In the '90s the life expectancy of heroin users entering treatment in Barcelona increased by 21 years, seemingly largely due to the expansion of low threshold oral methadone maintenance. As elsewhere, protection against overdose was the main way methadone saved lives.

Barcelona's experience is particularly convincing because methadone maintenance expanded rapidly over this period, because the death rate among heroin users was unusually high, and because all heroin users starting any form of treatment between 1992 and 1997 were regularly recontacted by researchers and tracked via official records until the end of 1999, a rare consistency and depth of monitoring. This conjunction makes it possible to decide with some confidence whether the figures support a causal relationship between treatment and deaths.

The study recruited over 5000 heroin users of whom half entered methadone maintenance while the rest started drug-free treatments. Over the follow-up period, 349 died due to overdose. Over 8 in 10 had never been on methadone; just 11 died while on methadone. From a yearly overdose death rate of 30 per 1000 patients in 1992, the rate fell to just 6 in 1999. When relevant factors were simultaneously taken into account, *not* being on methadone at the time was the one most strongly linked to dying from overdose. Without methadone, and even though all the study's subjects had entered specialist treatment of some kind, heroin users were seven times more likely to die.

Whilst maintaining medical, psychiatric, social and vocational assistance, from 1994 the city's clinics adopted a low threshold philosophy, abandoning limits on dose levels (which averaged 71mg) or duration, not penalising patients who continued to use illicit drugs, and commonly

at home. Partly because this and the rest of the treatment system netted such a high proportion of the city's heroin users, it seems unlikely that lives saved among methadone

patients were countered by an increase among non-patients to whom methadone was diverted.

• Brugal M.T. *et al.* "Evaluating the impact of methadone maintenance programmes on mortality due to overdose and AIDS in a cohort of heroin users in Spain." *Addiction*: 2005, 100, p. 981–989

(for 60% of doses) allowing patients to take their medication away for consumption at home. Partly, because this and the root of the treatment system potted such as