

## CHAPTER 4

# HEALTH ISSUES AND CONSEQUENCES OF DRUG MISUSE

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### 4.1 Introduction

Drug misuse can have a number of serious consequences for the health of the individual drug user. Infectious diseases such as HIV and hepatitis C can reach a high prevalence among injecting drug users (IDUs). Drug-related mortality is another possible consequence of some forms of drug use.

People encountering very serious problems with drug misuse will more than likely eventually come into contact with drug treatment services. The treated population of drug users in Ireland is well represented in the National Drug Treatment Reporting System (NDTRS). This is an epidemiological database providing anonymous data on people who receive treatment for problem drug use. The data are collected from both statutory and voluntary drug treatment agencies throughout the country by the Drug Misuse Research Division (DMRD) of the Health Research Board (HRB).

In recent years there has been an expansion in the services provided for problem drug users. Compared to ten years ago services are now decentralised and have become more diversified and dispersed both locally and nationally. Problematic opiate use, mainly heroin, continues to be concentrated in the Dublin area, in localities with high levels of social and economic disadvantage. Pockets of heroin use are being reported in recent

times in a number of areas throughout the country. Analysis of the characteristics of clients presenting to treatment for the first time gives a good indication of trends over a number of years.

This chapter explores health issues and consequences of drug misuse under the following headings:

4.2 Characteristics of Clients, Patterns of Use and Trends

4.3 Drug-Related Risk Behaviours and Trends

4.4 Drug-Related Infectious Diseases

4.5 Other Drug-Related Morbidity

4.6 Drug-Related Mortality

## **4.2 Characteristics of Clients, Patterns of Use and Trends**

Drug-use patterns in Ireland vary according to geographic location. Problem opiate use, mostly heroin, is mainly confined to the Dublin area. This is beginning to change, with pockets of heroin use now becoming apparent in a number of urbanised areas in regional locations. While the profile of the typical problematic drug user – young, unemployed male, leaving school at an early age and living in a socially and economically disadvantaged area – has not varied much over the years, there has been a change in some trends over the past five years.

Data on clients presenting for treatment for the first time are presented in Table 4.1 for the five-year period 1995–1999. Gender distribution has not changed much over the five-year period, and the mean age has remained fairly stable at around 22 years. Over 70 per cent of those presenting for treatment for the first time are under 25 years old. This is younger than in other EU countries and is a reflection of the demographic situation in Ireland, where the median age of the Irish population is much younger than the EU average. Nearly half the population in Ireland (48%) is under 30 years of age (see Table 2.1 at Appendix 2), whereas the median age in other EU countries is between 35 and 40 years of age.

Between 1995 and 1999 there was a fall in the proportion of clients living in the parental home (see Table 4.1). There was a decrease in those who left school before the age of 16 years, from 51.8 per cent in 1995 to 43.2 per cent in 1999. There was a sizeable increase in the level of employment among problem drug users, from a very low 15.2 per cent in 1995 to 31.2 per cent in 1999, reflecting more general changes in Irish society in relation

to improvements in the economy, *inter alia*, over the same period. The mean age of initial drug use was between 15 and 16 years of age and did not change much over the five-year period. Heroin was the main drug of misuse for over half of those presenting for treatment for the first time. Over the five-year period there was an increase in the proportion injecting their main drug of misuse, which was mainly heroin.

**TABLE 4.1**  
**Ireland 1995–1999. New Clients Presenting for Treatment. Characteristics and Patterns of Use.**

Characteristics	1995	1996	1997	1998	1999
Valid N	1,870	2,014	1,465	1,621	1,636
Gender Ratio (Male:Female)	80:20	73:27	72:28	74:26	73:27
Mean Age	21.1	21.3	22.0	22.1	22.7
Living Status – with Parental Family	79.0%	76.5%	71.6%	71.1%	70.2%
Early School-Leavers (<16 Years Old)	51.8%	50.2%	45.8%	45.2%	43.2%
Regular Employment	15.2%	13.9%	19.5%	24.8%	31.2%
Mean Age First Used any Drug (excl. Alcohol)	15.6	15.4	16.0	15.5	15.7
Main Drug – Heroin	54.6%	63.2%	58.4%	55.7%	53.5%
Main Drug – Route of Administration – Inject	23.8%	24.3%	29.3%	28.8%	30.6%

*Source:* NDTRS, DMRD, HRB.

The most recent data available indicate that there is great disparity in the pattern of drug use in different parts of the country. Problematic opiate/heroin use occurs mainly in the eastern region of the country, around Dublin. Seven out of ten Irish clients receiving drug treatment are residents of the Eastern Health Board (EHB) area (now three health boards in the Eastern Regional Health Authority (ERHA)) (O'Brien, Moran, Kelleher & Cahill, 2000). Most of these clients (80%) are treated for heroin misuse (O'Brien *et al.*, 2000). In other health board areas throughout the country cannabis is the drug for which the majority of people receive treatment (O'Brien *et al.*, 2000). The characteristics of clients vary according to the types of drugs being used. Heroin users are much less likely to be still at school than cannabis users; and they are more likely to be involved in behaviours with detrimental effects on their health, such as injecting and sharing injecting equipment.

Trends in problem drug use vary according to the type of drug involved. Information on treatment demand for different drugs presented below was obtained from the NDTRS.

**Heroin** – A majority of people (around six out of ten new cases each year) presenting to drug treatment services have problems with the misuse of heroin, that is, heroin is the main drug of misuse. This is mainly confined to the Dublin area. A sizeable proportion (56% in 1999) of those presenting to treatment services for the first time with problem heroin use are involved in intravenous drug-using practices, with very serious health and social consequences. This is the highest level in the past five years (38% in 1995; 37% in 1996; 49% in 1997; 50% in 1998) (see EMCDDA Standard Table 4.6 at Appendix 4).

**Cannabis** – Since the NDTRS was set up in 1990, the percentage of people presenting for treatment for cannabis use has not varied much: between 11 and 16 per cent. After heroin, cannabis is the drug, at a much lower level, for which treatment is most commonly sought. More than half of cannabis misusers (55%) started to use cannabis between the ages of 15 and 19; 37 per cent started before the age of 15 (Moran, O'Brien & Duff, 1997).

**Cocaine** – Treatment demand for problem cocaine use has always been relatively low – between 1 and 2 per cent. Apart from addiction counselling, there are no specific treatments for problem cocaine users in Ireland. Of all those presenting for treatment for the first time in 1999 with multiple drug problems (more than one drug) (64%), 7 per cent were seeking treatment for problem cocaine use.

**Synthetic Drugs** – Demand for treatment for problem ecstasy use has decreased somewhat in recent years, from 11 per cent in 1995 to 8.8 per cent in 1999. The proportion of problem amphetamine users presenting for treatment for the first time has increased from 0.4 per cent in 1995 to 2.1 per cent in 1999. A worrying development is that in 1999, 6 per cent of these were injecting the drug. The proportion presenting with problem LSD use has been falling over the past five years, from 1.6 per cent in 1995 to 0.2 per cent in 1999.

The majority of people presenting for treatment for drug use problems in Ireland are treated at non-residential drug treatment centres. Data from the NDTRS for 1999 show the following percentages presenting to different types of treatment services: 57 per cent to non-residential; 34 per cent to residential; 6 per cent to low-threshold services; 3 per cent to medical doctors in general practice. It should be stressed that in 1999 only a minority of general practitioners (GPs) in private practice were reporting to the NDTRS, and contacts in prisons were very poorly represented. Men are more likely to be receiving treatment at residential or low-threshold services, while women are more likely to present to non-residential or GP services for treatment. Clients living in the parental home are least likely to be attending low-threshold services. Unemployed clients

are the most likely to be attending low-threshold services; those in regular employment are more likely to be receiving treatment from a GP.

Against a background of increasing encouragement for GPs to become more involved in the treatment of drug users, a study was carried out in a specialised drug treatment setting, during August–September 1997, to assess the utilisation of primary care services for general health purposes by injecting opiate users ( $n=77$ ) (Smyth, McMahon, O'Connor & Ryan, 1999b). A structured questionnaire was used to interview clients. The sample size was 139, with a response rate of 75 per cent. The sampling procedure was opportunistic. Despite general policy changes, such as more emphasis on harm minimisation, the findings were similar to those of an equivalent study in 1991. In particular, the relative frequency of GP and hospital accident and emergency (A&E) department attendances was unchanged. Concern was expressed by the authors (Smyth *et al.*, 1999b) at the high proportion being prescribed benzodiazepines (39%) by GPs. They stated that this indicated that there was 'clearly a wide gap' between treatment approaches by psychiatrists, specialising in substance misuse at treatment centres, and GPs, in the management of co-morbid disorders such as anxiety and sleep disorders among drug users. The need for improved communication and co-operation, as well as explicit protocols relating to clarity, consistency and continuity in treatment approaches, was stressed.

In 2000 the Minister for Health and Children set up a committee to examine benzodiazepine-prescribing trends in Ireland. This committee will examine current prescribing trends and will make recommendations on good prescribing practice, particularly in relation to drug misusers.

### **4.3 Drug-Related Risk Behaviours and Trends**

Risk behaviours are very important in the transmission of drug-related infectious diseases (HIV, hepatitis B, hepatitis C). Injecting with shared equipment is the crucial transmission route among IDUs; sexual contact is likely to be the most common transmission route among the wider population. A retrospective examination of data from the Needle Exchange Programme (NEP) in the EHB area was carried out to identify the factors associated with high-risk behaviours (Mullen & Barry, 1999).

The NEP was set up in 1989. Drug users who attended for the first time between 1990 and 1997 were included ( $N=6,025$ ). The number of first attenders increased from 350 in 1990 to 1,039 in 1997. Four needles, on average, were distributed to first attenders; all were offered condoms, and 45 per cent accepted. First-time attenders were predominantly

male, but over the eight-year period the proportion of women increased from 18 per cent in 1990 to 24 per cent in 1997; the increase in the number of women was particularly noticeable in young women under 20 years of age. The mean number of years of injecting drug use among the study group was four years. The overall prevalence of needle sharing in the year prior to attendance was 39 per cent, but women (44%) were more likely to share than men (38%). Women (51%) were also more likely to engage in unsafe sex than men (44%). Young injectors, under 20 years of age, were just as likely as all attenders to share injecting equipment (39%). Those who did not share injecting equipment were more likely to use condoms, than those who did share. Young attenders, under 20 years of age, were less likely to be involved in unsafe sex than the overall group (see Table 4.2).

**TABLE 4.2**  
**Eastern Health Board Area 1990–1997.**  
**Characteristics and Risk Behaviours of Needle Exchange Attenders.**

Characteristics and Risk Behaviours Years	All Attenders	Young Attenders < 20 Years
Total (N)	6,025	1,224
Gender Ratio:		
Overall Male:Female	80:20	75:25
1990 Male:Female	82:18	86:14
1997 Male:Female	76:24	68:32
Mean Age	25	18.6
Risk Behaviours:		
Injecting – Mean Number of Years	4	<1
Sharing Prevalence – Past Year::		
Total	39%	39%
Male	38%	NA
Female	44%	NA
Unsafe Sex:		
Male	44%	36%
Female	51%	48%

*Source:* Mullen *et al.*, 1999.

NA = Data not available.

Trends over the time period 1990 – 1997 showed a significant decrease in high-risk behaviours: needle-sharing practices fell and safe sex (use of condoms) practices increased. Women engaged in more risky behaviours, and, with the proportion of women in the drug-using population increasing over time, this has serious health implications. Young IDUs are a particularly at-risk group. However, they do seem to present quite early in

their drug-using careers to needle exchange programmes. The authors stated that 'it is crucial that young people do not encounter barriers to protecting themselves, such as parental permission, mandatory treatment, and statutory notification' (Mullen *et al.*, 1999: 29). The authors argued that this would defeat the purpose of a low-threshold service, to which young people are more likely to present. The profile of the attenders at the NEP highlights the importance of providing prevention and early intervention programmes, particularly for young people. The authors recommended that more in-depth and qualitative research was needed to increase understanding of IDUs – 'the issues surrounding drug use, risk management and sexual relationships' (Mullen *et al.*, 1999: 25) – in order to make prevention strategies more effective.

Another study also highlights the fact that women are a very at-risk group among drug users (Geoghegan, O'Shea & Cox, 1999). Taking a somewhat different perspective and focusing on gender differences, the research study, carried out at the Merchant's Quay Project in Dublin (a voluntary agency providing a number of services to drug users, including a needle exchange service), explored patterns of drug use, risk behaviour, health and well-being among 934 new attenders. Data were collected between May 1997 and April 1998, from all new clients. A sizeable minority was female (25%) and notable gender differences were found. Women were younger than men and were more likely to:

- have a sexual partner who was an IDU;
- be living with an IDU;
- share injecting equipment with their sexual partner;
- report recent sharing of injecting paraphernalia;
- report having problems finding an intravenous site;
- report having abscesses and to be suffering from weight loss;
- report depression, being unable to cope, feeling isolated and having suicidal tendencies;
- have attended a GP in the previous three months; and
- have a medical card.

Heroin was the preferred drug of choice of all the study participants; a majority (86%) of the overall group reported that they had smoked heroin prior to injecting; no gender difference was found. However, women had significantly shorter smoking careers and were more likely to present sooner in their injecting careers to treatment services than men. The authors concluded that this research illustrated that it is important to recognise that women drug users do exist and that they 'are more likely than their male counterparts to engage in risk behaviour which has a detrimental effect on their mental and physical health' (Geoghegan *et al.*, 1999: 135).

Data from the NDTRS were used in a study (Smyth, O'Brien & Barry, 2000) to examine trends in treated opiate use and to identify factors associated with the route of administration of heroin. Dublin clients presenting for the first time for treatment of an opiate problem over the six-year period 1991 – 96 were included. The study population was 3,981. Over the period there was a three-fold increase in the number of new clients and the proportion of females increased. The mean age of first opiate use declined and users began presenting for treatment earlier in their opiate-using careers. There was an increase in the proportion of heroin users as distinct from users of other opiates, such as morphine sulphate tablets. There was a dramatic increase in heroin smoking between 1994 and 1996, when it became the most common route of administering heroin. Heroin was most likely to be smoked by young employed people who were using heroin for less than three years.

The reasons for the increase in chasing (heroin smoking) between 1994 and 1996 are not clear. It was suggested that, while awareness of AIDS and the risks of injecting might have been factors, it would be simplistic to assume that this, alone, accounted for the change in the pattern of heroin use (Smyth *et al.*, 2000). In a later study of first-time attenders at a needle exchange programme between May 1997 and February 1998, a comparative analysis of the risk behaviour of younger and older injectors, i.e. under 25 and over 25 years of age, was carried out. It was found that the younger group (under 25 years old) was significantly more likely to have smoked illicit drugs prior to injecting and to report using heroin as their primary drug (Cassin, Geoghegan & Cox, 1998). It might be that smoking was the preferred route for young people starting to use heroin, particularly for those reluctant to use injecting equipment. The more acceptable nature of chasing, it was suggested, might attract increasing numbers to use heroin, and concern was expressed that 'chasing may prove to be a dragon in sheep's clothing' (Smyth *et al.*, 2000: 1223).

Data from the NDTRS for 1997 – 1999 suggest that these concerns were warranted. The data (see EMCDDA Standard Table 4.5 at Appendix 4) show that between 1990 and 1996 the percentage of 'all contacts' injecting heroin decreased from 88 per cent to 49 per cent. However, since then the percentage has been increasing, from 64 per cent in 1997 to 69 per cent in 1999. The increasing injecting trend is also true for those receiving treatment for the first time (see EMCDDA Standard Table 4.6 at Appendix 4). Between 1990 and 1996 the percentage of 'first contact' drug users injecting heroin decreased from 83 per cent to 37 per cent, but it increased from 49 per cent in 1997, to 50 per cent in 1998 and 56 per cent in 1999. The explanation is likely to be a complex one, involving many factors (for example, sub-group norms/perceptions, availability, price of drugs), but it may be that young people, who initially are reluctant to inject and prefer to smoke, are more willing to inject once heroin use has become habitual.

In a qualitative study of prisoners (n=29) it was found that moving from smoking to injecting heroin was motivated by the need for a more efficient use of a scarce commodity. Because of the limited quantity of heroin available in prison, drug-using prisoners managed their drug use in order to ensure that the maximum number of people was facilitated by the heroin that could be accessed. Since smoking was considered to be wasteful, injecting rather than smoking heroin was more acceptable. Furthermore, injecting was perceived to give a better 'buzz' than smoking, once an individual had become a habitual user (Dillon, forthcoming).

A further trend of note was found in a study of seventy-seven drug-using women (O'Neill & O'Connor, 1999) involved in prostitution. The women in the study were found to be a particularly vulnerable and marginalised group, who engaged in high-risk behaviours. The following were the findings:

- 45 per cent started working in prostitution between the ages of 13 and 19 years, mainly to earn money for drugs;
- 83 per cent had injected in the past month, and a quarter of these (n=16) had shared needles in the past month; and
- less than one-third had been screened for sexually-transmitted diseases.

Compared to similar research carried out in 1996 (in O'Neill *et al.*, 1999: 9) the women in the 1999 study:

- tended to be younger;
- were more likely to have their children being cared for by someone else; and
- were more likely to be homeless.

These findings point to the importance of more imaginative education initiatives in harm-reduction interventions. This was demonstrated by a study conducted in a specialised treatment setting (Smyth, McMahon, O'Connor & Ryan, 1999a). The level of knowledge of IDUs regarding hepatitis C and the factors influencing this knowledge were assessed, using an instrument developed by the research team. The results showed that there were prominent misconceptions about the cause of transmission and natural history of hepatitis C infection. Contact with services did not lead to any significant gain in understanding. The authors concluded that current education approaches used in specialist treatment centres and by GPs were deficient. They recommended a move away from the 'typical didactic model of fact provision' (Smyth *et al.*, 1999a: 263) to a more explorative approach, where misconceptions were more likely to emerge, thereby providing the opportunity to correct and educate.

## 4.4 Drug-Related Infectious Diseases<sup>1</sup>

Drug-related infectious diseases present issues of concern for public health. HIV/AIDS and hepatitis B and C are the main diseases of concern. While anecdotal evidence suggests that tuberculosis may be increasing among Irish drug users, no routine data is available and the focus of research and public health concerns remains in the areas of HIV and hepatitis. This section explores the data relating to each of the following drug-related infectious diseases – HIV and AIDS, hepatitis B and hepatitis C.

### HIV and AIDS

The majority of data collected on drug-related infectious diseases relate to HIV. Two main sources of data are discussed below: first, the routine data on HIV tests reported by the Department of Health and Children; and second, special studies that have estimated the prevalence of HIV among drug users, mainly in treatment settings.

In Ireland, the Department of Health and Children, in collaboration with the Virus Reference Laboratory, located in University College, Dublin (UCD), produces statistics on HIV tests, which are issued every six months. The figures relating to HIV tests are broken down according to risk category. There are a number of risk categories identified in relation to HIV infection, including injecting drug use, homosexual sex and haemophiliac contact. Therefore, it is possible to get a breakdown of the number of HIV-positive cases attributable to injecting drug use in a given year.

The cumulative figures for the HIV-positive cases, from the start of data collection in 1982 up until 1985, show that just over 60 per cent (n=221) of all positive cases (N=363) were attributed to injecting drug use (see Table 4.3). Since 1985, injecting drug use has continued to be one of the main risk categories, accounting for 41.6 per cent of the cumulative number of positive cases up until 31 December 1999 (see Table 4.3).

The proportion of positive cases attributed to the 'intravenous drug user' (IVDU) category generally decreased from 1992 through to 1998. In 1994, for the first time, intravenous drug use accounted for fewer new positive cases than the 'homosexual sex' or 'heterosexual sex and/or risk unspecified' categories (see Table 4.3). In fact, the proportion of positive HIV tests attributed to intravenous drug use fell from 49.1 per cent in 1989, to a low of 17.7 per cent in 1997 (see Table 4.3). It is suggested that the

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1 The following is a summary of a paper on drug-related infectious diseases in Ireland, which will appear in a forthcoming publication from the Drug Misuse Research Division (DMRD) of the Health Research Board (HRB).

reduction, both proportionately and in absolute numbers, over this period may be attributed, at least in part, to the expansion of services aimed at reducing the spread of HIV among IDUs, i.e. substitution and needle exchange programmes.

Despite the apparent reduction in the proportion of positive cases attributed to injecting drug use and the actual number of positive tests, figures from 1999 show a substantial increase in the number of positive cases. Between 1998 and 1999 the total number of new cases of HIV increased from 136 to 209. Furthermore, the number of new positive cases attributed to injecting drug use increased from twenty-six of the total new cases (N=136) in 1998 to sixty-nine of the new cases (N=209) in 1999. Therefore, proportionately, injecting drug use as a risk category increased from accounting for 19.1 per cent of new HIV-positive cases within this data source in 1998, to 33 per cent in 1999. This is the highest annual proportion of new positive cases attributed to injecting drug use since 1993.

**TABLE 4.3**  
**Ireland 1985–1999. HIV-Positive Cases by Risk Category.**  
**Numbers and Percentages.**

Year	IVDUs		Homosexual Sex		Heterosexual Sex /Risk Unspecified		Other		Total	
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
1985*	221	(60.9)	39	(10.7)	0		103	(28.4)	363	(100.0)
1986	112	(66.3)	11	(6.5)	21	(12.5)	25	(14.8)	169	(100.0)
1987	72	(49.7)	21	(14.5)	26	(17.9)	26	(17.9)	145	(100.0)
1988	58	(50.4)	17	(14.8)	20	(17.4)	20	(17.4)	115	(100.0)
1989	57	(49.1)	33	(28.5)	0		26	(22.4)	116	(100.0)
1990	50	(45.1)	25	(22.5)	24	(21.6)	12	(10.8)	111	(100.0)
1991	34	(36.9)	27	(29.4)	25	(27.2)	6	(6.5)	92	(100.0)
1992	82	(40.8)	58	(28.9)	50	(24.9)	11	(5.5)	201	(100.1)
1993	52	(38.0)	48	(35.0)	21	(15.3)	16	(11.7)	137	(100.0)
1994	20	(23.5)	31	(36.5)	22	(25.9)	12	(14.1)	85	(100.0)
1995	19	(20.9)	33	(36.3)	30	(33.0)	9	(9.9)	91	(100.1)
1996	20	(18.9)	41	(38.7)	27	(25.5)	18	(17.0)	106	(100.1)
1997	21	(17.7)	37	(31.1)	40	(33.6)	21	(17.7)	119	(100.1)
1998	26	(19.1)	37	(27.2)	47	(34.6)	26	(19.1)	136	(100.0)
1999	69	(33.0)	40	(19.1)	59	(28.2)	41	(19.6)	209	(99.9)
<b>Total</b>	<b>913</b>	<b>(41.6)</b>	<b>498</b>	<b>(22.7)</b>	<b>412</b>	<b>(18.8)</b>	<b>372</b>	<b>(17.0)</b>	<b>2,195</b>	<b>(100.1)</b>

*Source:* Routine HIV/AIDS statistics compiled by the Virus Research Laboratory and reported to the Department of Health and Children.

\* Cumulative figures for 1982 – 1985.

Gender is the only socio-demographic data collected on those who are tested for HIV from the Department of Health and Children's data source; gender has been reported since 1997. An examination of the figures by gender suggests a possible change in the gender distribution of those who are testing positive for HIV in Ireland (see Table 4.4). In 1997 females only accounted for three of the twenty-one new positive cases attributed to injecting drug use. In 1998 this had increased to ten of the twenty-six positive cases among IDUs, and in 1999 it had increased further to account for thirty-four of the sixty-nine positive cases. Speaking in percentage terms, women have increased from representing 14.3 per cent of the positive tests among IDUs in 1997, to 38.5 per cent in 1998 and 49.3 per cent in 1999. Owing to the lack of information on gender prior to 1997, it is not possible to explore trends over a more extended period of time. Anecdotal evidence suggests that these figures may reflect a real increase in the number of women IDUs who are becoming infected with HIV. However, it is also suggested that these women may be becoming infected through their sexual behaviour rather than through their injecting drug use. Once identified as an IDU, however, their infection will tend to be attributed to their injecting drug-using behaviour. Anecdotal evidence also suggests that a growing number of women may be presenting for testing in order to be able to minimise the risk of infection to their baby were they to become pregnant.

**TABLE 4.4**  
**Ireland 1997–1999. HIV Seropositive IDUs by Gender. Numbers and Percentages.**

Year	Male		Female		Total	
	n	(%)	n	(%)	n	(%)
1997	18	(85.7)	3	(14.3)	21	(100)
1998	16	(61.5)	10	(38.5)	26	(100)
1999	35	(50.7)	34	(49.3)	69	(100)

*Source:* Routine HIV/AIDS statistics compiled by the Virus Research Laboratory and reported to the Department of Health and Children.

Since recording began in 1982 and up until 31 December 1999, there have been 691 AIDS cases reported in Ireland, and 349 AIDS-related deaths (see Table 3.2 at Appendix 3). In 1999 there were forty-one new AIDS-related cases recorded. IDUs continue to represent one of the main risk categories recorded in this data source. In 1999, IDUs accounted for 39 per cent of new AIDS cases, and 41 per cent of the year's AIDS-related deaths.

A number of special studies have been carried out exploring the prevalence of HIV among drug users in a range of study locations, mainly in treatment settings. The studies

include drug users located in the community, in drug treatment centres, in needle exchange programmes and in prisons. Prevalence rates range from 65 per cent among a cohort of IDUs who were first identified in 1985 and who were monitored over the next decade (O’Kelly & Bury, 1996), to 3.5 per cent among a national cohort of prisoners (Allwright *et al.*, 1999). A summary of the research findings on the prevalence of HIV infection among drug users is presented in Table 4.5 below.

**TABLE 4.5**  
**Ireland 1991–1999. Summary of Research Findings on the Prevalence of HIV Infection among Particular Cohorts of Drug Users.**

Author	Study Period	Sample Source and Size	Self-Report/ Test	Serum/ Saliva	Sample Type and Size Tested	% Infected of Those Tested
Long <i>et al.</i> , (2000)	1999	Committal Prisoners <sup>2</sup> N=593	Test	Saliva	IDUs n=173	5.8
Allwright <i>et al.</i> , (1999)	1998	Irish Prison Population <sup>3</sup> N= 1,178	Test	Saliva	IDUs n=509	3.5
Smyth <i>et al.</i> , (1998)	1992 – 1997	Drug Treatment Centre N=735	Test	Serum	IDUs n=600	1.2
Dorman <i>et al.</i> , (1997)	1992	Drug Treatment Centre & Non-Treatment IDUs N=185	Test	Serum and Saliva	IDUs n=180	8.4
O’Kelly <i>et al.</i> , (1996)	1984 – 1995	IDUs in Community N=82	Test	Serum	IDUs n=66	65
Johnson <i>et al.</i> , (1994)	1991	Needle Exchange N=106	Test	Saliva	IDUs n=81	14.8

2 ‘Committal prisoners are prisoners who have been admitted to the prison within the preceding 48 hours, accused or guilty of a new crime, excluding those on temporary release or transferred from another prison. The committal population includes individuals entering on remand, following sentence, committed as a result of a bench warrant and non-nationals without valid documentation.’ (Long *et al.*, 2000: 2).

3 All those incarcerated irrespective of their committal status.

In summary, injecting drug use continues to be one of the main risk categories to which HIV-positive cases are attributed each year. Despite the rates of new HIV-positive cases attributed to injecting drug use plateauing in the early and mid-1990s, recent figures suggest that there is an upward trend in the number of new HIV-positive cases among Irish drug users. The information available on those who are testing positive for HIV remains limited. Analysis of the figures highlights the need for more information, in particular of a socio-demographic and behavioural nature, to facilitate comprehensive epidemiological analysis of the trends.

## Hepatitis B

There is very little information in Ireland on the prevalence and incidence of hepatitis B, among both the general population and the injecting drug-using population. While data are collected on the number of positive tests carried out for hepatitis B by the Virus Reference Laboratory, no behavioural data are collected and therefore those infected through drug use cannot be identified. Information on prevalence rates is therefore confined to a small number of special studies that have been carried out in the field (see Table 4.6).

**TABLE 4.6**  
**Ireland 1992–1999. Summary of Research Findings on the Prevalence of Hepatitis B Infection among Particular Cohorts of Drug Users.**

Author	Study Period	Sample Source	Self-Report/ Test	Serum/ Saliva	Sample Type and Size Tested	% Infected of Those Tested
Long <i>et al.</i> , (2000)	1999	Committal Prisoners N=593	Test	Saliva n=173	IDUs	17.9
Allwright <i>et al.</i> , (1999)	1998	Irish Prison Population N=1,178	Test	Saliva n=509	IDUs	18.5
Smyth <i>et al.</i> , (1998)	1992 – 1997	Drug Treatment Centre N=735	Test	Serum	IDUs n=729	1.0

Smyth, Keenan & O'Connor's (1998) study of drug users located within a treatment setting found that only 1 per cent were infected with hepatitis B. However, more recent research carried out in the prison setting found significantly higher prevalence rates

among IDUs. Allwright, Barry, Bradley, Long & Thornton (1999) and Long, Allwright, Barry, Reaper-Reynolds, Thornton & Bradley (2000) found prevalence rates of 18.5 per cent and 17.9 per cent respectively for hepatitis B. While these figures suggest that hepatitis B may be prevalent among the injecting drug user population, the lack of data prohibits any in-depth epidemiological analysis of the situation in Ireland.

## Hepatitis C

In Ireland, there are no routine data collected on hepatitis C. However, there have been a number of special studies carried out among samples of drug users in a variety of study settings (see Table 4.7). While it is not possible from the available data to analyse infection trends over time, it would appear that hepatitis C infection has been prevalent among Irish IDUs over the past decade. Hepatitis C prevalence rates among cohorts of treatment clients have been found to range from 52.1 per cent (Smyth, Keenan & O'Connor, 1999) up to 89 per cent (Smyth, McMahon, O'Connor & Ryan, 1999a).

**TABLE 4.7**  
**Ireland 1992–1999. Summary of Research Findings on the Prevalence of Hepatitis C Infection among Particular Cohorts of Drug Users.**

Author	Study Period	Sample Source	Self-Report/ Test	Serum/ Saliva	Sample Type and Size Tested	% Infected of Those Tested
Long <i>et al.</i> , (2000)	1999	Committal Prisoners N=593	Test	Serum	IDUs (n=173) Non IDUs (n=420)	IDUs 71.7 Non IDUs 1.4
Allwright <i>et al.</i> , (1999)	1998	Irish Prison Population N= 1,178	Test	Serum	IDUs (n=509) Non IDUs (n=669)	IDUs 81.3 Non IDUs 3.7
Smyth <i>et al.</i> , (1999)	1993 – 1996	Drug Treatment Centre N=353	Test	Serum	IDUs (n=353)	IDUs 52.1
Smyth <i>et al.</i> , (1999a)	1997	Drug Treatment Centre N=84	Self- Report	NA	IDUs (n=84)	IDUs 89
Smyth <i>et al.</i> , (1998)	1992– 1997	Drug Treatment Centre N=735	Test	Serum	IDUs (n=733)	IDUs 61.8
Smyth <i>et al.</i> , (1995)	1992 – 1993	Drug Treatment Centre N=272	Test	Serum	IDUs (n=272)	IDUs 84

## 4.5 Other Drug-Related Morbidity

### Psychiatric Co-Morbidity

A study to assess the differences between individuals who are (1) dependent on opiates and benzodiazepines, and (2) dependent on opiates, was carried out on patients consecutively admitted to a ten-bed inpatient drug-treatment unit in Dublin over a four-month period (Rooney, Kelly, Bamford, Sloan & O'Connor, 1999). More drug use and greater psychological morbidity were found among those dependent on opiates and benzodiazepines, than among those dependent on opiates. The former were more likely to describe a past experience of depression and a past episode of deliberate self-harm. However, despite this, none of them were regularly attending or obtaining treatment from a psychiatric service. This has implications for drug-treatment programmes, as continued benzodiazepine use leads to destabilisation of methadone maintenance programmes (Rooney *et al.*, 1999).

Williams, Mullan, O'Connor & Kinsella (1990) studied the level of depressive symptoms in a group of opiate users on methadone maintenance. All those attending the Drug Treatment Centre, Trinity Court, in Dublin, at the start of November 1988 were included in the study (N=70). All met the diagnostic criteria (DSM-3 – Diagnostic and Statistical Manual of Mental Disorders) for opiate dependence. Of the group, 83 per cent reported moderate or severe depressive symptoms. This finding cannot, however, be used in more wide-ranging conclusions because the study group was not representative of other populations of opiate-dependent users. The authors concluded that the relationship between depression and opiate dependency in the group was speculative and open to a number of interpretations. For example, opiate use may be a method of self-medication to relieve depressive feelings; or depressive symptoms could represent a reaction to problems of living, or could be explained by familial factors. The authors concluded that awareness and recognition of depressive symptoms were important elements in the effective treatment of opiate dependency.

Irish policy on the treatment of alcohol and drug misuse (Department of Health, 1984) stipulated that the emphasis in the management of alcohol and drug-related problems should be on community-based intervention, rather than on specialist inpatient treatment. Despite the general policy of providing treatment for problem drug use at non-residential services in the community, drug-related admissions to psychiatric inpatient hospitals are continuing to rise (see Table 3.3 at Appendix 3). The proportion of drug-related admissions, with a primary or secondary diagnosis, increased from 2.2 per cent in 1995 to 3.6 per cent in 1999 for all admissions (information obtained from the National Psychiatric Inpatient Reporting System (NPIRS), maintained in the Mental Health

Division of the HRB). For first admissions (admission for the first time ever), the proportion increased from 2.4 per cent to 5 per cent in the same period. This is in contrast to the general trend of a decrease in overall admissions to psychiatric hospitals.

The rates (per 100,000 population) of all admissions to psychiatric hospitals increased from 16.2 in 1995 to 24.6 in 1999, and in the case of first admissions the rate doubled between 1995 and 1999, from 4.7 to 9.8 per 100,000 population. Admission rates for 'drug dependence' to inpatient psychiatric hospitals vary according to geographic location (see Table 4.8). This is not necessarily an indication of morbidity but may perhaps be linked to drug-treatment provision in different areas and/or more willingness in certain areas to admit people with drug problems to psychiatric hospitals.

**TABLE 4.8**  
**Ireland 1997–1999. First Admissions to Inpatient Psychiatric Hospitals,**  
**with Drug Dependence Diagnosis, by Hospital Board Area.**  
**Rates per 100,000 Population, Aged 16 Years and Over.**

Health Board Area	1997	1998	1999
Eastern	10.9	13.4	13.4
Midland	10.1	8.0	17.4
Mid-Western	10.6	10.2	13.2
North-Eastern	6.3	6.8	8.6
North-Western	6.5	6.5	2.6
South-Eastern	7.1	8.0	8.7
Southern	6.6	6.1	6.1
Western	5.4	6.5	7.7
<b>Total</b>	<b>8.7</b>	<b>9.6</b>	<b>10.6</b>

*Source:* NPIRS, Mental Health Division, HRB.

The NPIRS data from 1997 to 1999 did not show any noteworthy psychiatric co-morbidity. To some extent close family ties and good family supports could have been a factor in preventing people with psychiatric disorders from becoming involved in problematic drug use. However, it might also indicate that drug-dependent people with psychiatric co-morbidity were not obtaining treatment from psychiatric services, as was found in the Rooney *et al.* (1999) study.

Another topic that has been receiving some attention recently is the possible association between drug misuse and attention deficit hyperactivity disorder (ADHD). In an

attempt to draw attention to the concerns of the Irish Council of Attention Deficit Disorder Support Groups, a submission was made on their behalf to the National Drugs Strategy Review, which took place during 2000. The submission was made as a result of concern that ADHD may be a significant risk factor leading to involvement in substance misuse, and that people with ADHD are more likely to self-medicate. The aim was to highlight the need to identify drug users who suffer from ADHD and to ensure the provision of appropriate treatment programmes for their care and management.

## Other Health Issues

The Medical Bureau of Road Safety, Department of Forensic Medicine, National University of Ireland (NUI), Dublin, in collaboration with An Garda Síochána, has undertaken a study to determine current trends in driving under the influence of drugs in Ireland (Moane, Leavy & Cusack, 2000). The survey will investigate the presence of amphetamines, benzodiazepines, cannabis, cocaine, opiates and methadone in blood and urine samples taken by the Gardai under the Road Traffic Act, 1994. One thousand samples will be randomly selected, as well as another 1,000 from those under the legal alcohol limit for driving. Preliminary results (see Table 4.9) from 338 samples (under the legal alcohol limit) showed that cannabis was most frequently found (34%), followed by benzodiazepines (25%). Cocaine was the drug least commonly found (4%) (Moane *et al.*, 2000). These results indicate that there has been a significant increase in driving under the influence of drugs since 1987, when a similar study was carried out and 14.6 per cent of samples (under the legal alcohol limit) tested positive for drugs. The current preliminary study found that the percentage had risen to 37 per cent. The results of this survey will identify the types of drugs being taken and their combination with other drugs, including alcohol.

**TABLE 4.9.**  
**Drugs Driving in Ireland 2000. Preliminary Study of Prevalence of Driving under the Influence of Drugs – for Sample under Legal Alcohol Limit. Type of Drug, Percentages.**

Type of Drug	Driving under Influence of Drug (under Legal Alcohol Limit) (%)
Cannabis	34
Benzodiazepines	25
Amphetamines	16
Opiates	14
Methadone	7
Cocaine	4

*Source:* Moane *et al.*, 2000.

## 4.6 Drug-Related Mortality

Official Irish statistics on drug-related deaths from the General Mortality Register (GMR) are compiled routinely by the Central Statistics Office (CSO). They are coded according to the International Classification of Diseases, Version 9 (ICD-9), that is, the cause of death is designated as the underlying cause of death. This is defined as:

... (a) the disease or injury which initiated the train of morbid events leading directly to death, or (b) the circumstances of the accident or violence which produced the fatal injury. (WHO, 1977: 700)

The underlying cause of death can be from natural or external causes. The definition of external cause of death is as follows:

... a supplementary classification that may be used, if desired, to code external factors associated with morbid conditions classified to any part of the main classifications. For single-cause tabulation of the underlying cause of death, however, the E Code should be used as a primary code if, and only if, the morbid condition is classifiable to Injury and Poisoning. (WHO, 1977: xxix)

For the purpose of this report a drug-related death is defined as one where the underlying (natural or external) cause of death was drug dependence (ICD-9, Code 304) or opiate poisoning (ICD-9, Code 965.0). These are deaths directly related to problem drug use.

An examination of drug-related deaths recorded between 1990 and 1999 (see Table 3.1 at Appendix 3) shows that the number of deaths over the ten-year period increased considerably from 1995 onwards. The highest number was recorded (N=99) in 1998. It was during that time that amendments were made to the information recorded by An Garda Síochána for the CSO; this was as a result of the work of the National Task Force on Suicide (Department of Health, 1996, and Department of Health and Children, 1998). In the case of a sudden or suspicious death, a member of An Garda Síochána attends the scene of death and subsequently completes a data form (Form 104) for the CSO. The amendment relevant to the recording of a drug-related death consists of a question on drug/alcohol dependency. This obviously had an effect on the statistics recorded subsequently. The increase in the number of deaths, as recorded by the GMR between 1990 and 1999, was thus partly due to greater awareness of the need for such information, and the consequent improvement in the collection procedure of the GMR data, and partly due to a real increase in the number of drug-related deaths.

The increasing trend did not continue in 1999, when the number of deaths was eighty (see Table 3.1 at Appendix 3). In terms of geographic location the vast majority of deaths were in Dublin, where the opiate problem is mainly concentrated. The majority were males, between the ages of 15 and 49.

Indirect as well as direct drug-related death was the subject of an *ad hoc* retrospective study carried out by Keating, Ramsbottom & Harbison (1999). Dublin City and County coroners' files were examined to study the number of drug-related (direct and indirect) deaths in 1997. The criteria for inclusion were that the death:

- had occurred in Dublin (city or county) between 1 January and 31 December 1997;
- had positive toxicological evidence of the presence of drugs; and
- had drugs implicated in the cause of death.

This is a much broader definition than that used for the purpose of the GMR. Toxicological screens included testing for alcohol, opiates, benzodiazepines, tricyclics, barbiturates and cocaine. It was found that 120 cases were toxicologically positive for drugs, and 65 of these were known to be drug users. The gender ratio was 3:1 (male:female) and more than half of the deaths were in the 20- to 39-year-old age group. The drug most commonly identified was benzodiazepine (seventy-five cases), mainly in combination with other drugs. The most common combination of drugs was opiates and benzodiazepines. Methadone was found in forty-seven cases; alcohol in forty-seven cases; heroin in twenty-seven cases; tricyclics in twenty-one cases; cannabis in fifteen cases; phenothiazines in twelve cases; opiates in twelve cases; paracetamol in twelve cases; cocaine in seven cases; barbiturates in four cases; MDMA in two cases; amphetamines in two cases; and butane in two cases. A similar study of coroners' files in 1992 (in Keating *et al.*, 1999) found no cocaine, MDMA or amphetamines in drug-related deaths. The 1992 study found a similar number of drug-related deaths recorded (in Dublin coroners' files) to that recorded in the GMR for that year. However, the total number (N=120) found in the 1997 study did not correspond with the total number (N=49) recorded in the more narrowly-defined GMR for the same year.

In summer 2000, an outbreak of twenty-four cases of illness among IDUs in the Dublin area resulted in eight deaths. This was similar to an outbreak of the same illness in Glasgow, where the first cases were recognised. While the definitive cause of death for all cases has not yet been established, the likely cause has been identified as a toxin-producing strain of *Clostridium novyi*, but other bacteria may have been involved. The 'significance of the presence of clostridial species remains to be determined but it may suggest contamination of the drugs or other materials' used by the IDUs (Andraghetti *et al.*, 2000).

## 4.7 Summary

Over 70 per cent of those presenting for treatment for the first time are under 25 years old. This is younger than in other EU countries and is a reflection of the demography of Ireland, where nearly half the population (48%) is under 30 years of age (see Table 2.1 at Appendix 2). The profile of the typical drug user receiving treatment is young, unemployed male, leaving school at an early age, and living in a socially and economically disadvantaged area. However, there were some positive developments towards the end of the 1990s. There was a decrease in the number leaving school before the age of 16 years, and there was a sizeable increase in the level of employment among problem drug users. These trends reflected more general changes in Irish society, related to improvements in the economy over the same period.

There is great disparity in the pattern of drug use in different parts of the country. Problematic opiate/heroin use occurs mainly in the eastern region of the country, around Dublin. In other areas, cannabis is the drug for which the majority of people receive treatment. Heroin users are much less likely to be still at school than cannabis users, and they are much more likely to be involved in behaviours detrimental to their health, such as injecting, and sharing injecting equipment.

Trends in patterns of drug use have been changing since the beginning of the 1990s. Between 1990 and 1996, among those presenting for treatment for the first time, there was a trend towards smoking, rather than injecting, heroin. Smoking seems to have been the preferred route for young people starting to use heroin, at least in the initial year or so of their drug-using careers. However, trends since 1997 show that this has changed. The explanation is likely to be a complex one, involving many factors such as the perceptions of drug users, the availability of heroin, and fluctuations in the price of heroin. But it may be that young people, who initially preferred to smoke, become more willing to inject once heroin use had become habitual.

Trends in high-risk behaviours over the time period 1990 – 1997 have shown a significant decrease – needle-sharing practices have fallen and safe sex practices (use of condoms) have increased. This could be attributed to the increase in the services provided for people involved in risky drug-related behaviours, including the availability of clean injecting equipment. However, women were found to be more at risk than men, but, while women tend to be involved in more risky behaviours than male drug users, they present earlier for treatment than men. Young IDUs were found to be a particularly at-risk group.

The most comprehensive data available on drug-related infectious diseases in Ireland are for HIV. While the number of new positive-tested cases for HIV, which were attributable to injecting drug use, appeared to stabilise in the mid-1990s, figures for 1999 show an increase in the number of cases. For both hepatitis B and hepatitis C, analysis is dependent solely on data from special studies. Despite the absence of comprehensive data, it appears from the evidence available that hepatitis C continues to be highly prevalent among Irish IDUs. Overall, it would appear that drug-related infectious diseases continue to be an issue of concern in relation to IDUs. This highlights the need for more comprehensive data collection in the area of all drug-related infectious diseases, in order to monitor changes in the trends over time.

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