

Effective Interventions Unit

The effectiveness of treatment for opiate dependent drug users: an international systematic review of the evidence

Summary

Introduction

The Department of General Practice and Primary Care and the Health Economics Research Unit (HERU) at the University of Aberdeen were commissioned by the Effective Interventions Unit (EIU) to conduct a systematic review of the international literature on treatment for opiate users. This research summary provides an overview of the key findings.

Aims and Methods

The aim of this study was to identify, review, and critically appraise the quality of reviews and trials in the international research literature on drug misuse concerning the effectiveness and cost effectiveness of interventions, and the demographic and programme factors that influence treatment outcomes.

A systematic search of databases, journals, and the grey literature was carried out from 1990 to 2002. Reviews and primary studies that examine the effectiveness and cost-effectiveness of the following interventions were included: community maintenance, community detoxification and residential rehabilitation (see mini-glossary for definitions). Demographic and programme factors that influence treatment outcomes are noted where possible. Gaps in existing knowledge are highlighted and policy recommendations based on existing knowledge are presented.

Following a comprehensive, systematic search of the literature 819 papers were initially identified and of these, 141 were included in the review. The primary outcome measures examined were abstinence from opiate use, reduction in illicit opiate use, withdrawal severity, the length of time in treatment and retention in treatment. The findings outlined in this summary are based on randomised controlled trials (RCTs).

KEY FINDINGS

Community Maintenance

There was an extensive and high-quality literature investigating the effectiveness of community maintenance with a variety of drugs. The key findings were:

- community maintenance is effective at reducing use of illicit drugs and maintaining people in treatment across a wide range of age and ethnic groups, and among clients with a long history of opiate misuse;
- higher doses of methadone, buprenorphine, and LAAM are associated with better primary outcomes;
- higher doses of methadone (> 50 – 65 mg per day) appear to be slightly more effective than buprenorphine (2 to 8 mg per day);

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- those maintenance programmes that provide more and better psychosocial services have a higher effectiveness at reducing illicit drug use and retaining people in treatment for longer;
- contingent reinforcement is an effective method to reduce illicit drug use and promote client use of other services;
- treating opiate dependence with methadone or buprenorphine in a primary care setting is feasible and effective;
- less-than-daily dosing regimens with multiples of the daily dose of buprenorphine are effective and preferred by clients;
- prescribing maintenance naltrexone following detoxification can be effective at maintaining abstinence from opiates, reducing illicit opiate use and retaining people in treatment;
- results need to be interpreted with caution as they depend almost exclusively on studies conducted outwith the U.K.

Community Detoxification

The literature on community detoxification contained a substantial number of RCTs comparing different α adrenergic agonists, comparing opiates with α adrenergic agonists or various models of opiate-based detoxification. The key findings were:

- a wide range of different models of community detoxification have been studied;
- between 19% and 83% of participants returned to opiate use before the end of the programme;
- alpha adrenergic agonists are reasonably effective at relieving opiate withdrawal symptoms and, thus, improve outcomes;
- lofexidine is slightly more effective at reducing opiate withdrawal symptoms and, importantly, has considerably less adverse effects on blood pressure than clonidine;
- buprenorphine could have an important role in detoxification but further U.K. based studies are required;
- the role of methadone appears to be limited in detoxification as it was associated with particularly high drop-out rates;
- Reinforcement based intensive treatment is associated with longer retention in treatment and higher rates of abstinence.

Residential Rehabilitation

There was a small literature concerning the effectiveness of residential rehabilitation programmes. From the evidence available, the key findings were:

- residential rehabilitation is effective in terms of reduction in illicit opiate use, employment status, risk behaviours, and crime rates;

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- retention in and completion of treatment are more important than length of treatment in influencing outcomes;
- residential rehabilitation programmes that provide more health and treatment services and encourage client participation are more effective at retaining people in treatment.

Economic Evaluation

There were few economic evaluations that evaluated the cost-effectiveness of treatment modalities for drug dependence. From the evidence available, the key findings were:

- the results of studies employing modelling approaches critically depend on the quality and validity of estimates of model parameters;
- cost assessment is generally restricted to costs of health care interventions and does not consider indirect costs such as travel costs;
- health benefits and benefits related to reduced criminal activity are rarely examined;
- cost-benefit studies of treatment show positive net (overall) benefits from intervention;
- there is no strong evidence to support the cost-effectiveness of any particular intervention.

Gaps in the Research Literature

There are a number of areas in which the evidence base on the effectiveness of treatment for opiate users is weak. It is recommended that further research should be undertaken to examine:

- the relative effectiveness of community maintenance with methadone and buprenorphine;
- the appropriate starting dose and most effective maintenance dose of methadone and buprenorphine;
- the effectiveness of buprenorphine at maintenance doses exceeding 8 mg per day;
- the optimal treatment length of community maintenance;
- the effectiveness of buprenorphine in short-term detoxification;
- the effectiveness and practical implications of supervised administration of buprenorphine;
- the effectiveness of dihydrocodeine in short-term detoxification;
- the effectiveness of psychosocial services accompanying maintenance or detoxification;
- the effectiveness of residential rehabilitation programmes using well designed methods;
- the long term outcomes for clients following discharge from community maintenance, community detoxification, or residential rehabilitation;

- the effectiveness of interventions closely simulating clinical practice to improve the transferability of the results to community settings;
- the cost effectiveness of all available treatment for opiate users.

Policy Recommendations

Overall, this review of the international research literature generated a number of key policy recommendations:

- more emphasis should be placed on psychosocial support in both community maintenance and detoxification;
- contingent reinforcement should be more widely used in community maintenance programmes;
- naltrexone prescribing to maintain abstinence following detoxification should be more widely utilised;
- buprenorphine use should be more widely considered for use with clients who have lower levels of opiate dependence.

Mini Glossary

Community Detoxification: A programme based on the elimination of the drug of dependence from the body. Programmes vary between 3 days and 180 days and often involve the short term use of other drugs to manage withdrawal symptoms.

Community Maintenance: A community based treatment which stabilises clients on a substitute drug for as long as it is necessary to help them avoid returning to previous patterns of drug use. A longer term aim can be to gradually reduce the quantity prescribed. A community maintenance programme generally consists of drug administration, and the provision of psychosocial treatment and motivational interventions.

Residential Rehabilitation: A programme to establish a state in which clients become drug-free and physically, psychologically, and socially capable of coping with situations encountered. Residential rehabilitation generally involves communal living with other drug misusers in recovery and can include group and individual relapse prevention counselling, individual key working, improving skills for daily living, training and vocational experience, housing and resettlement services, and aftercare support.