

***NEEDLE EXCHANGE IN THE EASTERN HEALTH BOARD REGION:
AN ANALYSIS OF FIRST ATTENDEES 1990-1997***

AUTHORS:

LOUISE MULLEN BA MSC,
Research Psychologist, Eastern Health Board,
Drugs and AIDS Service, Baggot St. Hospital.

JOSEPH BARRY MSC MD FFPHMI FRCPI
Specialist in Public Health Medicine,
Eastern Health Board.
Senior Lecturer in Public Health,
Dept. of Community Health and General Practice,
Trinity College Dublin.

Summary

Injecting drug users are a major risk group for infection with the human immunodeficiency virus and other infectious diseases. Needle exchange programmes are based on a harm reduction approach and are designed to meet the needs of injectors who are unable or unwilling to cease injecting. The aim of needle exchange programmes is a reduction in the risk behaviours of injectors and a subsequent decrease in the incidence and transmission of infectious disease. These behaviours include the sharing of injecting equipment and unsafe sexual practices. Despite some behaviour change a substantial number of injectors continue to share injecting equipment and engage in risky sexual practices. This study analyses data from the years 1990-1997.

The number of injecting drug users who attended the Eastern Health Board needle exchange programme increased from 1990-1997, with a recent increase in the proportion of female attenders. The number of young injectors is increasing, and a large proportion of attenders are under twenty years of age. Almost one third of users have a very short duration of injecting, less than one year.

Decreases in high risk behaviour at first attendance are seen over the time period. Attenders who have been injecting less than one year have less needle sharing than those injecting longer. The high risk behaviours of needle sharing and not using condoms are significantly related to one another. Female injectors have a significantly higher proportion of needle sharing than their male counterparts.

The young injectors age group show an increase in numbers of attenders over the time period. Young males have decreased in number from a peak in 1995 whereas numbers of young females have steadily increased. Half of young injectors have been injecting less than one year. Very few of the young attenders have had any treatment; needle exchange may be the first contact with services for many.

Young injectors are not significantly different in their proportion of needle sharing than injectors age twenty and over. Needle sharing is significantly lower in the recent onset injectors, especially those injecting less than one year.

Young injectors are significantly more likely to use a condom during sexual encounters than the overall population of injectors, but young females are significantly less likely to have their partners use a condom during sexual encounters than young males. Young injectors with one partner are much less likely to use condoms during sex.

High risk behaviours at first attendance show a decreasing trend and it appears that prevention messages are being heeded, though prevalence of high risk behaviour remains unacceptably high. The needle exchange programme is effective at attracting high risk, female and young injecting drug users. In Dublin, injectors appear to be coming to needle exchange very soon after initiation of injecting. This is very important in terms of the potential for prevention and intervention.

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Introduction

Injecting drug users are a major risk group for infection with the human immunodeficiency virus (HIV) and other infectious diseases. The estimated prevalence of HIV in the European Union adult population aged between 15-59 years is 198 cases per 100, 000. Forty two percent of these cases are related to intravenous drug use (1).

The aim of needle exchange programmes is a reduction in risk behaviours of injectors including sharing of injecting equipment and unsafe sexual practices and a subsequent decrease in the incidence and transmission of infectious disease. Exchanges are ideally made as accessible as possible with none or low thresholds for eligibility, minimal identification requirements and informal relationships with staff. The exchange is potentially an important channel to other services (2).

Cities that are characterised by community outreach programmes and good access to sterile injecting equipment have successfully prevented HIV epidemics and seroprevalence has remained stable and low. In these cities prevention measures were put in place early (1987-1988), before any rapid transmission of HIV began (3). Needle exchange is an integral part of the prevention strategy for the reduction in transmission of infectious disease and attendance has been shown to reduce sharing behaviours (4).

1.1 Public health concept of harm reduction

The complex nature of drug addiction has meant that no single intervention measure, whether preventive or treatment, is enough to prevent or reduce drug misuse. The harm reduction approach is based on the principles of public health. The approach recognises that the goal of complete cessation of drug misuse for many drug users is unrealistic in the short term. The goal of a reduction in potential harm is a legitimate, pragmatic and humane response to this problem.

Harm Reduction is based on three basic assumptions (5):

- (a) the approach is an alternative to the moral/criminal and disease model of drug use and addiction, and recognises abstinence as an ideal outcome but accepts alternatives that reduce harm
- (b) approach is primarily 'bottom up', based on client advocacy
- (c) there is low threshold for access.

Needle exchange programmes seek to reduce injection related harm in drug users by the reliable and consistent access to a hygienic needle supply and by a knowledge and means educational approach. This strategy enables behavioural change by providing injecting drug users with information about the changes that need to be made, and the means to acquire sterile injecting equipment. The provision of a non-

judgmental, confidential service encourages the building of a relationship between the health services and what is recognised to be a highly marginalised group. Service providers educate, encourage and empower injecting drug users to reduce their individual risk and the risks to partners, children and the wider community, of contracting and spreading infection.

1.2 Risk behaviours in drug users

Brown in a review article of risk behaviours and the transmission of HTV infection concluded that needle sharing is the crucial transmission route within the injecting drug using community and the sexual transmission route is likely to be the most common route out of the community and into the wider population. Needle sharing rates range from 13% to 73% in international studies (1).

1.3 Young injectors

There are few studies in the international literature specifically concerned with young injectors. Fennema (6) in a Dutch cohort study found that a number of young users (under 25 years of age) had short injecting histories and had a lower seroprevalence than the whole cohort. Young injectors and recent onset injectors were found to be at greater risk of HTV infection than the older and longer term users due at least in part to behavioural factors.

1.4 Injecting drug users in Ireland

In Ireland, 98% of heroin misusers in treatment are resident in the Eastern Health Board (7). The 1997 European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) report indicates that Ireland has the youngest mean age of treated drug use at 23.6 years (1995 figures) and two thirds of treated drug users are under the age of 25 years (8).

The overall number and percentage of young people in the 15 to 19 age group attending for drug treatment in the greater Dublin area has increased from 336 (17%) in 1990, to 1170 (29%) in 1996 (7). The patterns of drug use among teenagers has changed as well and current trends show younger opiate users more likely to smoke heroin than inject.

1.5 Rationale for study

This study is an analysis of the database from the Eastern Health Board needle exchange programme. The analysis will describe the characteristics and behaviours of the injecting drug population who use the needle exchange programme in Dublin and identify any trends over time. Data on young injectors is analysed as a subset to describe this important sub-group and their characteristics.

Aims and Objectives

2.1 Aims

The aims and objectives of this study are:

2.1.1 Needle exchange attenders

Aim

To analyse the existing database on injecting drug users who attended the Eastern Health Board needle exchange programme from 1990-1997.

Objectives

To provide a descriptive analysis of injecting drug users who were attenders at the Eastern Health Board needle exchange programme from 1990-1997, including describing the socio-demographic characteristics, number of years injecting drug use, drug related characteristics, and risk behaviours of attenders and to identify trends over time.

To identify factors associated with high risk behaviours; sharing of injecting equipment, lack of condom use, and the number of sexual partners.

2.1.2 Young injectors

Aim

To focus particular attention on young attenders between the ages of 15 and 19 years.

Objectives

To provide a descriptive analysis of a subgroup of attenders, young attenders between the ages of 15 and 19 years; including describing the socio-demographic characteristics, number of years injecting drug use, drug related characteristics, and risk behaviours of attenders and to identify trends over time.

To determine if young injectors have increased needle sharing and high risk sexual behaviour.

Methods

3.1 Study population

The study population consists of all injecting drug users who attended the Eastern Health Board Needle Exchange Programme from 1990-1997. Data is collected from eleven clinics in the greater Dublin area. The first clinic was established mid-year in 1989 and data from this year was discarded. All data on first attendance for the years 1990-1997 was used in the analysis.

3.2 Information system and database

The Health Information System was established at the initiation of the needle exchange programme. All needle exchange programme sites participate in the system. Data is routinely collected at source by outreach workers in the presence of the drug user. Data is collected anonymously on all attendees and each is given a unique number. This number is assigned at a central location where data from all the clinics is coded and entered into the Health Board's mainframe computer.

3.2.1 Interviews with staff

Informal interviews were conducted with three outreach workers (two senior)/ the clerical officer responsible for coding and inputting the data and a public health specialist in charge of health information systems in the health board. The purpose of these interviews was to determine the way in which information was collected and coded from the individual drug users and the clinics and progressed through the system.

3.2.2 Data form content

The following variables were analysed for this report: socio-demographic data; name/ using only first and last initials to preserve anonymity within the data system/ sex/ date of birth. The drug behaviour data collected was: number of years of injecting drug use and the number of detoxifications and interest in methadone treatment. The following data on risk behaviour in the previous year was collected: needle sharing/ number of sexual partners and condom use. The following data is also collected on first attendance and on each subsequent attendance; date of visit/ needles in (number of needles returned)/ needles out (number of needles supplied)/ and were condoms taken.

3.3 Data analysis

Data was downloaded from the mainframe health board computer and analysed using the SAS institute Jump In® programme and Epi-info 6. Frequency distributions were completed for all nominal variables and means/ medians and ranges were computed for continuous variables. To test association between variables, Pearson's chi square tests and Fisher's Exact test were used for univariate comparisons. For assessing trend/ chi square tests for trend were used.

Results

4.1 Overview

The number of injecting drug users who attended the Eastern Health Board needle exchange programme increased from 1990-1997 as is shown in Table 1.

Table 1. Number of first attenders at needle exchange from 1990-1997

Year of first attendance Number (percent)

Year of first attendance	Number (percent)
1990	350 (6%)
1991	237 (4%)
1992	590 (10%)
1993	906 (15%)
1994	956 (16%)
1995	1217(20%)
1996	730 (12%)
1997	1039 (17%)
Total	6025

The total number of attenders is 6025. Due to missing data or unusable data this denominator changes with different variables during the analysis.

4.1.1 Demographics

Gender

New attenders are primarily male (80.11%). Table 2 shows the numbers and proportions of male and female first time attenders. The number of attenders has increased for both sexes. The proportion of female attenders was stable from 1990-1995 with an increase seen in 1996 and 1997. This is a statistically significant trend.

Table 2. First attenders at needle exchange by gender

Year of first attendance	Males	Females
1990	283 (82%)	62 (18%)
1991	195 (84%)	36 (16%)
1992	480 (81%)	109(19%)
1993	735 (81%)	171 (19%)
1994	780 (182%)	166 (18%)

1995	987 (81%)	225 (19%)
1996	494 (76%)	159 (24%)
1997	698 (76%)	226 (24%)
Totals	4652 (80%)	1155 (20%)

χ^2 tr= 16.85, p-value= .00004

Age

The mean age of first attenders is 25.04 years with a median age of 24 years, range 15-58 years. Age was categorised into four groups for further analysis; 15-19 years, 20-24, 25-29, 30 and over. A large proportion of attenders are young (15-19) and there is a statistically significant association between the sex of the injector and which age group they are from, as is shown in Table 3. Males predominate but there are proportionately more females in the younger age groups. Fifty-seven percent of the population is under 25 years old and 21% are under the age of 20 years.

Table 3. Age group of male and female first time attenders

Age groups:	Male	Female	Number (%)
15-19 years	923 (75%)	303 (25%)	1226 (21%)
20-24	1652 (80%)	425 (20%)	2077 (36%)
25-29	1119 (82%)	247(18%)	1366 (24%)
30+	931 (84%)	178 (16%)	1109 (19%)
Totals	4625	1153	5778

χ^2 tr= 30.01, p-value= .00001

4.1.2 Characteristics of injecting and drug use

Number of years injecting

The overall mean number of years of injecting drug use for first time attenders is 4.1 years, see Table 4. Males have proportionately longer duration of injecting. Almost one third (29%) of users have a very short duration of injecting, less than one year.

Table 4. Number of years injecting drug use in male and female first time attenders

Number of years IDU	Male	Female	Total
<1 year	1283 (28%)	403 (35%)	1686 (29%)
1-4	1810 (39%)	478 (42%)	2288 (40%)
5+	1495 (33%)	259 (23%)	1754 (31%)
Totals	4588	1140	5728

$\chi^2_{tr} = 45.26, p < .0001$

Treatment and Exchange services

The exchange programme supplies needles and syringes at the first attendance. The mean number of needles given out to injecting drug users at first attendance is 4.0. Condoms are also offered and 47% took condoms.

Number of sexual partners

The mean number of sexual partners in the previous year was 2.55. Males were twice as likely to have more than one sexual partner than females. Two thirds of female injectors had one partner in the previous year, see Table 5.

Table 5. Number of sexual partners in the previous year for male and female injectors at first attendance

Number of sexual partners	Male	Female	Number (percent)
None	769 (18%)	211 (19%)	980 (18%)
One	2110 (48%)	694 (64%)	2804 (51%)
Multiple (more than one)	1488 (34%)	182 (17%)	1670 (31%)
Totals	4367	1087	5454

$\chi^2_{tr} = 67.97, p\text{-value} < .0001$

4.1.3 Risk behaviours and related factors

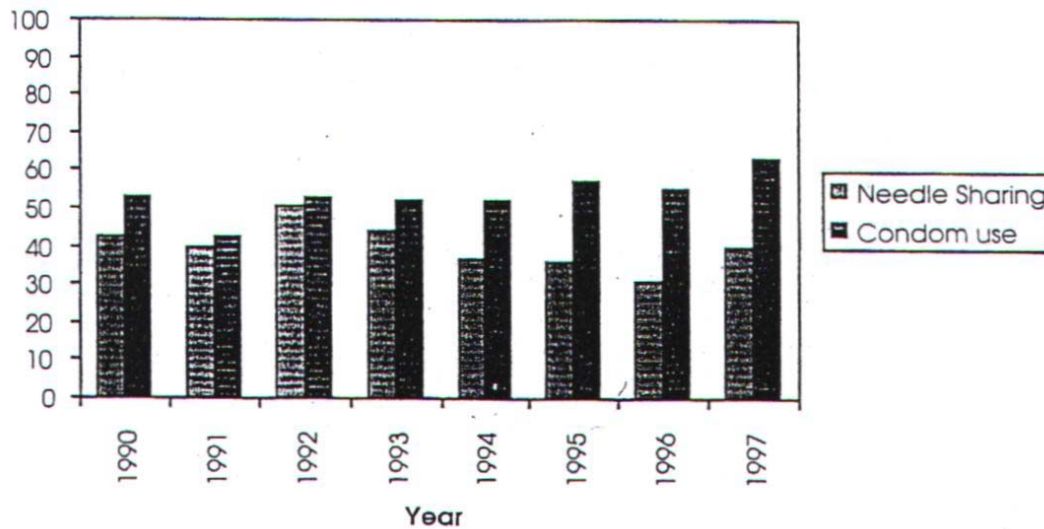
Risk behaviours reported at first attendance are needle sharing and condom usage in previous year.

Trend over time

Decreases in high risk behaviour at first attendance are seen over the time period. Figure 1 shows the changes in risk behaviour of first time attenders over the 1990-1997 time period. Needle sharing has shown a significant decreasing trend ($\chi^2_{tr}=24.81, p < .0001$). The use of condoms during sexual encounters has shown a significant increasing trend ($\chi^2_{tr}=19.29, p=.00001$).

Figure 1. Percentage of first attenders needle sharing and using condoms 1990-1997

Risk Behaviours of First Time Attenders 1990-1997



4.1.4 Needle Sharing

The overall prevalence of needle sharing at first attendance in the previous year is 2020, 39% of injectors.

Needle sharing and gender

Table 6 illustrates the patterns of high risk behaviour of male and female injectors. Female injectors are engaged in more risk taking behaviour compared to males. Female injecting drug users have a significantly higher proportion of needle sharing than their male counterparts. The prevalence of needle sharing was 38% for males compared with 44% for females.

Table 6. Needle sharing of male and female injecting drug users.

	Needle Sharing	Not Sharing	Total
Male	1568 (38%)	2549 (62%)	4117
Female	448 (44%)	564 (56%)	1012
Totals	2016	3113	5129

$\chi^2=13.02, p=.0003$

Needle sharing and age group

Needle sharing is greatest in the 20-24 year age group, and is lowest in the 30+ age group. Table 7 shows that the highest prevalence of needle sharing is occurring in the age group (20-24) with the highest number and proportion of attenders.

Table 7. Needle sharing of first attenders by age group

Age Group	Needle Sharing	Not Sharing	Total
15-19	424 (39%)	663 (61%)	1087
20-24	776 (42%)	1051 (58%)	1827
25-29	480 (39%)	738 (61%)	1218
30+	335 (34%)	646 (66%)	981
Totals	2015	3098	5113

χ^2 tr=7.16, p=.0058

4.1.5 Condom Usage

Fifty-five percent (2825) of first time attenders report using a condom during sexual encounters in the previous year.

Condom usage and gender

Table 8 illustrates the patterns of high risk behaviour of male and female injectors. Female injectors are engaged in more risk taking behaviour than males. Female injecting drug users are less likely to have a condom used by their partner during a sexual encounter than males.

Table 8. Condom usage of male and female first attenders

	Condom Use	Lack of Condom Use	Total
Male	2321 (56%)	1804 (44%)	4125
Female	503 (49%)	524 (51%)	1027
Totals	2824	2328	5152

χ^2 =17.64, p=<.0001

Condom usage and age group

Condom usage is significantly related to age group with the younger age groups much more likely to report condom use, see Table 9 below.

Table 9. Age group and condom usage of first attenders

Age Group	Condom Use	Lack of Condom Use	Total
15-19	601 (61%)	379 (39%)	980
20-24	902 (55%)	733 (45%)	1635
25-29	515 (50%)	507 (50%)	1022
30+	405 (53%)	356 (47%)	761
Totals	2423	1975	4398

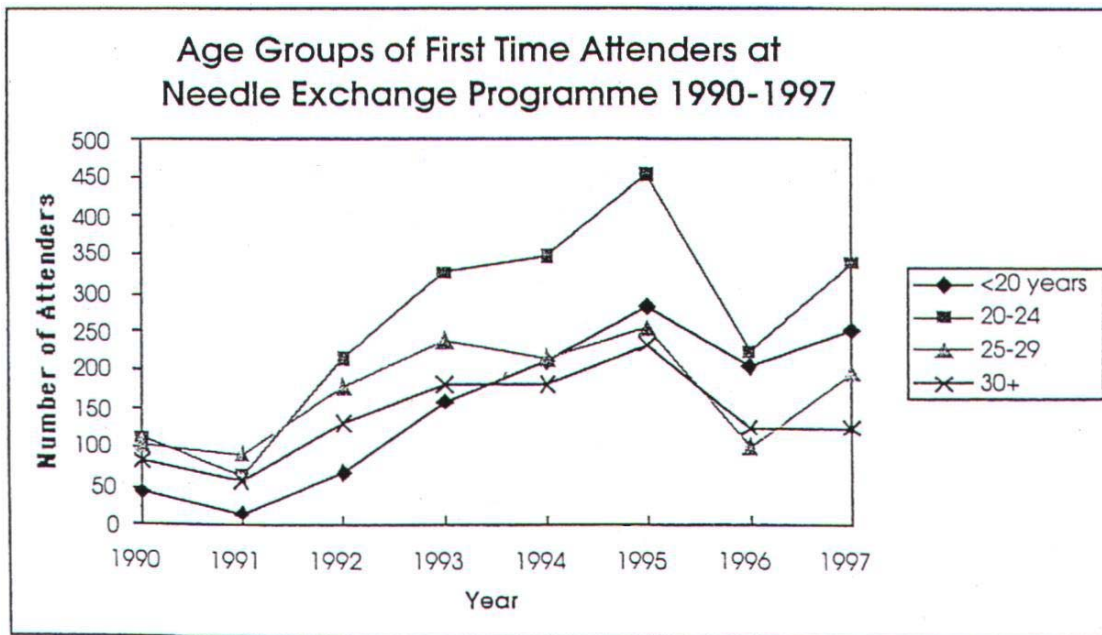
$\chi^2_{tr}=17.06, p=.00004$

4.2 Young Injecting Drug Users 15-19 years.

Overview

There were 1224 (21%) first time attenders between the ages of 15 and 19 years old. Figure 2 below shows the age group distribution of young attenders in relation to the overall population. The young injectors have an increase in the number of attenders over the time period, and now represent the second largest age group.

Figure 2. Age groups of first time attenders at needle exchange programme 1990- 1997



4.2.1 Demographics of young injectors

Seventy-five percent of the young attenders are male. The overall number of young injecting drug users shown in Table 10 has increased over the time period. Young males have decreased in number from a peak in 1995 whereas the number of young females has steadily increased from 1990-1997 to 32% of young first time attenders. The mean age of young injectors is 18.59 years.

Table 10. Number and gender of Young of attendance

Year of attendance	Males	Females
1990	38 (86%)	6 (14%)
1991	15 (94%)	1 (6%)
1992	58 (88%)	8 (12%)
1993	119 (74%)	41 (26%)
1994	164 (80%)	42 (20%)
1995	216 (79%)	59 (21%)
1996	138 (68%)	65 (32%)
1997	169 (68%)	80(32%)
Totals	917	302

X²tr= 19-40, p= .00001

Number of sexual partners

The mean number of sexual partners in the previous year for young injectors is 3.06 (analysis excludes subjects who were not sexually active, i.e. no sexual partners in the previous year), 42% have had more than one sexual partner (multiple partners) in the previous year, and there was a range of 1-40 partners. The variable “number of sexual partners” was grouped into three categories and is shown in Table 11. Females are much more likely to have had only one sexual partner in the previous year compared to males.

Table 11. Number of sexual partners of young injectors

No. of sexual partners	Male	Female	Total
None	144 (16%)	55 (19%)	199 (17%)
One	321 (36%)	172 (58%)	493 (41%)
Multiple (>1)	428 (48%)	70 (24%)-*•	498 (42%)
Totals	893	297	1190

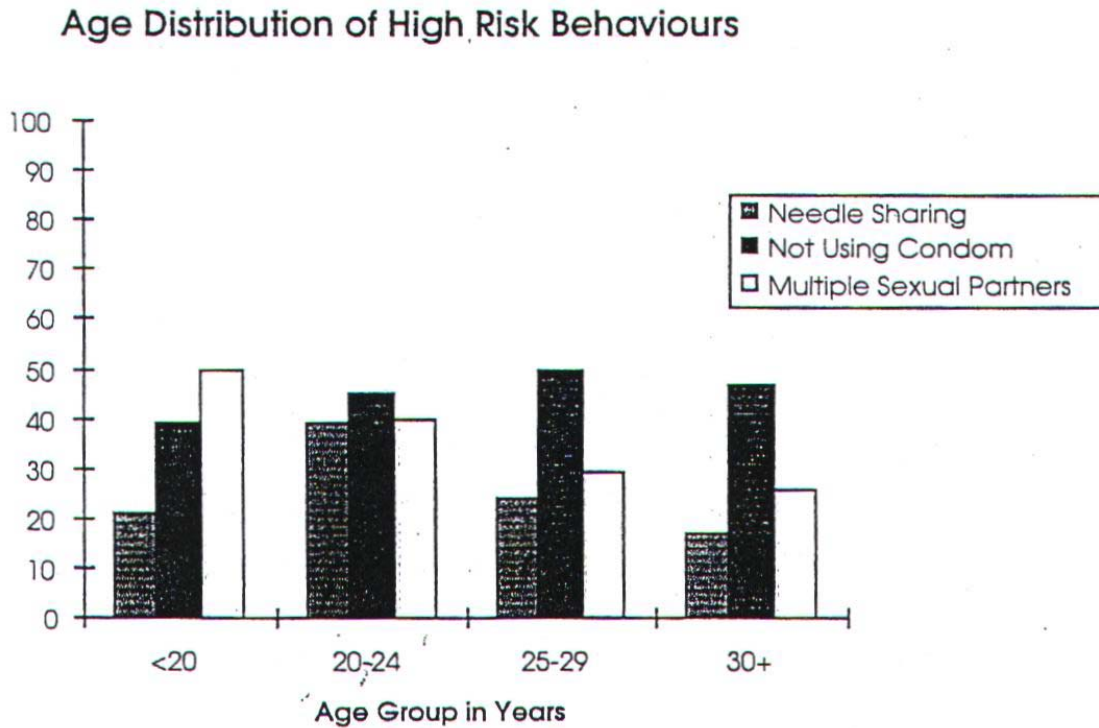
x²tr=30.50, p=<.00001

4.2.2 Risk behaviours and related factors for young injectors.

Overview

Figure 3 describes the age distribution of risk behaviours. Needle sharing shows a generally decreasing trend with a peak prevalence in the 20-24 age groups. Needle sharing is lower in the youngest and older age groups (χ^2 tr=7.614, p=.0058). The proportion of injectors reporting condom usage decreases with age (χ^2 tr=17.056, p=.00004). The proportion of injectors with multiple sexual partners also decreases with age (χ^2 tr=148.91, p=<.0001).

Figure 3. Age group distribution of needle sharing, lack of condom use and sexual partners in young injectors

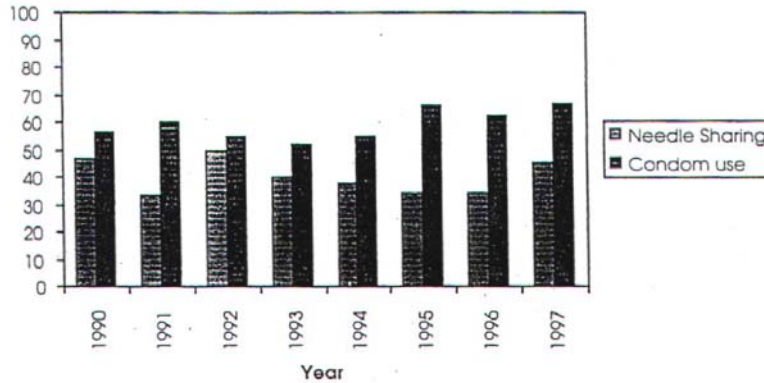


Trend over time

There has been a decrease in the risk behaviours of young injectors over the time period 1990-1997 as is shown in Figure 4. Needle sharing prevalence has fluctuated from year to year but there has been a general decrease which is not statistically significant (χ^2 tr=0.17, p=.68). Condom use has increased significantly over the seven years (χ^2 tr=5.21, p=.02).

Figure 4. Needle sharing and condom usage of young injectors at first attendance 1990-1997

Risk Behaviours of Young Injectors
1990-1997



4.2.3 Needle sharing

Overall prevalence of needle sharing

Young injectors have a 39% needle sharing prevalence. This is identical to the prevalence in the overall population of injecting drug users.

Needle sharing and number of years injecting

Table 12 shows that needle sharing is significantly lower in the recent onset injectors, especially those injecting less than one year. There is a significant increase in the proportion of needle sharing as the length of time injecting increases.

Table 12. Number of years injecting and needle sharing by young injectors

Number of years IDU	Needle Sharing	Not Needle Sharing	Total
Under 1 year	166 (34%)	320 (66%)	486
1-4 years	241 (42%)	329 (58%)	570
5 + years	14 (61%)	9 (39%)	23
Totals	421	658	1079

$$\chi^2_{tr}=11.11, p=.00086$$

Needle sharing and condom usage in young injectors

Needle sharing and condom usage are significantly associated in young injectors. Table 13 shows attenders who do not needle share are more likely to use a condom compared to those who do needle share.

Table 13. Needle sharing behaviour and condom usage in young injectors

	Condom Use	Lack of Condom Use	Totals
Needle Sharing	185 (51%)	178 (49%)	363
Not Needle Sharing	392 (68%)	188 (32%)	580
Totals	577	366	943

$\chi^2 = 25.96$, $p < .0001$

4.2.4 Condom Usage

Overall prevalence of condom usage

Young injectors had a 61% prevalence of using a condom during sexual encounters in the previous year. Young injectors' condom use is significantly higher compared to the overall population of injectors (55%), ($\chi^2 = 15.52$, $p < .0001$).

Prevalence of condom usage and gender in young injectors

Differences in risk behaviour for male and female young injectors are described in Table 14. Females are significantly less likely to have their partners use a condom during sexual encounters

Table 14. Condom usage of male and female young injectors

	Male	Female	Total
Lack of Condom use	304 (36%)	130 (48%)	434 (39%)
Condom Use	535 (64%)	141 (52%)	676 (61%)
Totals	839	271	1110

$\chi^2 = 11.85$, $p = .0007$

Number of sexual partners in the previous year and condom usage in young injectors

Injectors with one partner were compared for high risk behaviours to injectors with multiple partners (Table 15). Young injectors with one partner are much less likely to use condoms during sex. Injectors with multiple sexual partners are more likely to use condoms.

Table 15. Number of sexual partners and condom usage of young injectors

Sexual Partners	Condom Use	Lack of Condom Use	Total
One	267 (55%)	220 (45%)	487
Multiple (>1)	334 (68%)	159 (32%)	493
Totals	601	397	980

$\chi^2 = 17.25, p < .0001$

Discussion

5.1 Needle exchange programme

The analysis of the first attendance data provides evidence of trends in the characteristics of the drug using population attending the needle exchange programme in Dublin. The proportional increase in young and female users is clearly seen over time. The needle exchange programme is effective at attracting high risk, female and young injecting drug users. This is in contrast to what is seen in the international literature where needle exchange is often seen as a last option and attenders are often older with well established injecting careers. High risk behaviours at first attendance show a decreasing trend over the time period, and it appears that prevention messages are being heeded, though prevalence of high risk behaviour remains unacceptably high.

5.1.1 Gender

This study finds evidence that both the number and proportion of female injectors has increased over the eight years of the needle exchange programme, especially in recent years. This change is greatest in the younger age groups. This could reflect the change in the wider society of a narrowing of the gender gap between men and women. Females have a higher proportion of recent onset of injecting, and 35% have been injecting less than one year. Females are engaging in more risk behaviours with a significantly higher proportion of needle sharing (44%) compared to males (38%). The proportion of females (51%) not using a condom during sexual relationships is also higher compared to males (44%). This could be due to the high proportion of females (64%) in the present study who had only one sexual partner and appear to be in long term relationships.

5.1.2 Recent onset of injecting

In Dublin injectors are 'coming to needle exchange soon after the initiation of injecting. This is very important in terms of prevention as the longer the length of injecting drug use the greater the probability of high risk behaviours. There is evidence in the international literature that transmission of infection occurs in the early years of injecting drug use (9).

5.1.3 High risk behaviour

Needle sharing is a common occurrence with 39% of injectors reporting needle sharing in the previous year. Needle sharing occurrence is generally higher in the younger age groups and decreases significantly in those over 30 years of age. Needle sharing is also greater in drug users who have been injecting more than one year. Those injecting less than one year are less likely to share needles.

The use of condoms during sexual encounters is much more common in the young injectors. The change in legislation on condom usage in 1993 means that many young injectors would have had the benefit of safe sex messages and have a higher awareness of condoms. The older attenders may not have yet adapted to wearing condoms, or are in long term relationships and feel they are not necessary. Injectors with multiple sexual partners appear to be protecting themselves to a greater degree than those with one sexual partner by wearing condoms during sexual encounters.

5.1.4 Prevention and services

In relationships where both partners are injecting, attempts to stop or reduce drug use are very difficult to maintain if both partners do not remain committed to treatment or abstinence. The sexual relationship is a key site for consideration in prevention programmes. Where risks are being taken as part of a long term sexual partnership targeting the couple for intervention may be more productive. The health services, armed with health promotion's philosophy of helping people to help themselves by making it easier for them to make the safer choice, can foster and encourage and use these mechanisms if they recognise them.

Friedman (10) looked at rates of seroconversion in low (under 8%) and high prevalence (21% or higher) cities and suggested that different approaches to prevention need to be considered. In high seroprevalence cities, needle sharing is the major risk factor while in low prevalence cities infection is spread through 'pockets of infection' in socio-behavioural groups that engage in high risk behaviours and have high seroprevalence. The 1993 prevalence of HTV in Dublin was 8% which by Friedman's designation makes it a low prevalence city where transmission occurs within relatively small social networks. This is consistent with what we know about the Dublin injecting drug users, that they come from marginalised areas of the city where poor socio-economic conditions are the norm. Cycles of poverty and imprisonment reinforce the risks that exist in these groups. No prevention programme can be as effective as reducing the numbers of individuals who come into drug use in the first place. This is a problem of society and must be addressed not only by the health services but in the economic and political spheres.

5.2 Young Injectors

The proportion of young injectors, aged 15-19 is 21% of needle exchange first attenders. The number and proportion of young injectors has increased steadily from 1990 to 1997. Ireland has a young population and this is reflected in the figures. Nevertheless/ 60% of drug users attending needle exchange are under 25. This is different from what is found in the international literature, where needle exchange attendance is generally associated with older-injecting drug users and injectors with long injecting careers.

5.2.1 High risk behaviours of young injectors

The prevalence of needle sharing in young injectors is identical to that of the overall population (39%). Condom use was greater in the young injectors, especially males, and those with multiple sexual partners. Young injectors with multiple sexual partners are one and a half times as likely to needle share. Using a condom during sexual encounters and having a recent onset of injecting lowered the odds of needle sharing. Again this is a similar pattern to the overall population. The first year of injecting appears to be a very important time in terms of self protection and risk reduction.

5.2.2 Vulnerability of young injectors

Young users may be at greater risk for prostitution or crime to support drug habits. The income of young injectors and their income generating ability is very small. Prostitution by both male and female injectors exposes the user to an increased risk of infection with HTV, and sexual and physical violence. In addition to the harm prostitution can bring to the injecting drug user it provides a bridge for infection to enter the wider community. Income generated by crime exposes the drug user to a violent and anti-social way of life, which often ends in imprisonment. Prison exposes users to infection through the shared use of equipment and the high prevalence of HIV and hepatitis infections. Any infections transmitted in prison are transmitted to contacts outside of the prison when release occurs. Drug users' pattern of imprisonment, short stays but many in number, put them at risk for getting and transmitting the virus.

Experimentation with heroin use, especially smoking heroin, is very much in evidence in popular youth culture today. The worlds of music, fashion, literature, and film combined with the erroneous belief that smoking heroin is not addictive may lead young people to experiment with hard drug use. The peer pressure to conform is stronger in adolescence than in older adulthood. There is a romantic notion associated with counter culture and the rebellion of youth, which is natural in context. In marginalised areas where real life does not offer up much, the lure of fantasy and escapism is strong.

The outreach workers are seeing an increase of young people who started smoking heroin, coming into the needle exchange quite quickly as they have to move on to injecting with its more efficient effects. This transition may occur at a time of shortage of the supply of the drug or when an individual is short of money. Young people may be initiated into drug injection by other users; peers or partners who supply the equipment. Young users may not have the experience or the money to organise their personal supply of safe injecting equipment. Young injecting drug users are also reported to lend injecting equipment more often than older users. The outreach workers describe reported emotions of despair and self loathing by young injectors expressing disbelief at the plight they find themselves in. The desperation for the drug alerts them to the nature of their addictions as it moves from a recreational smoking habit to a desperate craving and injecting problem. Forty-eight

percent of the 15-19 year olds who are coming to needle exchange have been injecting less than one year (this is the shortest duration we can record). There is some informed anecdotal evidence that young users are presenting to needle exchange very quickly after their first injection.

Young injectors are aware of the risks of sharing needles and are concerned to protect themselves. This situation is a tremendous opportunity for intervention and health service provision. Every effort must be made to ensure that services are accessible, non-judgmental, accommodating and effective so that young people are encouraged to embrace the wider services that are available to them and that they are protected from infection and the social disintegration that can occur with prolonged drug misuse.

5.2.3 Prevention services and opportunities

It is crucial that young people do not encounter barriers to protecting themselves, such as parental permission, mandatory treatment, and statutory notification. Anything that drives them away from services increases their risk of harm. The statutory services may find this situation leaves them in an awkward position as there are constitutional restrictions on services that can be offered to minors. The policy of mandatory consultation with a psychiatrist appears to be preventing young users from availing of services. This compulsory visit changes the philosophy of a low threshold of entry to the needle exchange and identifies it much more with an official health board drug service. Anecdotal evidence suggests that young people see this as a deterrent and will refuse to come in the first place and not come back where this policy is in place. The policy may be a good one and in place for good reasons but if it is preventing young people from accessing sterile equipment with which to protect themselves then it needs to be reviewed. One city centre exchange is a non-statutory service that works in co-operation with the health board and participates in the data system of the needle exchange programme. The clinic workers interviewed indicated that this clinic was where many young people now attended as there were no conditions placed on attendance and the services offered. This organisation reports an increase in young injectors in its 1998 annual report (11).

The increased risk of infection among recent onset injectors emphasises the importance of targeting preventive interventions early for them to be most effective. The potential for intervention and prevention in this young cohort has important public health implications. Prevention measures may not have initially been envisioned to be needed by such 'a young population and may not be targeted enough.

Conclusions

The information gained from this analysis of the needle exchange programme can be used to identify groups within the drug injecting community that may need prevention and service programmes targeted to their needs. Young injectors have specific needs that can be met by a service willing to address them. Attention should be paid to female injectors that may need services that take into account their patterns of behaviour and the presence of sexual partners and children in their lives. Sexual risk and injecting risk, though related, need to be addressed as separate facets of high risk behaviour. Injectors' ability and desire to engage in risk reduction can be facilitated by a prevention service with greater knowledge and understanding of injectors' patterns of behaviour.

Quantitative research such as this analysis by nature sacrifices depth of information for breadth of information. Qualitative research projects could fill in the gaps of understanding and knowledge with regards to this drug injecting group. Prevention initiatives will be greatly enhanced by a better understanding of the issues surrounding drug use, risk management and sexual relationships. Once-off research projects that enhance our understanding of issues can really make prevention strategies more effective. Effecting behaviour change is difficult but it is possible; with limited resources, targeted programmes that address the core issues for specific drug users in a community will be the most effective. A multidisciplinary approach is of particular importance. Prevention programmes, treatment and primary healthcare are essential. Of equal importance are social initiatives to expose the causes of the problem, including tackling social deprivation and marginalisation.

Recommendations

1. Targeted prevention strategies for young and female injectors should be made available.
2. An initiative should be launched to encourage risk awareness in young women. The importance of condom use as a preventive measure and the dangers of shared needle use with partners should be emphasised.
3. The reasons for non-use of health services by young injectors should be determined.
4. Qualitative research on young injectors should be undertaken to identify issues surrounding initiation into injecting drug use.
5. Qualitative research should be initiated to explore the context of needle sharing and where and when this behaviour occurs.
6. HTV and hepatitis testing should be linked to risk reduction counselling.
7. HIV and Hepatitis prevalence in needle exchange population should be measured at regular intervals.
8. The policy of mandatory consultation with a psychiatrist for young injectors should be reviewed.
9. Feedback to clinic staff should be provided at regular intervals.
10. Training should be provided to outreach staff on the data system.
11. Information from the needle exchange programme should be made publicly available to complement the research and data reported in the Health Research Board Treated Drug Misuse in Ireland Report (7).

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