







Prescribing heroin: what is the evidence?

Until recently, the UK was the only country in the world that allowed doctors to prescribe heroin for the treatment of opiate dependence. The Government wants heroin prescribing to increase and to be made available to all those who have a clinical need for it. This report, by Gerry Stimson and Nicky Metrebian from the Centre for Research on Drugs and Health Behaviour at Imperial College, looks at the reasons for international interest in prescribing heroin. It critically examines the research, clinical, political and practical challenges to expanding heroin prescribing in the UK. The authors found that:

-  The UK is one of the few countries where heroin can be prescribed for the treatment of opiate dependence.
-  Heroin has been prescribed in the UK since the 1920s. However, heroin prescribing is rare, few doctors do it, and many of them prescribe it reluctantly.
-  Methadone is the most common treatment for opiate dependence in the UK but not all opiate dependent people benefit from it, hence the interest in prescribing heroin.
-  Large-scale trials conducted in Switzerland and the Netherlands with people with long-term heroin dependency have provided evidence that prescribing heroin can lead to health and social gains.
-  There is a dearth of UK research evidence on the effectiveness of prescribing heroin. In particular, it is unclear who might benefit most from this type of treatment, and in what circumstances.
-  The authors conclude that any expansion of heroin prescribing in the UK needs a clear strategy for doing so, and a robust evaluation of its effectiveness. New guidance states that the prescribing of injectable opioid drugs may be beneficial for a minority of heroin misusers, and gives guarded endorsement of this practice. However, the guidance is constrained by the lack of good UK research evidence and in itself is unlikely to encourage more doctors to prescribe heroin.

Introduction

Heroin dependence is a major public health problem in the UK, and also has high social and criminal costs. Some countries see providing drug users with a medical prescription for pharmaceutical heroin (diamorphine) as a way of solving the 'heroin problem', with potential benefits to individual addicts and to society.

Prescribing heroin to treat opiate dependence may benefit individuals and/or society, but may also pose risks. The benefits may include:

- attracting people who are not attracted by other treatments (such as methadone), and retaining them in treatment for longer;
- helping people to stop or reduce their illicit heroin use, thereby undercutting the illicit market and ensuring that people dependent on heroin can use a drug of known quality and strength;
- reducing the likelihood of individuals suffering health problems (such as overdose), or using unsafe injecting practices that can lead to transmission of HIV and hepatitis B and C;
- reducing acquisitive crime to support drug habits, resulting in lower criminal justice and prison costs;
- providing a stepping stone to a gradual change from heroin use to methadone, and from injecting to oral use.

The risks may include:

- prolonging the time that heroin users are drug dependent and injecting by removing the motivation to stop using or injecting drugs. This may lead to an accumulating population of patients receiving prescriptions for heroin and prevent others from getting treatment;
- adverse health consequences as a result of continued heroin injecting, including risk of overdose, infections, abscesses and blood-borne viruses;
- heroin users presenting for treatment coming to expect heroin, thus making other treatments less attractive;
- the potential for prescribed heroin being diverted into the illicit market.

Furthermore, those who are cautious about prescribing heroin suggest that:

- it is better to use treatments of known effectiveness (such as oral methadone);

- pharmaceutical heroin is more expensive than methadone: prescribing it for addicts is not an equitable use of society's finite resources for health spending; furthermore, more people can be treated by other methods, such as methadone, for the same cost.

Heroin is currently prescribed in the treatment of opiate dependence in only a few countries. It has been prescribed in the UK since the 1920s. The reasons for doing so have changed over the years, reflecting different historical contexts and changing perceptions. It was originally adopted to help addicts to lead normal lives. More recently, the UK Government has proposed limited expansion of heroin prescribing because of its potential impact on reducing crime as well as in improving the health of heroin users.

Heroin use in the UK

The proportion of the UK population taking illicit heroin is small. In 2000, the British Crime Survey found that 2 per cent of men and 1 per cent of women reported trying heroin at some time (*Drug misuse declared in 2000*, Home Office Research Study 224, 2001). Most people who try heroin do not go on to become regular users. However, some become 'problematic' or 'dependent' heroin users. The total number of problematic heroin users in the UK is thought to be around 200,000, but such estimates are acknowledged to be imprecise. Various indicators suggest that the number of heroin users has increased.

Heroin can affect users' psychological and physical health and social functioning. Individuals' drug use can also have a harmful impact on other people, their family, their community or society. Not all heroin users suffer problems or suffer them to the same degree. The health consequences of heroin use depend on how the drug is used, including:

- the route of administration (injecting heroin being riskier than smoking it);
- whether it is taken alone or with other drugs (such as cocaine, tranquillisers or alcohol);
- the level of purity and dose;
- the user's characteristics, including pre- or co-existing health, social and economic circumstances.

Harm appears to be greater when heroin and other drug use is associated with social deprivation and poverty.

Current approaches to heroin problems in the UK

The UK has a wide range of services aimed at reducing or ameliorating drug problems. The current pattern of provision is complex and patchy, reflecting uneven growth and different care philosophies. The precise number of people in treatment for their drug problems is not known. Treatments often include a mixture of interventions – for example, methadone maintenance is usually accompanied by counselling. Treatments are delivered in a variety of settings, such as NHS drug dependency clinics, private clinics, general practice and residential rehabilitation centres.

Heroin dependence is a chronically relapsing condition which affects multiple dimensions such as physical, psychological and social well-being. Abstinence is therefore difficult and often unachievable for many drug users, at least in the short to medium term. Prescribing a legal substitute drug is designed to help to stabilise individuals and reduce their reliance on illicit drugs.

Methadone

Many doctors consider methadone to be the best substitute drug for opiate-dependent drug users because it is easy to administer (usually orally) and long acting (needs to be taken only once a day). Evidence suggests that oral methadone substitution treatment can:

- help to reduce the consumption of illicit drugs;
- improve the health of drug users;
- help them to avoid the risks of overdose and infection;
- improve social skills and functioning;
- reduce crime.

There is no central UK record, but a recent estimate suggests that there are probably more than 40,000 problem heroin users in methadone treatment. However, not all heroin users want methadone treatment.

Heroin prescribing

Any medical practitioner can prescribe heroin in the treatment of medical conditions, but doctors need a licence from the Home Office to prescribe it for treating addiction. The UK has relatively few restrictions and regulations for prescribing heroin to addicts. Until recently, there has been little guidance for doctors and no agreed protocols.

There is no central record of the numbers of doctors prescribing heroin, or of the numbers of

heroin users receiving prescriptions. A survey in 2000 found 70 doctors licensed to prescribe heroin, 46 of whom were currently prescribing it to 448 patients (Metrebian N et al, *Survey of doctors prescribing diamorphine (heroin) to opiate-dependent drug users in the UK*, *Addiction*, 97, 1155-1161 (2002)).

The 2000 survey found that methadone was the main drug prescribed by most of the doctors; only a small number of patients were prescribed heroin. The geographic distribution of heroin prescribers was very uneven. The majority were in London (9), the South East (9), and North West England (7). There were only three in Wales and none in Northern Ireland and Scotland. The level of heroin prescribing was determined by the history of the service, prescribing doctors' personal preferences, and local NHS trust policy. Nearly half of the doctors (21 of the 46) had not initiated the prescription for heroin, but had 'inherited' patients from a previous physician. Most of the doctors prescribed heroin in ampoules for injection. Some prescribed it as tablets, powder, heroin-impregnated cigarettes or in a solution.

The effectiveness of prescribing heroin

The evidence base is relatively weak, with only a few studies in the UK and two large-scale trials in the Netherlands and Switzerland. These studies have mainly been based on long-term heroin injectors and smokers for whom other treatments have failed.

Evidence from these studies suggests that: prescribing heroin is feasible in specialist clinical settings; it succeeds in retaining people in treatment; and there are health and social gains. Patients improve in most areas – their physical and mental health are noticeably better, illicit drug use and crime are reduced, and employment increases. However, illicit drug use and crime are not eliminated.

Most of the studies have identified benefits to individuals, but there are no data on community impact, such as the overall effect on crime and drug scenes. Nor are there any data on who would benefit most from this treatment, and no information on whether the availability of heroin prescribing attracts more people into treatment. It costs more to prescribe heroin than methadone, but it may be cost beneficial. However, it is unclear whether the benefits of prescribing heroin outweigh the additional costs when compared with prescribing methadone.

A cautious assessment of the evidence suggests that heroin is potentially an effective treatment for some patients. The Government's interest in expanding the provision of heroin prescribing provides the opportunity to do this. Any such expansion would

need to be monitored and properly evaluated. In the past, many opportunities to conduct research on the effectiveness of prescribing heroin in the UK have been lost. It would be unfortunate if this new chance to carry out some definitive work were also lost.

Conclusion – the challenges

The *Updated drug strategy* (Home Office, 2002) aims to improve access to prescribed heroin. It proposes that "all those with a clinical need for heroin prescribing will have access to it under medical provision, safeguarding against the risk of seepage into the wider community". The strategy acknowledges current inconsistency in providing this treatment, and pledges to spend money on it.

The authors conclude that while the Government's willingness to consider prescribing heroin is welcome, a major stumbling block is the lack of evidence of what might constitute 'clinical need'. It appears that doctors have one goal for treatment – drug users' health and eventual freedom from addiction – while policy-makers prioritise the needs of society as a whole (hence their interest in providing heroin in order to reduce crime). To persuade doctors to prescribe heroin, policy-makers need to show good evidence for its clinical efficacy. But the dearth of research in this field means that the questions of who might benefit, and in what circumstances, remain unanswered. Without this evidence, doctors may remain reluctant to prescribe heroin.

Unless there is a clear strategy for increasing the provision of heroin prescribing across the UK to ensure that all eligible drug users have access to this treatment, the inconsistent and haphazard nature of prescribing will continue. If prescribed heroin is to be made available to all those who require it, and is to play a role in how drug problems are treated, any expansion needs to be done in a systematic manner, and subjected to scrutiny. There can be no benefit from expanding the provision unless it is monitored and evaluated. Answers are still needed to the questions of who benefits, in what way, at what cost, and whether these benefits exceed those of standard substitute treatment. One priority could be a multi-centre randomised controlled trial comparing heroin against standard treatment.

In May 2003, the National Treatment Agency for Substance Misuse published *Injectable heroin (and injectable methadone): Potential roles in drug treatment*. This guidance states that prescribing injectable opioid drugs may be beneficial for a minority of heroin misusers who do not respond to optimised oral

methadone treatment, and gives guarded endorsement to the practice.

Guidance is necessary, but is insufficient on its own. Constrained as it is by the current lack of a good UK evidence base, guidance alone is unlikely to encourage more doctors to prescribe heroin. Implementing the *Updated drug strategy* will require clear commitment from the Home Office, the National Treatment Agency, the Department of Health, the medical profession, local drug action teams and commissioners. An increase in the provision of prescribed heroin and an evaluation of the part it can play in treating people with heroin problems is overdue. It would be a clear failure of vision if ten years ahead the same vague system remains, and there are still the same unanswered questions about the effectiveness of prescribing heroin.

About the project

In the report the authors - from the Centre for Research on Drugs and Health Behaviour, Imperial College, London – draw together evidence from their own studies of heroin prescribing in the UK and evidence from other countries.

How to get further information

The full report, **Prescribing heroin: What is the evidence?** by Gerry V. Stimson and Nicky Metrebian, is published by the Joseph Rowntree Foundation as part of the Drug and Alcohol series (ISBN 1 85935 082 8, price £13.95).