

Methadone works

OPIATE DEPENDENCY is a dangerous business. All the evidence indicates that if you have an opiate habit, it is best not to tell your insurance company. Home Office figures for 1987 to 1993 show that 3.2 per cent of addicts died after five years on the Addict Index.¹ It is clear that this death rate greatly exceeds expectations for this age group. Figures vary, but a recent Scandinavian study found an excess mortality of 18.3 times the expected rate.² These dramatic figures indicate a health risk worse than many forms of cancer. And yet there is reason to believe that mortality in the future could be much higher – the statistics do not take account of the long-term effects of HIV or hepatitis C, because the majority of people who have contracted these infections through drug use are not yet dead.

When we do the rounds in Manchester trying to get GPs to take part in our shared care work, it is the mortality figures which usually persuade them that it is right for health services to get involved in helping drug users. Many GPs, like many members of the public, do not see crime or even the spread of disease as a reason for prescribing opiates to drug users. However, they do understand reducing mortality as a key part of their job and so can be persuaded to participate in our treatment protocols.

Methadone saves lives

The only proven way of reducing mortality is methadone maintenance treatment. A number of studies demonstrate that methadone substantially reduces death rate. In Sweden treated subjects had a death rate of 1.4 per cent, compared to 3.3 per cent in those untreated.³ This study is particularly interesting, because methadone treatment slots were extremely limited in Sweden at the time, and users had to spend years on waiting lists before being accepted. Often they were ill by the time of treatment, which explains the relatively high death rate in the treatment group. Yet those still on the waiting list continued to die at a much faster rate. There are also studies which show lower HIV seropositivity among those receiving methadone.^{4,5} This is bound to have a significant effect on future mortality. The greater availability of methadone may also have played a part in the reduction of

Methadone's champions have been chewing at the bit ever since Russell Newcombe's controversial claim that the drug is more dangerous than heroin. Here, not only is the argument questioned, but also the use to which it could be put

by

Tom Carnwath

*Consultant Psychiatrist,
Trafford, Manchester*

S U M M A R Y

In the first *Druglink* of 1996, an article claimed that methadone had a death rate four times that of heroin. If this is true, the drug field's response to heroin addiction urgently needs to be reconsidered. However, a brief analysis of the figures (both national and local) shows that the death rates are much more similar. The worry is that the argument against methadone may be used by some people to justify an argument against substitute prescribing all together.

the death rate in UK registered addicts, from 7.5 per cent after five years between 1967 and 1979 to the figure quoted at the top of this article.⁶

Despite this relative success, a number of articles, particularly from North West England, have recently questioning the safety of methadone. Alan Parry, from Liverpool, has claimed that methadone treatment is a "public health disaster".⁷ Russell Newcombe, also from Liverpool, has argued in these very pages that methadone is more dangerous than heroin, on account of the higher number of overdoses in which methadone is implicated.⁸ If this contention is true, it must be taken extremely seriously. Evidence supporting Newcombe's argument would encourage trials of alternatives to methadone, to see whether the same overall reduction in mortality could be combined with a reduced number of deaths by overdose.

However, it must first be decided whether this argument is correct, and whether methadone is really more dangerous than heroin. The claim is based on two observations: firstly, that the number of opiate-related deaths is steadily increasing, and secondly, that the proportion of deaths involving methadone is also increasing. These findings are not in dispute, and are confirmed by official figures. Nonetheless, they do not prove that methadone is more dangerous than heroin. Other explanations are equally plausible, and are more consistent with the facts.

The reason why the number of overdoses is rising is simply that the number of opiate users is rising. As stated earlier, opiate use is associated with a substantial risk of overdose. There has been a steady increase in opiate use over the last twenty years, and therefore an increase in overdoses is only to be expected. The important figure to note here is the *proportion* of users who overdose, not the *absolute number*.

Death rates falling

Arriving at a suitable estimate for that proportion is quite difficult, as the available statistics are rather piecemeal. Newcombe used hard data on all drug deaths from the Office of Population Censuses and Surveys, but could only guess at the number of opiate users by applying an arbitrary multiplier to the Addict

Index. I am not a statistician, but clearly this is unsatisfactory. However, the present statistics leave us with few alternatives. Therefore, I have chosen to stick to the devil we know and use the Addict Index alone.¹ While it can provide little guide to absolute numbers, one can assume that it can give us a truer idea of the proportion of users who overdose.

The Index shows that overdose deaths amongst registered addicts increased from 138 in 1987 to 262 in 1993. In the same period, the number of notified addicts increased from 10,716 to 27,976. In other words, the proportion of registered users who died from overdose fell from 1.3 per cent to 0.9 per cent. Despite the great expansion in methadone prescription in this time, despite a huge increase in suicide rates (a 75 per cent rise in suicides amongst young men under 25⁹) it must be encouraging that the rate of overdose among opiate users has nonetheless fallen.

Newcombe also points to an increased frequency of methadone overdoses relative to heroin overdoses. Home Office figures show that in 1987, there were 27 methadone deaths compared to 54 heroin deaths. In 1993, there were 105 methadone deaths and 88 heroin deaths. At first sight, this quadrupling of methadone deaths seems to prove that methadone is increasingly dangerous. But the number of addicts notified for methadone has increased fivefold, while the number notified for heroin has 'only' doubled. This means that – *relatively* – the death rate of methadone users has actually dropped by a quarter, from 1.2 per cent to 0.9 per cent (in other words, roughly in

line with the overall death rate). The heroin rate – although at a lower level – does not show such a promising fall, from 0.6 to 0.5 per cent.

What makes the fall in the methadone death rate even more promising is that the number of people who are prescribed methadone has doubled, and yet the death rate has not risen at all. If methadone was significantly more dangerous than heroin, one would expect this substantial rise in availability to have *some* impact on overdoses. Clearly, this has not been the case.

Lies and damned lies

Unfortunately, when dealing with statistics, one is also all too readily faced with 'lies and damned lies' too. Perhaps a better idea of the complexities surrounding drug-related deaths can be obtained by trawling through coroners' reports.

As someone who prescribes over a 1000 gallons of methadone a year, my worries about potential overdose led me three years ago to look at our local coroner's records for the years between 1991 and 1993. I found 34 drug-related deaths in a population of about one million.¹⁰ I may well have missed some, since the coroner's recording system up here is somewhat Dickensian, but I tried to eliminate any gremlins by assigning likely causes of death on *my* reading of the evidence available from the inquests rather than on the coroner's report alone. (See table).

Opiates were implicated in most deaths, though few were caused by opiates alone. The majority were caused by large doses of alcohol/benzodiazepines in combination with opiates. Misjudged tolerance may have played a part in several deaths, because the victims had recently been released from prison. Two experienced users died of unexplained reactions to heroin, and three deaths were recorded of people using opiates for the first time at parties. There were no deaths of children, although these have been reported recently in Liverpool.

It was not clear from this unscientific survey whether methadone was more dangerous than heroin (it was certainly involved in fewer deaths, though all the suicides had taken methadone), but what is clear is that drug deaths are invariably 'polydrug' deaths and that opiate users urgently need to be made aware of the dangers of respiratory depression due to combined drug use.

Coming full circle

The evidence shows that methadone maintenance reduces mortality, and is not associated with an increasing death rate

DRUG-RELATED DEATHS IN SOUTH MANCHESTER 1991-1993

<i>"Overindulgence"</i>	
Alcohol + Heroin	6
Alcohol + Methadone	2
Alcohol + Methadone + Heroin	2
Benzos + Heroin	3
Benzos + Methadone	1
<i>"Lost tolerance"</i>	
Heroin	4
<i>Inexperienced user</i>	
Heroin	1
Methadone	2
<i>Opiate reaction</i>	
Heroin	2
<i>Suicide</i>	
Methadone + Alcohol + Antidepressant	1
Methadone + Alcohol + Chlorpromazine	1
Methadone + Alcohol + Paracetamol + Benzo	1
Methadone + Heroin + Lithium + Antidepressant	1
<i>Possible suicide</i>	
Alcohol + Heroin	3
Alcohol + Methadone	1
Benzo + Methadone + Antidepressant	1
<i>Ecstasy-induced hyperthermia</i>	
	1
<i>Temazepam gelthix arterial occlusion</i>	
	1

by overdose. The problem about the Parry/Newcombe argument is not only that it is wrong; it may also be interpreted by some as an attack on substitute prescribing *per se*, to the disadvantage of many users presently in treatment. From speaking to Newcombe, it's clear that he's not against substitute prescribing (in fact, he believes that heroin should be prescribed more frequently) and is not in favour of tighter 'American' prescribing regimes, with legal restrictions on dosage and take-home privileges.

However, there are still many people who disapprove of substitute prescribing altogether, who are likely to be encouraged by the 'methadone is more dangerous than heroin' argument. They may also see it as an attack on liberal prescribing regimes and take-home medication, and as evidence in favour of a more structured system. Personally, I think that methadone is certainly a dangerous drug to take home, but then so are a large number of other drugs prescribed by doctors.

So, should heroin be prescribed in place of methadone? The overdose rate by itself does not support such a change and other arguments for prescribing heroin founder on a dearth of data. Ultimately, both methadone and heroin are potentially lethal substances. Recent experience in Glasgow demonstrates the dangers of heroin,¹¹ whereas a number of recent deaths in Northumberland underline the dangers of methadone. If you are looking for a 'safe' opiate to prescribe, neither heroin nor methadone is the answer – provided that problems of intravenous abuse can be overcome, it looks as if the best bet is buprenorphine. ○

1. Home Office. *Statistics of Drug Addicts notified to the Home Office, United Kingdom, 1994*. London: Government Statistical Office, 1995.

2. Engstrom A. *et al.* "Mortality in patients with substance abuse: a follow up in Stockholm County, 1973-1984." *International Journal of the Addictions* 1991, 26, p.91-106.

3. Gronbladh L. *et al.* "Mortality in heroin addicts: impact of methadone treatment." *Acta Psychiatrica Scandinavica*, 1990, 82, p.223-227.

4. Novick D.M. *et al.* "Absence of antibody to HIV in long term socially rehabilitated methadone maintenance patients." *Archives of Internal Medicine*, 1990, 150, p.97-99.

5. Williams A.B. *et al.* "Methadone maintenance treatment and HIV Type 1 seroconversion among injecting drug users." *AIDS Care*, 1992, 4, p.35-41.

6. Ghodse H.A. *et al.* "Death of drug addicts in the United Kingdom 1967-81." *British Medical Journal*, 1985, 29, p.425-428.

7. Parry A. *UK Methadone Programme: a Public Health Disaster?* Liverpool: Atlantic Project, 1995.

8. Newcombe R. "Live and let die: is methadone more likely to kill you than heroin?" *Druglink*: 1996, 11(1), p.9-12.

9. Department of Health. *Health of the Nation Key Area Handbook: Mental Illness*. London: 1994, DoH.

10. Carnwath T.C.M. Deaths among drug users. Paper presented to Northern Doctors in Drug Dependence, 1993 meeting.

11. Hammersley R. *et al.* "Drugs associated with drug-related deaths in Edinburgh and Glasgow, November 1990 to October 1992." *Addiction*: 1995, 90, p.959-965.