

## Methadone maintenance treatment

### Britain has been overcommitted to psychological theories of drug dependence

EDITOR,—Michael Farrell and colleagues' review of maintenance treatment with methadone fails to explain why there is only one British evaluation of such treatment or why there is a "virtual absence of structure and regulation in Britain."<sup>1</sup> I suggest that the lack of research was caused by the dominance of a few individuals and their commitment to psychological, usually behavioural, models of drug dependence.<sup>2</sup> As they rejected maintenance as a valid treatment for dependence,<sup>3,4</sup> the directors of British research into drug dependence failed to evaluate it. Rather, they spent nearly 30 years unsuccessfully searching for a cure for dependence on heroin.

The dominance of psychological theories in education about drug dependence and in training, in my opinion, influenced staff of the drug dependence units to refuse to provide maintenance treatment. This meant that people who were dependent on drugs had to go outside the specialist system for maintenance treatment. I consider that the rejection of the public health model of treatment of dependence was also associated with a failure to respond to the threat of HIV and AIDS. Not one of the authors of the initial reports, in 1985-6, of HIV (human T cell leukaemia/lymphoma virus III) infection in British people who were dependent on drugs worked in drug dependence, and in 1985 the Royal College of Psychiatrists failed even to mention AIDS in a lengthy official report on treatment of misuse of drugs.<sup>5</sup>

Farrell and colleagues concluded that "the challenge for researchers and planners is to define clearly the most cost effective method to deliver long term methadone treatment."<sup>3</sup> I argue that such research will not be done, nor its findings implemented, until British researchers, managers, and clinicians abandon psychological theories and return to an eclectic, public health model of drug dependence.

JOHN CAPLEHORN  
Research officer

Department of Public Health,  
Faculty of Medicine,  
A27 University of Sydney,  
Sydney 2006,  
Australia

1 Farrell M, Ward J, Mattick R, Hall W, Stimson GV, des Jarlais D, et al. Methadone maintenance treatment in opiate dependence: a review. *BMJ* 1994;309:997-1001. (15 October.)

### Advice to authors

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- 2 Edwards G. The Addiction Research Unit of the Institute of Psychiatry, University of London—1. The work of the unit's drug and alcohol section, and general issues. *Br J Addict* 1989;84:715-25.
- 3 Edwards G. The British approach to the treatment of heroin addiction. *Lancet* 1969;i:768-72.
- 4 Connell PH. Drug dependence in Great Britain: a challenge to the practice of medicine. In: Steinberg H, ed. *Scientific basis of drug dependence*. London: Churchill, 1969:291-9.
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### Methadone treatment can reduce mortality

EDITOR,—In their review Michael Farrell and colleagues emphasise the importance of methadone maintenance in the treatment of heroin dependence.<sup>1</sup> They omit, however, an important factor in the evaluation of treatment—namely, mortality. Heroin users have a high mortality compared with the normal population. This increased mortality can be lowered by methadone treatment. In untreated Swedish heroin users Grönbladh *et al* noted a mortality 63 times that of the normal population.<sup>2</sup> During methadone treatment the mortality fell to only eight times that of the normal population. In our methadone project in Göttingen, Germany, we obtained similar results: heroin users had an extremely high mortality when injecting regularly (69 times that of the normal population (table)). In contrast, mortality was much lower when they received methadone. Only three patients died, two of AIDS and one of myocardial infarction.

The decrease in mortality is due to methadone maintenance, since, in the Swedish project, the high mortality returned when the patients were involuntarily discharged from maintenance treatment and returned to injecting heroin: their mortality increased to 55 times that of the normal population. Thus, clearly, many early deaths due to use of heroin can be prevented by methadone treatment.

WOLFGANG POSER  
Associate professor

JOHN KOC  
Clinical fellow in psychiatry  
HANNELORE EHRENREICH  
Senior lecturer

Mehadone Project,  
Department of Psychiatry,  
University of Göttingen,  
D-37075 Göttingen,  
Germany

- 1 Farrell M, Ward J, Marrison R, Hall W, Stimson GV, des Jarlais D, Gossop M, Strang J. Methadone maintenance treatment in opiate dependence: a review. *BMJ* 1994;309:997-1001. (15 October.)
- 2 Grönbladh L, Ohlund LS, Gunne LM. Mortality in heroin addiction: impact of methadone treatment. *Acta Psychiatr Scand* 1990;82:223-7.
- 3 Gardner MJ, Gardner SB, Winter PD. *Confidence interval analysis*. London: BMJ Publishing Group, 1988.

*Standardised mortality ratio in injecting heroin users when injecting and when receiving methadone maintenance: preliminary data from Göttingen methadone project (in Germany methadone maintenance is restricted to injecting heroin users)*

	No	Years under observation	Observed deaths	Expected deaths*	Standardised mortality ratio (95% confidence interval)†
Heroin users when injecting	188	167	14	0.203	69.0 (38 to 116)
Patients receiving methadone	151	149	3	0.183	16.4 (3.4 to 47.9)

\*Calculated from appropriate tables of the "Statistisches Bundesamt" with consideration for year, age, and sex.  
†Confidence intervals calculated according to method of Gardner *et al.*

### Treatment should be tailored for each patient

EDITOR,—Michael Farrell and colleagues note that for successful maintenance treatment of people dependent on opiates high doses of methadone are needed, and they recommend a dose of 70-120 mg a day.<sup>1</sup> High doses are essential for people with chronic dependence, particularly long term injecting misusers, who may use more than one drug, but it is doubtful whether extended treatment with high doses is suitable for people who smoke heroin and who meet the criteria for substitute prescribing. When heroin is smoked or inhaled (rather than injected) the equivalent daily methadone dose can be reduced by roughly one third. In our experience with people who smoke heroin lower doses of methadone (30-60 mg/day) prevent withdrawal symptoms and relapse.

Tailoring treatment to suit the individual person is essential. Providing a suitable dosage schedule is difficult because the patient's reported drug use has to be balanced against a clinical assessment of his or her dependence. A rigid conversion system (illicit heroin versus pharmacologically pure methadone) is not possible because of the fluctuating purity of illicit heroin.

Many variables have been investigated to help assess the efficacy of maintenance treatment with methadone. The usual procedure entails analysis of urine for drugs of misuse. Although important for assessing use of non-prescribed drugs, analysis of urine sheds no light on compliance with methadone maintenance. At present most doctors or agencies who prescribe methadone do not monitor compliance. This is despite the fact that in Britain a substantial quantity of methadone is diverted to illegal sources, with a resultant increased risk of unsupervised or unauthorised consumption of methadone by people who have never used opiates.<sup>2,3</sup>

We believe that it is essential to know whether patients are taking all of their prescribed treatment, diverting a proportion of it, or supplementing the prescription. Scientific measurements are needed to test compliance; we have reported elsewhere that measurements of plasma methadone concentration meet this need.<sup>4</sup> In one study we compared consumption of methadone by patients on the site at Leeds Addiction Unit with that by patients obtaining their prescription from a pharmacy. Compliance was assessed by measuring the plasma methadone concentration under steady state conditions. Patients who consumed methadone on site were substantially more compliant than those who consumed it off the site. Those who consumed it off the site did so at times other than those indicated on the prescription or consumed several days' supply at one time. Patients from both groups supplemented their prescription with methadone obtained illicitly.<sup>5</sup>

As a result of our work on compliance we believe