2.1 Methadone treatment cost-effective life saver

Findings Three studies have shown that methadone maintenance curbs the elevated death rate associated with opiate dependence.

Study ❶ draws on research (all pre-AIDS) to estimate that such treatment costs £3600 for every year it prolongs the lives of clients. The estimate derives mainly from a Swedish study which compared the fate of opiate addicts in methadone treatment with those eligible but denied it. Other studies and assumptions yield different figures but all well within the USA's £30,500 per year criterion for cost-effective treatment. Many accepted medical interventions are much less cost-effective.

Studies ❷ and ❸ suggest the risk of death is greater among patients who drop out or are discharged for failure to comply with methadone programmes. Study ❷ found that over a year nearly 12% of the 77 patients who had dropped out or been discharged from a US programme died within 12 months; none were back in treatment at the time. Just 1% of retained patients died. Heroin overdose caused 6 of the 9 deaths among leavers but none among those retained in treatment. The authors tentatively suggest that deaths may have been avoided had discharged patients been allowed to remain in treatment. In study ❸ the annual death rate was 1% among patients in treatment at a Swedish programme but 4% among those discharged, compared to 2% among untreated opiate misusers.

In context Several studies have costed the benefits of treatment in terms of reduced crime and health costs. Few have considered the prolonged lives of the clients, though these may be valued more highly by the public than crime reduction. Accounting for prolonged lives could alter the relative cost-effectiveness of different treatments.

LINKS *NTORS* p. 16. *Nuggets* **1.4, 1.5, 2.2**

With numbers too small to statistically test a pre-prepared hypothesis, the authors of studies ❷ and ❸ instead tried to make sense of what they observed. The theory that premature departure was at least a partial cause of elevated death rates is supported by the fact that in study ❸ hospital admissions rose after discharge, but fell when patients resumed methadone after an enforced break. Adverse impacts on health and functioning have also been observed when whole programmes have been closed or curtailed. However, in both studies subjects were not randomly allocated to premature departure but selected or self-selected in 'real world' conditions; they *might* have died even if they had remained in treatment, and clients forced out might later have dropped out.

Practice implications 'Maximising retention saves lives' is the main message of these studies, one taken on board by the clinic in study ❷ which later relaxed its rules. Intrusive requirements such as supervised consumption of methadone and daily clinic visits are unpopular with clients and may lead to higher drop out. Local pharmacy dispensing, allowing drugs to be taken at home, self-regulated dosing, optional counselling, commitment to long-term maintenance and harm reduction, and enhanced services, all improve retention. However, some retention enhancements have costs as well as benefits. Relaxing restrictions intended to stop methadone leaking on to the illicit market may save the lives of some patients who would otherwise have left or been discharged, but may also increase deaths due to leakage. Policies which avoid making demands on patients potentially jeopardise therapeutic progress among more motivated clients and create management difficulties by enabling the less motivated to remain in treatment.

Main sources ❶ Barnett P.G. "The cost–effectiveness of methadone maintenance as a health care intervention." *Addiction*: 1999, 94(4), p. 479–488 ❷ Zanis D.A., *et al*. "One-year mortality rates following methadone treatment discharge." *Drug and Alcohol Dep.*: 1998, 52, p. 257–260 ❸ Stenbacka M., *et al*. "The Impact of methadone on consumption of inpatient care and mortality, with special reference to HIV status." *Subst. Use & Misuse*: 1998, 33(14), p. 2819–2834. Copies: for all apply ISDD.

Secondary sources Ward J., *et al*, *eds*. *Methadone maintenance treatment and other opioid replacement therapies*. Harwood Academic Publishers, 1998.

Contacts ❶ Paul Barnett, Center for Health Care Evaluation, 795 Willow Road, Menlo Park, CA 94025, USA, fax 00 1 415 617 2667, e-mail pbarnett@odd.stanford.edu ❷ David Zanis, Center for Studies of Addiction, University of Pennsylvania, Philadelphia, USA, e-mail Zanis@research.TRC.upenn.edu ❸ Marlene Stenbacka, Center for Dependence Disorders, Karolinska Institute, Box 6401, 11382 Stockholm, Sweden.