3.1 Careful induction prevents overdose deaths among methadone patients

Findings Substituting legally prescribed methadone for heroin saves lives but entails overdose risks for patients who continue illegal drug use, especially early in treatment.

By guaranteeing confidentiality to the doctors involved, study ❶ was able to audit shortcomings in the preceding two weeks which may have contributed to the 32 methadone-related deaths in Glasgow in 1995. Failure to examine for and/or to respond to continued illegal use of drugs was apparent in most of the 19 cases where the deceased was being prescribed methadone. Poor supervision of prescribing may have caused three deaths where the dose was excessive and six where the patient did not take the methadone as directed by the doctor.

LINKS *Nuggets* 2.1 2.3

The role of continuing illegal drug use was confirmed in study ❷ of the 238 deaths during methadone maintenance in New South Wales between 1990 and 1995. 105 deaths were recorded as "drug-related" – presumably mainly overdoses. All but seven involved drugs in combination with methadone (generally depressants such as benzodiazepines, opiates and alcohol) and 4 in 10 occurred in the first week of treatment. Excessive starting doses of methadone and over-rapid increases might have contributed to many of the deaths.

In context The danger of using 'on top' of methadone has been confirmed by pathology-based assessments implicating other drugs in three-quarters of methadone-related deaths in Strathclyde. Alcohol plays a prominent role. However, in both Australia and Glasgow the potential for methadone alone to cause deaths may have been obscured because the drug is usually taken under supervision in the clinic. In England and Wales, where supervised consumption is less dominant, in the first half of 1998 a sample of coroners reported that 45 methadone patients had died from methadone with other drugs, but another 24 from methadone alone.

Study ❷ confirms the elevated risk of overdose fatality in the first weeks of methadone treatment. Even low doses could accumulate dangerously in the first few days because new users take longer to clear the drug from their bodies. Dangers are exacerbated because tolerance to methadone's depressive effect on breathing (main cause of death) develops slower than tolerance to its psychoactive effects.

In both studies some of the deaths may have been suicide – among drug users, hard to distinguish from accidental overdose. Nine out of 13 methadone patients in Scotland who had survived a methadone overdose said it was deliberate. Many drug treatment clients in Britain contemplate suicide and an increasing proportion use their prescribed methadone to carry out the act.

While the focus here is on deaths among methadone patients, study ❶ also highlighted the danger of methadone diverted on to the illicit market, a factor in 13 of the 32 deaths and in most methadone overdose fatalities in England and Wales.

Practice implications For UK guidelines ◤ *Secondary sources*. The balance between preventing methadone overdose and leakage on to the illicit market, while not impeding access to treatment, is particularly delicate in the first weeks when failure to adjust doses or to spot supplementary drug use can lead to deaths. These will be minimised if prescribers carefully examine for drug use by physical means (urinalysis, recent track marks) and respond to admissions of 'topping up' in ways which encourage openness. Alcohol is at least as dangerous as other depressant drugs. Caution in prescribing initially low doses should be balanced by frequent monitoring (within hours and then daily for the first few days) of the patient's need for increased or repeated doses in order to avoid resort to illicit supplies.

Main sources ❶ Scott R.T.A., *et al.* "A confidential enquiry into methadone-related deaths." *Addiction*: 1999, 94(12), p. 1789–1794 ❷ Zador D. *et al.* "Deaths in methadone maintenance treatment in New South Wales, Australia 1990–1995." *Addiction*: 2000, 95(1), p. 77–84. Copies: for both apply DrugScope.

Secondary sources Department of Health *etc. Drug misuse and dependence – guidelines on clinical management*. HMSO, 1999. Copies: phone HMSO on 0171 873 9090, or download from http://www.doh.gov.uk/drugdep.htm.

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