatment, for example people who are socially unstable, have severe drug or polydrug use, have co-existing medical and psychological problems or have a history of unsuccessful detoxifications in the community. However, clients with less severe problems may also benefit from inpatient treatment.

Cost-effectiveness
There is evidence that inpatient treatment leads to good outcomes overall and is possibly slightly more cost-effective. Detoxification is more expensive in inpatient settings, but such cost calculations should be informed by, and adjusted for, evidence of actual effectiveness in populations with different severities and outcomes. There is little specific research on the relative cost-effectiveness of treating more unstable patients with this intervention, but in clinical practice this form of treatment may be determined by individual client needs.

Treatment setting
Specialist drug and alcohol facilities may be more effective than non-specialist facilities for drug detoxification (for example, general psychiatric wards).

Enhancing good outcomes
Better treatment outcomes are seen where there is:
- an adequate length of time spent in treatment
- effective linking of detoxification to aftercare services, including residential rehabilitation.

Factors associated with good outcomes suggest that detailed assessment and care planning, including a consideration of goals of treatment and aftercare provision, may help to maximise the efficiency of inpatient bed usage.

Range of services
The full potential of inpatient treatment is not limited to opiate detoxification. Current inpatient interventions include detoxification for a range of substances, dose titration, stabilisation of prescribed medication and assessment of physical and psychological functioning, as well as entry to residential rehabilitation.
Introduction

The term “inpatient treatment” covers a range of services in many different settings. This may involve detoxification, rehabilitation, a combination of both, or one followed by the other.1, 2 The full range of potential inpatient treatment includes inpatient assessment, dose titration and stabilisation.

This review will focus on the use of inpatient services for opiate detoxification (excluding ultra-rapid detoxification under anaesthesia), but reference will be made to their uses in rehabilitation. Such services involve medically supervised prescribing with 24-hour medical or nursing cover, in addition to a variable level of psychological and other support. Because of its high cost, there has been a tendency to view inpatient treatment as expensive and unnecessary in all but the most complicated cases.2

The number and variety of different inpatient services in England is not clear, but they appear to have diminished over time.2, 4, 6 There are both standalone specialist hospital units dedicated to the treatment of clients with drug or alcohol problems and services located within psychiatric or acute medical wards. In addition, many of the existing residential programmes in the non-statutory sector combine detoxification and residential rehabilitation (this briefing will not review the literature on the latter).

Who should (and does) get admitted?

There are a number of possible benefits from inpatient admission.1, 7, 8 A hospital setting permits a high level of medical supervision and safety for individuals who may require intensive physical and psychiatric monitoring. The greater intensity of treatment may also help patients who do not respond to lesser measures. Inpatient treatment can help interrupt a cycle of drug use even in the absence of medically dangerous withdrawal symptoms. For some, the safety of an inpatient environment and a period of respite can help in their attempts to make important life decisions. Withdrawal can often be completed far more quickly in an inpatient environment, but if the programme is a comprehensive one, attention should also be paid to family, vocational, medical and psychiatric issues. However, the protectiveness of an inpatient unit may also be one of its main disadvantages, as a major determinant of craving is drug availability. Moreover, inpatients are unable to work, care for their families, study or conduct their normal daily activities. The stigmatisation of some inpatient service settings may also be a deterrent, particularly where beds are located within general psychiatric wards.9–11

Although there is a limited research evidence base for the role of inpatient detoxification services, there is a reasonable level of clinical consensus about the types of client who benefit from being admitted.1, 5, 11, 12 Inpatient treatment may be of benefit to people who are socially unstable, more severely dependent, have co-existing medical or psychological problems or who have failed to complete more than one community-based detoxification.1, 12, 13 Inpatient detoxification, in units offering intensive medical support, is also commonly used because of the reduced risk of the potentially serious medical consequences of withdrawal. Similarly, complicated detoxification regimes – such as those required for patients dependent on two or more substances – are also much easier to administer in a hospital setting. There is evidence that inpatient units facilitate clients who use multiple substances to achieve reductions in substance use.14, 15

The National Treatment Outcome Research Study (NTORS) included a residential sample including 23 treatment programmes, eight of which were inpatient services and 15 were residential rehabilitation agencies. In total, 408 clients were recruited on entry to residential treatment, with 122 from inpatient units.16 When compared to the study average, the inpatient sample had some of the longest heroin careers, lowest rates of employment and highest levels of psychiatric and physical health problems. The group was also more likely to have used cocaine than the community treatment cohort and had higher average levels of alcohol consumption.2 A majority of clients achieved widespread improvements across a range of outcome behaviours and these were maintained at two years.

What services can inpatient treatment provide?

Medically-supported inpatient settings can be used for a range of tasks:

- Assessing the level of dependence
- Stabilising drug use, particularly when there is dependence on more than one substance
- Stabilising and/or subsequent detoxification of opioids, barbiturates, benzodiazepines or other sedative hypnotics
- Managing drug problems complicated by alcohol dependence
- Assessing and managing drug dependence and pregnancy
- Treating the secondary complications of drug use
- Assessing mental state
- Providing a period of respite from drug use and the ensuing psychosocial problems, particularly when there is limited social support available in the community.

Furthermore, detoxification is often only the first step in the treatment process and inpatient settings may convey some advantages in enhancing entry to aftercare.16, 17
How effective is detoxification in inpatient services?

Comparison of inpatient and outpatient settings

Studies on inpatient detoxification and its outcomes are relatively rare. In general, a higher proportion of patients finish the treatment successfully in an inpatient environment (36–81 per cent) compared with an outpatient setting (17–60 per cent). More research is needed to investigate the impact of new medical treatments now available in community settings, such as lofexidine and buprenorphine.

Two randomised controlled trials have been reported with opioid dependent clients. Gossop et al. reported that 81 per cent of clients completed a 21-day methadone reduction detoxification in an inpatient unit in London, compared with 17 per cent completing a six-week methadone reduction programme as an outpatient. Wilson et al. found seven out of ten (70 per cent) of their inpatient detoxification group were opioid-free on discharge, compared with 11 out of 30 (37 per cent) of the outpatient group. However, both studies included very small numbers of clients and utilised different medical treatment regimes in each setting.

Non-randomised studies comparing inpatients and outpatients typically show that the former have more severe substance use histories and a greater prevalence of medical, psychosocial and vocational difficulties, including less social stability, increased unemployment and a greater prevalence of medical and psychiatric disorders. However, this data reflects referral patterns and individual care needs rather than which populations fare best in each setting. Inpatient detoxification is considered to be most useful for those individuals who have too many adverse prognostic features to be successful at detoxification as an outpatient. In practice, not only are such individuals also the least likely to complete detoxification as an inpatient, but they are often especially unable to tolerate the constraints of a hospital setting. This has been described as the “severity paradox”, in which success is least likely in those who are particularly considered to require the approach. Nevertheless, inpatient treatment for clients with complex problems is usually indicated because of the potential to make generalisations from the results.

Cost and cost-effectiveness

The cost of providing inpatient services is clearly an important issue. In simple terms, detoxification in an inpatient setting appears to be much more expensive. Gossop and Strang, analysing the results of the London study mentioned above, calculated that a three-week inpatient detoxification programme costs nine times more than an eight-week outpatient programme. However, when adjustments are made for different extents of successful outcomes, the costs of inpatient and outpatient treatment are almost identical, with a slight advantage to inpatient treatment in some cases. A discussion of treatment costs is misleading if not informed by (and adjusted for) evidence of effectiveness. Rapid and successful exit from treatment is an issue to be taken into account.
Key success factors

Effectiveness of specialist and general settings
The use of non-specialist facilities for opioid and other drug detoxification is widespread in many areas of England, but there is some evidence that it is not the most effective use of resources. Strang et al randomised heroin addicts to either a specialist inpatient drug dependence unit (DDU) or a general (non-drug specialist) psychiatric ward. Of the 69 clients admitted to the DDU, 52 (75 per cent) remained in treatment until at least their first drug-free day, compared with only 13 (43 per cent) of the 30 clients admitted to the general ward. The specialist setting was associated with greater acceptance of randomisation, entry into treatment, completion of detoxification in hospital and a greater likelihood of opioid-free status at both two and seven-month follow-up.

Length of stay
The extent of the association between length of stay and inpatient treatment outcome is not clear. Large-scale outcome studies have shown that drug-dependent patients, who received less than 90 days of treatment in either inpatient or outpatient programmes, did less well than those receiving more than 90 days. NTORS calculated the odds of opioid use at one year for three periods of treatment – 10, 28 and 60 days. In the inpatient and short-stay rehabilitation programmes, a period of 28 days was associated with the greatest chance of abstinence and this was strongly related to the likelihood of overall improvement. The odds of abstinence from all of the target drugs at follow-up was strongly related to the likelihood of overall improvement. Studies examining predictive factors for entry into long-term treatment after detoxification have emphasised the importance of completion of treatment. In one inpatient sample of clients treated for either alcohol or drug misuse problems, the severities of medical and drug problems were the strongest negative predictors for long-term treatment uptake. Attempts have been made to evaluate psychological interventions to increase the uptake of aftercare after inpatient treatment. There is some evidence that participants who believed that long-term treatment would help them, would lead them to have more pleasure and fewer problems and reduce their health and money problems, were significantly more likely to utilise long-term treatment. A stated desire to participate in an abstinence-based treatment programme has been shown to be a significant predictor of completing an inpatient detoxification.

Linking detoxification with aftercare
Long-term drug treatment offers the most promising route to reduction in drug dependence and some dependent individuals begin their contact with the treatment system via detoxification. Even admissions as short as three days have been shown to have considerable benefits up to six months later. Nevertheless, detoxification can also be problematic when not integrated into a comprehensive treatment system. The risk of accidental overdose with opioids is increased immediately after a period of detoxification.

It is important to consider the process not as a treatment in its own right, but rather as the first (and often necessary) step on a path to recovery. With this in mind, the link to a comprehensive aftercare package is important post-detoxification. Research at one inpatient unit has shown significantly better treatment outcomes among those who completed detoxification and went on to spend at least six weeks in a recovery and/or residential rehabilitation unit. In contrast, there were no significant differences between non-completers and completers who had no aftercare on the majority of measures of drug use during follow-up.

Models of care and Clinical guidelines for the management of drug misuse recommend that any intervention should be matched to the level of severity and complexity of drug misuse. Therefore, on the basis of both currently available evidence and extensive clinical experience in this area, inpatient services should form an important part of the complete treatment spectrum. However, further research would be useful to clarify the key therapeutic elements. This paper has focused on opiate detoxification and not on the wider role of the inpatient unit within the full spectrum of treatment for drug dependence. Future reviews should look at the role of inpatient detoxification for crack or benzodiazepine dependence. They should also look at the role of inpatient units in stabilisation, dose titration and assessment of prescribing of injectable medication.

Conclusion
Studies on inpatient detoxification and its outcomes are relatively rare, but the following broad conclusions can be drawn:

- The rates of successful completion of opiate detoxification are generally higher in studies carried out in inpatient settings, than those in outpatient settings.
- There is a degree of consensus about the type of client who may benefit from inpatient treatment, including those with complex needs and those in situations where residential treatment is required for medical or social reasons.
- Inpatient treatment can also be beneficial for more stable patients and although it is more expensive than community-based-treatment options, the higher costs are at least partially offset by improved detoxification completion rates in the inpatient setting. Detoxification and other interventions in an inpatient setting can therefore be cost-effective.
- The factors that influence the likelihood of treatment success and improved outcomes include length of stay, the linking of detoxification with rehabilitation and aftercare, and the provision of treatment in specialist facilities.
References


This summary aims to review the factors influencing the successful completion of opiate detoxification in an inpatient setting.

Primarily providers and commissioners of drug treatment services in England, and service users and carers.

Managers and commissioners of treatment services
Co-ordinators and chairs of local partnership (e.g., drug action teams and crime and disorder reduction partnerships)
Service user and carer groups
Directors of public health, social services, police and probation services
Special health authorities
Medical directors of primary care trusts and mental health trusts
Managers of prison healthcare
Regional government department leads on drugs
Central government department leads on drugs
Royal College of Psychiatrists
British Psychological Society/substance misuse faculty

This review discusses the major variables affecting the success of an inpatient opiate detoxification programme, including treatment settings, length of stay and the range of client groups treated.

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