Should heroin be prescribed to heroin misusers?

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YES Recently, a public hearing of a Danish parliament sub-committee discussed whether heroin assisted maintenance treatment should be offered experimentally to reduce health and social harm related to use of heroin (www.tekno.dk/ordineret-heroin). This is just one in a series of similar—existing or proposed—programmes in Europe, North America, and Australia.¹ We believe that such treatment is appropriate for heroin misusers under certain circumstances.

Supporting evidence

Increasing heroin misuse in the United States in the early 1970s led to a public debate about prescribing heroin as a last resort form of opioid maintenance therapy for people with chronic heroin dependence. In 1973 Lorrin Koran advocated in the *New England Journal of Medicine* that “carefully designed clinical research on the safety and efficacy of heroin maintenance should be undertaken, particularly with addicts not helped in current treatments.”² Some 35 years later, three important research studies have been completed. In Switzerland, a small randomised trial³ and a study using natural cohort designs⁴ found heroin assisted maintenance treatment to be feasible and effective for a group of heroin misusers who were refractory to treatment, as characterised by long term heroin dependence; physical, psychological, or social deficits; and unsuccessful previous treatment.^{4–5} Effectiveness

was observed in treatment retention; somatic health outcomes such as epileptic episodes, abscesses, or cachexia; mental health outcomes such as affective or anxiety disorders; heroin and cocaine misuse; and criminal outcomes such as property offences or drug trafficking (on the basis of self report and objective measures).⁵

Large randomised controlled clinical trials in the Netherlands and Germany, which compared different modes of heroin assisted maintenance treatment with methadone main-

tenance treatment, obtained positive results on similar outcomes.^{6–7} Moreover, heroin assisted maintenance treatment was found to be cost beneficial in Switzerland⁸ and cost effective in the Netherlands compared with methadone maintenance treatment.⁹ Since these results were obtained, this treatment option has been extended beyond the trial periods, and heroin has been approved by the regulatory bodies for treating opioid dependence. In all three countries, the intake of medical heroin is supervised and occurs a maximum of three times a day, and patients recover from acute intoxication before leaving the treatment clinic. Notably, heroin has been a treatment option for heroin misusers in the United Kingdom for several decades, albeit on a relatively small scale and under different conditions—with lower average dosing and less supervised intake.¹⁰

Use of maintenance

The above summary makes the recent use of heroin assisted maintenance treatment look like a straightforward scientific success story, and not like a topic for debate in the *BMJ*. However, since the original heroin assisted maintenance treatment programme was proposed in Switzerland in the early 1990s, there has been scientific, and perhaps more importantly, larger public debate on the ethics, safety, and clinical value of prescribing heroin, and to a lesser degree, on maintenance treatment in general. Overall, maintenance with buprenorphine and, to a larger degree, methadone is more successful than treatment focusing on abstinence or using placebos.¹¹

Given the nature of opioid dependence as a chronic relapsing disease,¹² these results are not surprising.

Opioid maintenance treatment generally seems to be well justified for treating this disease. And if maintenance is generally justifiable as a form of treatment, why should heroin not be used as one such pharmacological agent? One reason that has been cited is safety, both for the patient¹³ and for the general public (for example, through diversion or the risk of trivialising the dangers of heroin, leading to an increase in use). Results from the Swiss studies, however, show that mortality among patients in heroin assisted maintenance programmes is low, and lower than for

patients in other maintenance programmes.¹⁴ In addition, the wider safety concerns could not be empirically confirmed in Switzerland or the Netherlands.¹⁵ Finally, the incidence of heroin dependence has decreased greatly in Switzerland since the start of the trials, and currently heroin has a more negative image than it did 15 years ago.¹⁶

Overall, we see no convincing reason why heroin assisted maintenance treatment should not be part of a comprehensive treatment system for opioid dependence. However, the development of an overall integrated treatment system is crucial. All studies to date have been conducted in samples of refractory addicts with severely compromised health and several previous failed attempts of methadone maintenance treatment. Our current knowledge about the effectiveness of heroin assisted maintenance treatment is restricted to these groups and to the context of countries where there is already an established and effective comprehensive system for treating opioid dependence. Although we currently do not have the necessary empirical evidence for establishing heroin assisted maintenance treatment in other circumstances, addition of heroin assisted maintenance treatment would be likely to improve the overall treatment system, especially with respect to so called treatment resistant and refractory opioid addicts.

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Mortality among patients in heroin assisted maintenance programmes is low

Some heroin addicts are very difficult to treat. **Jürgen Rehm** and **Benedikt Fischer** believe that maintenance with heroin is the way forward for this group, but **Neil McKeganey** argues that it is treating the effects of misuse not the addiction

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NO Prescribing heroin to heroin addicts is a strategy beloved by top police officers¹ and successive home secretaries.² It is a strategy, though, borne of utter frustration at our seeming inability to tackle an escalating drug problem. If you cannot stop addicts committing crimes to fund their drug habit then, so the argument goes, the next best thing is to provide them with the drugs that are the reason they are committing the crimes in the first place. The logic may seem faultless, but at the back of your mind is the nagging question, “Is it treatment or is it social problem prescribing?”

The evidence in relation to heroin prescribing is far from conclusive. On the positive side Nordt and Stohler have suggested that heroin prescribing led to a large reduction in incidence of heroin addiction in Switzerland, although the authors also point out that such prescribing may have reduced individuals’ inclinations to cease their heroin use.³ A London study found no health benefits associated with heroin prescribing,⁴ whereas various Dutch and Swiss heroin trials have identified a range of benefits including improved social functioning and psychological and physical health.^{5 6} What

is often quite difficult to identify from these studies is the degree to which the improved outcomes are the result of the heroin prescribed or other elements of the therapeutic programme provided. The cost of treating an addict with heroin is estimated to be three to four times that of treating an addict with methadone.⁷

Risks of prescribing

In the face of the additional costs and inconclusive evidence, many clinicians are wary of prescribing heroin. Their anxieties are understandable, given the high profile cases of doctors who have prescribed heroin to addicts and then subsequently found themselves facing a General Medical Council inquiry into their prescribing practices.⁸

At a clinical level prescribing heroin to heroin addicts is a risky strategy. Once you start, it is difficult not to feel that you have ceded authority for your prescribing to your patient. What, for example, do you say to patients who threaten to resume their previous life of crime if you reduce their heroin prescription? What do you say to the cocaine addict who asks why he cannot have cocaine provided in the same way as the heroin addict? Opening up heroin prescribing to addicts could lead to massive pressure on doctors to prescribe increasing amounts of the drug.

It was in part as a result of that pressure that the Interdepartmental Committee on Drug Addiction advised the UK government in 1965 that only appropriately certified doctors should prescribe heroin to addicts. The committee’s decision was influenced by the case of Lady Frankau, a noted London psychiatrist who in 1962 prescribed more than 600 000 heroin tablets to her addict patients.⁹

What are we treating?

Prescribing heroin to heroin addicts, however, makes sense only if your primary concern is to treat not their drug dependency but the consequences of their drug use. You may want to reduce their use of street drugs, the risks to health from HIV or hepatitis C virus, the risks of overdose, or their criminality. With all of these aims in mind you may conclude that it makes sense to provide

addicts with a prescription for the drug that they have become dependent on. And yet the reason they are committing those crimes, and taking such enormous and persistent risks with their health, is because the drugs have become more important than life itself—that is the nature of drug addiction. And that is the problem that drug treatment services need to tackle.

Research has shown that with the right services in place it is possible to do more than simply stabilise addicts’ continued

drug use through the prescribing route. For example, the Australian treatment outcome study, which followed up 429 heroin users recruited

from a random sample of drug treatment agencies 36 months after starting treatment, found that 40% of drug users had been abstinent for the preceding 12 months and 25% had been abstinent for the preceding 24 months.¹⁰ In a similar Scottish study of 695 addicts, re-interviewed 33 months after they had started treatment for drug misuse, 29.4% of those who had been provided with residential rehabilitation had been abstinent for at least 90 days before being interviewed compared with only 3.4% of those receiving methadone maintenance.¹¹ All of the residential rehabilitation services included in this study followed an abstinence based programme.

But do addicts coming forward for treatment actually want heroin to be prescribed to them? A study of over 1033 drug users starting treatment in 2001 asked participants what they wanted to get from the drug treatment services they were contacting.¹² Most of those questioned said that they wanted the services to help them become drug free. Health services need to ensure that they are supporting addicts’ attempts to become drug free, and they need to be extremely cautious about any extension of a policy that could be seen as a route to maintaining rather than reducing an individual’s drug dependency.

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