

Analysis of trends in deaths from accidental drug poisoning in teenagers, 1985-95

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Surveys in secondary schools over the past 25 years have shown large increases in the number of teenagers exposed to drugs. A study in Wolverhampton found that the proportion of secondary school pupils who had been offered drugs more than doubled between 1989 and 1994.¹ The proportion of pupils who had been offered the psychostimulant drug Ecstasy (3,4-methylenedioxymethamphetamine) increased from 5% to 43% between 1989 and 1994.¹ Accidental overdose and acute severe complications are important causes of death among drug misusers.² We examined trends in death rates from accidental poisoning in teenagers aged 15-19 years from 1985 to 1995.

Methods and results

The anonymised records of all deaths from injury and poisoning in England and Wales among people aged 15 to 19 years inclusive during 1985-95 were obtained from the Office for National Statistics. Each record included the external cause of injury code (E code) of ICD-9 (the international classification of diseases, 9th revision), age, sex, and year of death. The numbers of people aged 15 to 19 in the general population in each year were obtained from published sources. Trends in death rates from accidental poisoning (E8500-8690) were examined using Poisson regression modelling.³

Over the 11 years 436 teenagers died of accidental poisoning; 303 were males and 133 females. The largest single category of death from poisoning was accidental poisoning by opiates and related narcotics, which accounted for 21% (90/436) of the deaths. From 1985 to 1995 the death rate from accidental poisoning increased by 8% per year (95% confidence interval 5% to 17%); the death rate from poisoning by opiates and related narcotics (E8500) increased by 27% per year (17% to 36%). From 1985 to 1989 there were 17 deaths from opiates and related narcotics; from 1991 to 1995 there were 67 deaths. Opiates and related narcotics accounted for 11% of deaths from accidental poisoning in 1985 and for 37% in 1995. Death rates from poisoning by other psychotropic agents (E8540-8550) increased by 23% per year (10% to 36%) over the 11 years. From 1985 to 1989 there were eight deaths in this category, of which one death was from psychostimulant overdose (a category which includes amphetamines); from 1991 to 1995 there were 32 deaths, of which 16 were caused by psychostimulants. Trends in death rates from opiates and related narcotics (E8500) and from psychostimulants (E8543) are shown in figure 1.

Over the 11 years 287 deaths from poisoning were in category E980-983; this includes deaths for which an investigation by a medical or legal authority has not determined whether the poisoning is accidental, suicidal, or homicidal. We investigated the possibility that increasing death rates from accidental poisoning may have resulted from diagnostic transfer from poisonings of unknown intent. There was an annual

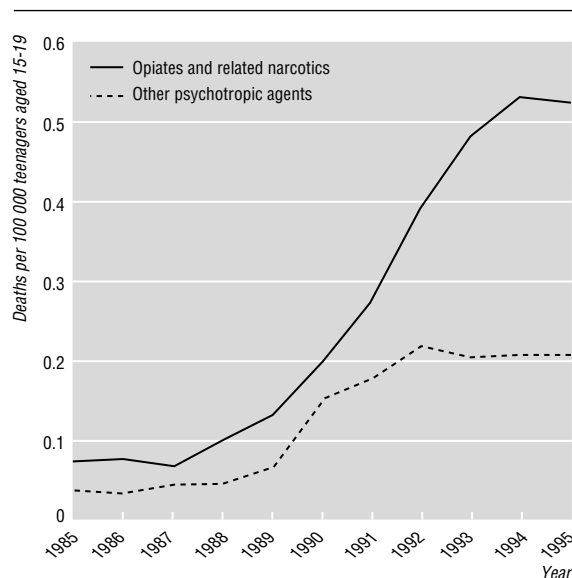


Fig 1 Trends in death rates from drug overdose among teenagers aged 15-19, 1985-95 (three year moving average)

decrease of 1% (5% decrease to 3% increase) in the death rate from poisoning of unknown intent. In the category of deaths that includes opiates and related narcotics (E9800) there was an annual decline of 1% (7% decrease to 4% increase). Although there was no substantial change in the suicide rate during the study, there is the possibility that some deaths from suicide were included in the deaths from accidental poisoning.

Comment

There has been a large increase in the death rates from accidental poisoning among teenagers aged 15-19 years. The increase is particularly noticeable for opiates and related narcotics and for psychostimulant drugs. There have been no substantial decreases in the death rate from poisonings of unknown intent or from the subcategory that includes opiates and related narcotics, so the increase in death rates from accidental overdose is unlikely to be due to diagnostic transfer. Although data on accidental poisoning deaths are likely to underestimate the total number of drug related deaths, these data underscore the public health impact of drug use among teenagers and the need to identify effective drug control strategies.

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- 2 Henry JA. Ecstasy and the dance of death. *BMJ* 1992;305:5-6.
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