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Drug-related mortality among newly-released offenders

Social Survey Division, Office for National Statistics
National Addiction Centre, Institute of Psychiatry

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DRUG-RELATED MORTALITY AMONG NEWLY-RELEASED OFFENDERS

**Report of a research project carried out by the Office for National Statistics
and the National Addiction Centre on behalf of the Home Office**

Nicola Singleton
Elizabeth Pendry
Social Survey Division,
Office for National Statistics

Colin Taylor
Michael Farrell
John Marsden
National Addiction Centre,
Institute of Psychiatry

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Nicola Singleton, Elizabeth Pendry, Colin Taylor, Michael Farrell and John Marsden.

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Executive summary

There is considerable concern about rates of drug-related mortality in the United Kingdom. Studies have suggested that recently released offenders are a group at high risk of dying from drug-related causes. To obtain more information about the extent and nature of drug-related mortality among newly-released prisoners in England and Wales, the Home Office commissioned the Office for National Statistics to undertake a research project in collaboration with the National Addiction Centre.

Mortality rates

- Module A deals with 6,674 discharges occurring in June 1999 and 6,736 in December 1999. Of these 13,410 discharges, 972 could not be traced on the National Health Service Central Register resulting in a final sample size of 12,438.
- In the time period covered by the study, 79 drug-related deaths and 58 deaths from other causes were recorded among study members in Module A. The definition of drug-related death used in this study is that used for the Office for National Statistics Drug-Related Poisoning Deaths Database.
- There was a high rate of death in the immediate post-release period. There were 13 deaths in the first week after release (55 deaths per thousand per annum), six in the second week (25 deaths per thousand per annum) and three-four per week in the third and fourth weeks (15 deaths per thousand per annum). After this the rate of death declined to a steady rate of about two deaths per week (between 5 and 10 deaths per thousand per annum).
- The decline in the mortality rate after discharge for all causes was largely due to the decline in the drug-related mortality rate. The drug-related mortality rate decreased from 50 per thousand per annum in the first week after release to 17 per thousand per annum in the second week and then to about four or five per thousand per annum thereafter. The highest rate for mortality from other causes was observed four weeks after discharge and was just over ten per thousand. It then dropped slightly to between two and four per thousand.
- Over the study period 137 deaths were recorded among the people in the sample, whereas in a sample of the general population matched for age and gender only 23 would be expected. In the week following release, prisoners in the sample were about 40 times more likely to die than a member of the general population. Most of this excess (90%) was associated with drug-related causes.
- A measure of the extent of excess mortality specifically associated with the immediate post-release period is obtained by comparing the excess mortality ratio for the first week post-release with that for the period three months or more after release, when mortality rates remained constant. The drug-related component of the excess mortality ratio for the first week post-release was 12.5 times greater than that for the period three months to one year post-release and in the second week was 4.2 times greater.
- The age of the prisoner at the time of release was significantly associated with the risk of death from both drug-related and other causes. There was a higher than expected number of deaths in all age groups compared to the general population but the difference was greatest for prisoners aged 25 to 39 years old at the time of release. In this age

group there were about 11 times as many deaths as expected and about two-thirds of this excess mortality was due to drug-related causes.

- Two groups of main offence had significantly higher rates of drug-related mortality. These were theft (which included robbery, burglary and fraud) and property/other crimes. Both groups had three times higher odds of drug-related mortality after release.

Causes and circumstances of death

- The 56 non-drug-related deaths for which a cause could be ascertained were classified as either acute or chronic. Overall, 16 were classified as chronic and 40 as acute, with many, if not most, in some way related to the lifestyle and pattern of drug and alcohol consumption. In this population, a significant number of non-drug-related deaths were the result of motor vehicle accidents, alcohol-related deaths and suicides reflecting the high risk lifestyle of this population.
- A large proportion of the cohort had additional spells in prison during the follow-up period. It is apparent that a significant proportion of those dying a comparatively long time after their index release from prison had died immediately after a more recent release from prison. This is most marked in the case of drug-related deaths. A fifth of this group had died within two weeks of their index release but almost a third had died within two weeks of their last release from prison.
- Of the 79 drug-related deaths just over half (53 per cent) were recorded as involving a single drug only. A single drug with alcohol was recorded in 13 per cent of cases, mixed drugs without alcohol in 19 per cent and mixed drugs with alcohol in 14 per cent of cases (in 71 per cent of cases heroin or morphine were specifically mentioned either by the coroner or in the toxicology report).
- Information about where death occurred was available for just under half the drug-related death cases. A large proportion of deaths occurred in residential settings suggesting that it is possible that family members or friends may have observed the deterioration.
- There were a number of deaths where the underlying cause of death was specifically alcohol-related and others where alcohol was mentioned as a contributory factor. In total amongst all deaths, 11 deaths were classified as alcohol-related and alcohol was found to be a contributory factor or found present in the body of a further 23 cases (21 of these were drug-related deaths).
- Amongst the drug-related deaths in the sample there was only one instance of a coroner considering that a deliberate suicide had occurred, although suicides were recorded amongst the non-drug-related deaths.

Risk factors for drug-related mortality

- Module B involved the linking of data from the ONS Psychiatric Morbidity among Prisoners Survey (PMP) carried out in 1997 with data on releases and deaths. A sample of 3,142 was obtained from the PMP and 2,649 of these prisoners had been released into the community in England or Wales. Of these 2,649, 103 could not be traced on the National Health Service Central Register and one case was later found to have died in custody and was excluded, resulting in a final sample size of 2,545.

- There have been 25 drug-related deaths and 21 deaths from other causes recorded to study members in Module B. The results of the analyses in this section are therefore based on very small numbers so should be interpreted with caution.

Socio-demographic and personal characteristics

- Those in the Module B sample dying from drug-related causes were most likely to be male, white and aged under 30. The majority had left school at 16 years of age, had no qualifications and had been living off crime before the prison term when they were interviewed. They were also mostly single at the time of interview and had been living with other adults in rented, self-contained accommodation before the prison term when they were interviewed.

Offence and prison sentence factors

- Compared with the survey population as a whole, people in Module B who had died from drug-related causes were:
 - more likely to have been imprisoned for a sex offence
 - less likely to have served between six and 11 months
 - less likely to have been imprisoned in a Category C or Female Training prison or an Open or Category D prison.

Substance use

- A range of factors relating to substance use and dependence were considered in the analysis of the survey data. Compared with the survey population as a whole, people who had died from drug-related causes were more likely to have:
 - injected drugs
 - used illicit tranquillisers
 - used drugs in the month before the prison term in which they were interviewed
 - been dependent upon opiates and stimulants in the year before the prison term when they were interviewed
 - experienced an accidental overdose in the past
 - had treatment for drug problems during the prison term when they were interviewed
 - had treatment for drug problems in the year before the prison term when they were interviewed
 - been prescribed methadone during the prison term they were serving when interviewed.

Mental state

- A number of factors indicative of respondents' mental state were also considered. Compared with the survey population as a whole, people who had died from drug-related causes were more likely to have:
 - been assessed as having antisocial and other types of personality disorder and less likely to have non-antisocial types of personality disorder only
 - been receiving medication acting on the Central Nervous System (CNS) at the time of interview
 - had suicidal thoughts between one week and one year before the interview

- ever experienced three or more stressful life events
- been victimised during the prison term they were serving when they were interviewed.

Multivariate analyses

- Multiple logistic regression analysis was used to try to identify the factors that were independently associated with the likelihood of dying from drug-related causes taking into account all the other factors shown above to be associated with drug-related mortality.
- The personal and socio-demographic factors identified in this way were employment status (living off crime or being economically inactive increased risk), marital status (being separated, divorced or widowed or being single increased risk) and having a small primary support group. Prisoners who were taken into Local Authority Care during childhood had a lower risk of drug-related death.
- The most important prison-related factor was offence type (those held for sex offences had a higher risk of drug-related death).
- Having a history of using tranquillisers illicitly, use of drugs in the month before imprisonment and not using drugs in the prison term in which they were interviewed were associated with a significantly increased risk of mortality from drug-related causes.
- Other factors which entered the model but for which the differences between groups did not reach statistical significance were the length of the prison term in which they were interviewed, having a history of accidental overdose, being in receipt of medication acting on the CNS at the time of interview, and the number of stressful life events.

Discussion

- This study is the first of its kind to empirically estimate the drug-related mortality risk among all sentenced prisoners in the early phase of release from prison in England and Wales. The most striking conclusion from this study is the very high rates of drug-related mortality in the first two weeks after release from prison. The effect is very strong and confirms findings from previous smaller-scale studies.
- This study confirms that released prisoners have a much higher risk of death than people in the general population. This is consistent with a broader body of knowledge indicating that individuals with a high level of drug involvement, high level of drug dependence, use of injected drugs, use of tranquillisers, and lower levels of social support and of economic and social functioning are at greater risk. It also indicates that those who are in prison for a medium period of time are also at greater risk.
- As well as showing a high risk for early drug-related deaths, this study shows that the post-release population is at high risk from non-drug-related death also and that the needs from a social, mental and physical perspective of prisoners on release are very substantial.
- A high proportion of individuals returning to the community from prison who have used drugs immediately prior to entry will return to drug use. It is clear that this return to use with altered tolerance to opiates, alcohol and benzodiazepines presents a major hazard in the first week.

- Some of the data from Module B of this study relating to use of health services would appear to indicate that many of those at risk are being identified and worked with to some degree. There is a need to see if the process of risk identification and linkage for throughcare planning and post-release support could be developed in a manner that would assist in reducing the levels of risk exposure on release. The present findings have implications for the operation of drug misuse treatment interventions within the criminal justice system. The operation of Counselling, Assessment, Referral, Advice and Throughcare (CARAT) initiatives should be reviewed in particular so that the prison release arrangements (throughcare) for inmates with known drug misuse are strengthened.
- There is clear evidence from other studies that drug substitution treatment for those with chronic opioid dependence reduces the risk of death. Consideration should be given to ensuring that opioid dependent individuals on release from prison have fast track access to community based treatment services and in particular to methadone maintenance treatment. Some of the data presented here seems to indicate that brief and intermittent prison based treatment does not play an effective role in reducing drug-related death risk.

Recommendations

- General education and awareness-raising about the risk of drug-related death in the immediate post-release period as a result of the consumption of drugs and alcohol should be made available to all prisoners as part of their release preparation.
- It is recommended that links to community based services be improved. Individuals at higher risk of drug-related death should be identified and linked into ongoing care with community-based services immediately on release from prison as part of a comprehensive and integrated approach to treatment in prison and the community. All prisoners on release should have priority access to community based drug services in the first month of release because of increased overdose risk and overall vulnerability to relapse during this period.
- Consideration should be given to the establishment of pilot studies to investigate the feasibility of providing a methadone maintenance programme within prisons for individuals with long-standing opioid dependence (recognising that some methadone prescribing initiatives in prison have already been implemented).
- It is recommended that consideration should be given to developing a pilot project to investigate the use of naltrexone, which should include an evaluation of the likely impact on overdose risk and mortality.
- It is recommended that potential use of naloxone should also be further explored.
- It is suggested that the rates obtained in this study could be used as the basis for target-setting for the reduction in post-release drug-related mortality. Further research on this topic is also recommended to establish the relative risk of drug-related mortality among sub-groups not covered in this study, such as women prisoners and remand prisoners, and for the consideration of possible regional variation.