

# An Analysis of the Effects of HIV Infection in a Cohort of Intravenous Drug Users

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## Abstract

Intravenous drug use has been a serious problem for Dublin's deprived inner city areas since the late 1970's. In 1985, a cohort of all known intravenous drug users (IVDUs) was identified in one inner city electoral cohort and has been followed since then. The cohort was identified before the introduction of HIV testing. The prevalence of HIV infection and its consequences have continued to rise. By 1994, 80% of the group were known to have had a HIV test: 53-(65%) are seropositive. Twenty-one (26%) have died, almost all from the seropositive group. Thirty-six (44%) continued to inject heroin during 1994. The implications of these grim statistics are discussed.

## Introduction

HIV antibody testing was introduced to Ireland in 1985. By March 1995, 1,556 positive tests for HIV antibody have been recorded, 463 people have been diagnosed as having AIDS and 231 of these have died; in approximately 50% of those tested positive intravenous drug use is the main source of infection'. Most appear to have begun injecting drugs during the late 1970's - early 1980's<sup>2</sup>.

In early 1985 a study of intravenous drug use in the electoral district Merchant's Quay F (total population 2,818) was undertaken<sup>3</sup>; an electoral district is the smallest census unit for which up to date and reliable statistics are available. The study identified 103 intravenous drug users, of whom 82 were interviewed in depth: the 82 interviewees represented 10% of the population in the age-group 15-24 years. This study is unique in that a cohort of all IVDUs in a defined area was identified before the advent of HIV testing in Ireland. A follow-up study examined the seroprevalence of HIV infection in the cohort in 1991 and showed that 47 respondents (57%) were seropositive and eight deaths had occurred<sup>4</sup>. The present study aims to calculate the seroprevalence of HIV infection in the original cohort, assess current health status in relation to HIV infection and describe the present use of illicit drugs.

## Methods

Sixty seven of the eighty-two people were at some time registered with the authors' general practice; much relevant information was available on this group from clinical records. Practice held information was verified and supplemented by contacts with medical, drug-treatment and nursing agencies dealing with the same patients. Seven of the cohort are now living outside Ireland. Full information was not available on the remaining eight patients, but other care workers and community organisations were able to provide some information in strict confidence. Data collected included HIV status and disease staging, year of HIV test, health status and current drug use. The disease staging used is that of the Centre for Disease Control, Atlanta, pre 1993.

## Results

HIV status: By early 1994, 53 persons (65%) were known to be HIV antibody positive. Thirteen (16%) have tested negative and HIV status is unknown in sixteen (19%) persons. Table 1 compares the 1991 and 1994 figures and shows that in a four year period, a further six members of the original cohort have become seropositive.

**Table 1. Results of HIV Testing Among the Cohort**

	1991 (Deaths)	1994 (Deaths)
Seropositive	47	53 (18)
Seronegative	9	13 (2)
Unknown	26	16 (1)
Totals	82 (8)	82 (21)

At present, 70% of the males and 50% of the females in the group are known to be HIV positive.

Health status in relation to HIV infection: Table 2 shows that of the 53 who tested HIV positive, 18 (15 males and three females) have died. Of the 13 who tested HIV negative, two have died; among the 16 whose serostatus is unknown, there has been one death. Of the 21 deaths, 14 were HIV related, two were due to other medical causes (pulmonary embolus, trauma) and five were drugs related, due to either accidental overdosage or suicide.

Among the remaining 35 HIV positive members of the cohort, seven have now had an AIDS defining illness confirmed, 11 are currently in CDC stages II or III and the health status of 17 is unknown.

The 11 surviving seronegative members of the cohort are well.

Seven of the remaining 15 whose sero-status is unknown are well; all had stopped drug use prior to 1985. There is no information available on eight of this group.

Drug usage since 1985: 36 (44%) persons have continued to inject drugs, principally heroin, since 1985; of the 36, 32 are HIV positive, two are HIV negative and the sero-status of two is unknown. Of the 36, 19 are reported to have injected drugs during 1994.

**Table 2. Health Status in Relation to HIV infection**

<i>Health status</i>	<b>HIV status</b>			<i>Total</i>
	<i>Seropositive</i>	<i>Seronegative</i>	<i>Unknown</i>	
RIP	18	2	1	21
AIDS defining diagnosis	7	0	0	7
CDC11/111	11	0	0	11
Well	0	11	7	18
Unknown	17	0	8	25
<b>Total</b>	<b>53</b>	<b>13</b>	<b>16</b>	<b>82</b>

## Discussion

HIV infection in Dublin is predominantly related to intravenous drug use and is concentrated in inner city areas. These areas are characterised by poor housing, lack of recreational facilities, high levels of unemployment and poor levels of educational achievement. Studies to date on drug use confirm the high levels of opiate use in preference of other drugs, and intravenous use of these drugs, as has occurred in Edinburgh<sup>5-2</sup>.

The study cohort was originally identified from practice records, the Drugs Advisory and Treatment Centre, the local Youth Action Committee, local community workers, public health nurses, social workers, local clergy and from interviews with intravenous drug users (IVDUs). The principal conclusions of this study were:

1. *By 1981, 10% of the population in the age group 15-24 had used heroin intravenously. All of the IVDUs in this age group lived in a single local authority housing complex (pop. 1500) and constituted 19% of the 15-24 year olds in the complex.*
2. *Heroin use reached a peak in 1981 and then gradually became less frequent. This was due in part to migration from the area and in part to lower availability of the drug.*
3. *Fifty-nine percent of the respondents had used heroin intravenously by age 19. Intravenous drug use was usually intermittent and respondents sometimes abstained for weeks or months before returning to heroin use.*
4. *Peer pressure, family problems, boredom, lack of self esteem, ignorance of drug effects and easy availability of drugs were among the reasons given for starting to use drugs and for returning to drug use after a period of abstinence.*

The Merchant's Quay F area of Dublin's south inner city was one of the first parts of the city to feel the impact of heroin use in the 1970's; at the peak of the city's drugs epidemic in the early 1980's, the area was a focus for huge numbers of drug users and pushers. The uncontrolled use of injected drugs and the sharing of scarce equipment were commonplace at the time; the true impact of these practices is now clear in terms of the spread of HIV infection among the young people who lived there. The cohort of 82 IVDUs identified in 1985 now has a known prevalence of HIV infection of 65%; the potential is for this figure to be even higher, as only 80% of the cohort is known to have had a HIV test.

Among the 53 who have tested positive, the consequences have been grim; 18 have died, seven have AIDS and 32 have continued to inject drugs. By contrast, those who have tested negative or whose HIV status is unknown, have suffered far fewer deaths and are much less likely to have continued injecting drugs. Many of those whose status is unknown continue to attend the practice and have been counselled at length about testing; most have made a conscious decision not to have a test and none show any clinical indications of immunodeficiency.

The total number of injecting drug users in Dublin is unknown but has been estimated at around 7,000<sup>13</sup>. Although a prevalence of HIV infection of around 15% has been suggested for the overall population of IVDUs<sup>1</sup>, the extremely high prevalence of 65 reported in this cohort shows that this low figure is not uniformly distributed. In other inner city pockets in which heroin use first became epidemic in the early 80's, it is likely that similar high prevalences are to be found.

The significance of these foci of infection lies in the intense social and primary care consequences of so much illness and death concentrated in the youth of areas which have already suffered the depredations of unemployment, drug-related crime and hopelessness. Within a one mile radius of the area described in this study, lie two identical communities which have been affected as severely but in which no similar cohort of IVDUs is available to document the impact of HIV. Although much has been done to provide an infrastructure of care for IVDUs and HIV positive patients throughout the city, the special needs of areas such as these must also be addressed. As an example, the continuing absence of a community drug treatment centre for these populations must be urgently addressed. Recent initiatives by the Eastern Health Board and local groups of general practitioners have provided many areas of Dublin with community drug treatment centres using a philosophy of harm reduction to provide methadone maintenance and needle exchange facilities. These initiatives have proven very successful in providing care to previously nationalised IVDUs and have an important preventive role. However, the south inner city remains one of the areas without such a service, a situation which must be remedied soon.

The general area has also seen a recent rise in the numbers of young people injecting or smoking heroin for the first time, is of great concern that the conditions of deprivation, easy availability,

ignorance or hopelessness which originally led to the drug use problems in Dublin's inner city have not been eradicated and continue to claim victims.

The differences in continuing injecting behaviour by the seropositive and other group C is of importance. Almost all those known to be active IVDUs are HIV positive. Further research is essential to explore whether continuing drug use has led to most IVDUs becoming infected or whether those who found they were HIV positive have had much less incentive to stop injecting.

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