MAKING CONTACT

Evaluation of a Syringe Exchange Programme

By

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Making Contact

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EXECUTIVE SUMMARY

The Merchant's Quay Project was established in 1989 by the Franciscan Community in response to an increase in the number of drug users seeking help within the locality. As a voluntary organisation the Project is receptive to the needs of its service users and has the flexibility to respond accordingly. To this end, a Health Promotion Unit was set up within the Merchant's Quay Project in July 1992 to provide a model for working with people who engage in both injecting and sexual risk behaviour. This model concentrates on reducing or eliminating these risks in so far as possible. In 1997, it was decided to undertake an evaluation of the Health Promotion Unit. This Report presents the findings of the evaluative research undertaken from May 1st 1997 to October 31st 1998[1] .

RESEARCH OBJECTIVES

The objectives of this evaluation study are as follows;

- to research the international information available on the evaluation of syringe exchanges and outcome measures;
- to fully define the services provided by the Merchant's Quay Project's Health Promotion Unit;
- to identify the indicators of positive effect for the Health Promotion Unit;
- to collect information on clients' self-reported behaviour at first visit and at a subsequent three month follow-up visit;
- to adjust the collection of information at first contact to include baseline data on these indicators of positive effects;
- to comparatively analyse clients' behaviour according to these indicators and;
- ultimately to evaluate the effectiveness of the service offered by the Health Promotion Unit to the clients.

RESEARCH METHOD

The evaluation was undertaken by means of collecting information on clients risk behaviour at both First Intervention and at a Follow Up Visit. It entailed interviewing clients with the aid of a highly structured questionnaire at the point of intake or as soon as possible thereafter, and asking the attendees for the same pieces of core information, in the same way, at a three month follow-up time period and comparing the results. The research instruments collect information on the following outcome domains; drug use, injecting risk behaviour, sexual risk behaviour, contact with services and health and well-being. Information is based on the self-reported risk behaviour of clients.

[1] The evaluation of the Health Promotion Unit is ongoing, and consequently the relevant data is still being collected from consenting attendees at the Unit.

MAKING CONTACT

A total of 1,337 new clients attended the Health Promotion Unit during the 18 months under investigation. All consented to complete the First Visit Intervention Sheet, and the data collected provides valuable information on the effectiveness of the Heath Promotion Unit in making contact with various sub-groups of injecting drug users.

- The Health Promotion Unit proved highly successful in making initial contact with those injecting drug users who were not attending any other drug treatment service. At the time of presenting at the Unit a total of 48% of the new attendees at the Unit reported that they had never attended any other drug treatment service. Moreover, only 21% of the sample reported that they were in contact with a treatment service when they first presented at the Unit.
- The Unit was also effective in attracting female drug users; 23% of first visit clients were women (n=313). International research illustrates that women are underrepresented in treatment services (Anglin *et al*, 1987; Gossop *et al*, 1990). This is most evident when the number of female first visit clients at the Health Promotion Unit is compared with, for example, the number of female first contacts presenting at the Manchester Syringe Exchange Schemes in 1997, where only 18% of the clients were female (Drug Misuse Database, 1997).
- International research illustrates that syringe-exchanges have not been successful in making contact with young injectors (Paone *et al*, 1995). However, 28% of first visit clients at the Health Promotion Unit were under 19 years of age, and 64% were under the age of 25. This suggests that the service is particularly attractive to young injectors, who tend to be regarded as the 'hard to reach' (Battjes *et al*, 1992). In view of the fact that within Europe, Ireland is one of the countries with the youngest population of drug users (EMCDDA, 1997) it is vital that services in Ireland target young injectors.
- The Health Promotion Unit was very successful in making initial contact with drug users who have recently initiated intravenous drug use. Fifty five percent of the new presenters at the Health Promotion Unit were injecting drugs for less than one year. Moreover, thirty percent of the above clients reported injecting for less than 6 months. This is very encouraging, as the international research indicates that Syringe Exchanges primarily appeal to those who have a long history of IV drug use (Stimson *et al*, 1991).
- The Health Promotion Unit was also successful in attracting it's target population, that is, those who engage in risk behaviour. The high percentage of clients who reported injecting in excess of four times a day (27%), recent sharing of injecting equipment (29%), and injecting paraphernalia (55%), and inconsistent cleaning practices (60%) clearly illustrates the vulnerability of this group in terms of personal risk, and risk of future transmission of HIV and hepatitis.
- The Unit has also been very successful in attracting a large number of drug users who are potentially at greater risk if engaging in injecting and sexual risk behaviour due to their circumstances, of engaging in unsafe injecting and sexual behaviour, such as homeless drug users (19%) and poly-drug users (64%).

OUTCOME MEASURES

The Health Promotion Unit proved successful in maintaining contact with a significant proportion of the 1337 first time attendees to the Unit. Twenty eight percent of all first visit clients who attended the Health Promotion Unit during the 18-month period represented at the three month follow-up. This was considered a reasonable follow-up rate in view of the time period and the chaotic life-style of the clients attending the Health Promotion Unit. International research suggests that a one in four follow-up rate is 'good' (Dept. Health, 1996). In addition, the Unit was successful in delivering the most basic service i.e. getting syringes out and getting them back. To this end, there was a 44% return rate on all injecting equipment distributed by the Unit. The results of the evaluation show that the Health Promotion Unit was effective in producing the following outcome measures at follow-up in relation to drug use, injecting risk behaviour, sexual risk behaviour, and health and well-being. The data below relates only to the 370 attendees who represented at the Unit.

Drug Use

- The Health Promotion Unit was effective in facilitating a significant change in reported heroin use. 12% of the attendees who reported using heroin as their primary drug at first visit (n=345), reported using an 'other' primary drug by the three month follow-up period.
- There was a less dramatic, although statistically significant change in the number of clients who reported using physeptone as their primary drug at the three-month follow-up period. At follow-up visit, 8% (*n*=31) of follow-up clients reported the use of physeptone as their primary drug, compared with 4% (*n*=15) of clients at first visit.
- The Health Promotion Unit was effective in not only producing the desired behaviour changes in regard to the type of drug used but also in relation to the route of administrations. Follow-up clients reported safer routes of administration in that there was a 11% reduction in IV drug use among those who reported doing so at first visit (n=341).
- There was also a reduction in the frequency of injecting for clients who reported injecting in excess of 4 times a day (n=104). 67% of these respondents reported less frequent IV drug use at their three month follow-up visit.

Injecting Risk Behaviour

- Literature has shown that syringe exchanges have been effective in reducing injecting risk behaviour among regular attenders (Keene *et al* 1993, Frischer and Elliott 1993). The evaluation of the Health Promotion Unit has illustrated that there was a significant reduction in the number of clients who reported both the lending and borrowing of used injecting equipment. Fifteen percent of clients (*n*=56) reported lending their used injecting equipment at first visit compared with only 9% of clients (*n*=33) at follow-up. There was a similar reduction in the number of clients who reported borrowing others injecting equipment, in that 23% of first visit clients (*n*=85) reported such risk behaviour compared with 15% of follow-up clients (*n*=55).
- Analysis revealed that unlike the sharing of injecting equipment, there were no significant changes in the sharing of injecting paraphernalia. In that, there was only a 1% reduction in reported sharing at follow-up. Fifty four percent of follow-up clients (*n*=197) at first visit reported this sharing compared with 53% of clients (*n*=194) at follow-up.
- The Merchant's Quay Project is also concerned with health problems that emerge from unhygienic and poor injecting techniques. Improvement in injecting hygiene is considered to be a positive outcome measure in reducing the level of injecting risk behaviour. At follow-up, there was a 44% increase in the number of clients who reported cleaning their injecting site. In addition, 64% of the clients who reported not injecting self at first visit (n=87) had initiated the safer practice of self injecting by follow-up.

Sexual Risk Behaviour

- International research has indicated that there has been little or no change in the condom use of injecting drug users as a result of attending syringe exchanges (Hart, 1989). The emphasis placed on needle sharing and syringe sharing has led to the exclusion of other risk factors. The evaluation of the Health Promotion Unit revealed that only 33% of those who reported never using condoms at first visit (n=222), had initiated condom use by follow-up. Overall there was a 5% increase in reported condom use in the time period under investigation. At first visit 38% of clients reported always using condoms compared with 43% at follow-up.

Health and Well-Being

- Recognising the fact that 79% of new presenters at the Health Promotion Unit were not in contact with any other drug treatment service, there is a need to ensure that the Unit acts as an effective source of referral thus maintaining and maximising treatment contacts. The evaluation of the Health Promotion Unit has illustrated that although not statistically significant, there was an increase in reported contact with drug treatment services in the three-month time period between first visit and follow-up intervention. Twenty percent of clients (*n*=75) reported contact with other treatment services at first visit, compared with 26% of clients (*n*=95) at follow-up.
- Unlike treatment contact, there was only a 1% increase in the total number of reported medical contacts by clients, in that, 56% of clients (*n*=206) reported contact at first visit compared with 57% (*n*=212) at follow-up. Although, this change was not statistically significant, 48% of the clients who reported no medical contact at first visit (n=161) reported such contact at follow-up.
- Encouraging clients to engage in specialist contact such as having a HIV test, and receiving the hepatitis B vaccination are also considered an integral part of the Health Promotion Unit. The evaluation of the Health Promotion Unit reveals that 18% of the attendees who reported not having had a HIV test at first visit (n=203), had done so by the three month follow-up period. Although not statistically significant 31 clients or 10% of those who reported not having had a vaccination against Hep B at first visit (n=301), reported having had one at follow-up.
- The Health Promotion Unit also strives to maintain the health and well being of clients. Following the three-month follow-up period, there were significant changes in mental health complaints, in that, there was a reduction in the number of clients who reported experiencing all complaints. This could be due to clients initiating contact with other drug treatment services and hence experiencing less exclusion. With regard to physical health complaints, there was a significant change in the number of clients reporting weight loss over the three-month follow-up period. 40% of the clients who reported weight loss at first visit did not report this at follow-up (n=215). Other changes in regard to physical health were less dramatic. Recognising the limited time frame of the follow-up period there was however no overall deterioration in clients physical or mental health.
- The Health Promotion Unit recognises that to maintain satisfactory levels of medical contact, the provision of medical card application forms to clients is therefore a necessary feature of the service that is provided to clients. 37% of the attendees who reported having no medical card at first visit (n=130) were in receipt of one by the three month follow-up visit.
- The Health Promotion Unit was effective in providing clients with the necessary advice and information to enable them to make the appropriate changes. At follow-up the majority of clients reported that the Unit provided them with information on safer injecting techniques (70%), safer drug use (71%) and safer sex (69%).

RECOMMENDATIONS

This study has clearly demonstrated the effectiveness of needle exchanges as a public health initiative, while at the same time highlighting a number of deficits in service provision and policy. To this end the Report recommends the following;

- Improved access to sterile injecting equipment at a local and community level. To ensure 24 hour availability of injecting equipment, a range of strategies supplementing existing services are recommended.
- Specific areas of service development to ensure the utilisation of more extensive harm reduction strategies and ultimately a more holistic approach to the needs of injecting drug users.
- Innovative information and publicity campaigns to place HIV and hepatitis C at the forefront of the public health agenda.
- Further research to advance and legitimise drug service provision.
- That harm reduction be identified as a primary objective of the national drug policy.

CHAPTER 1
INTRODUCTION

Syringe exchange programmes are the cornerstone of HIV prevention strategies for people who inject drugs. They are one of the most rapidly expanding and developing areas and have played a major role in the development of new aims, working practices and ideologies for those who seek to help drug users reduce the risks and harm associated with injecting drug use. This chapter provides a description of the Merchant's Quay Project's syringe exchange. Thereafter, the aims and objectives of the service are outlined. As will be seen the service is multidimensional in nature, in that it is not solely concerned with the distribution of sterile injecting equipment. This is reflected by the fact that the Merchant's Quay Project refers to its syringe exchange as a Health Promotion Unit. This chapter concludes with an outline of the Report.

1.1 BACKGROUND TO THE STUDY

The Merchant's Quay Project established its Health Promotion Unit in July 1992, to provide a model for working with people engaging in intravenous drug use which concentrates on reducing or eliminating the associated risks. Over the years the number of injecting drug users attending the Unit has increased rapidly, and it is now the largest syringe exchange in Ireland. As the Health Promotion Unit grew in size, the management of the Merchant's Quay Project became acutely aware of the increased difficulties in monitoring the efficacy of the Unit, that is, in producing the desired behaviour changes among the attending clients. Moreover, they recognised the need to develop existing mechanisms, to ensure adequate accountability to funders, service users and service providers. In order to address these issues, the management decided that it was necessary to develop an *outcome* monitoring system, to evaluate the effectiveness and efficiency of the Health Promotion Unit.

It is essential from the outset to be clear about the correct definition of an outcome; *an outcome is a change within the client* (Burns, 1994). This is usually taken to include changes in behaviour, such as levels of drug use, injecting/sexual risk behaviour, and changes in health which encompass a range of physical and psychological complaints. Collecting and analysing this information enables the Project to determine if a significant proportion of clients are showing positive changes, or outcomes, over a period of time, that are at least in part attributable to the service provided to the clients[2]. On the other hand, this practice also enables the Project to report to funders and other interested bodies, which in turn contributes positively to future planning and service development.

The Merchant's Quay Project was well aware that by definition of the process involved, outcome monitoring can have an impact on the service provided. This can present itself either as a problem or a positive contribution. Some agencies express concern that outcome monitoring can be an intrusion into the privacy of the clients, or too time-consuming, thus taking away from the time spent with the client. The emphasis within the Project was on developing a system that located itself well within the needs of the Health Promotion Unit and within the needs of the client group. The Merchant's Quay Project found that the research instrument employed proved to be a good therapeutic tool, and helped workers to get a more in-depth understanding of the clients' history and circumstances. Moreover at times, the questions themselves worked as a motivational hook.

The response of staff, to any new monitoring system is another important implication. Research shows that this can vary widely, and that the involvement of staff in developing the monitoring process, can have positive results. However, a balance was needed between encouraging staff at the Project to participate in the process of developing outcome measures, while acknowledging that this is outside their usual priorities, but none the less essential. The staff at the Merchant's Quay Project, were closely involved in developing the outcome monitoring system and viewed the collection of outcome information as a positive contribution to their work with clients.

[2] Theoretically there is a problem in attributing any change solely to the agency or particular intervention. This issue will be discussed in more detail in Chapter 3 Methodology.

1.2 OBJECTIVES OF THE STUDY

The objectives of the study are as follows;

- to research the international information available on the evaluation of syringe exchanges and outcome measures;
- to fully define the services provided by the Merchant's Quay Project's Health Promotion Unit;
- to identify the indicators of positive effects for the Health Promotion Unit;
- to collect information on clients' self-reported behaviour at first visit and at a subsequent three-month follow-up visit;
- to adjust the collection of information at first contact to include baseline data on these indicators of positive effects;
- to comparatively analyse clients' behaviour according to these indicators and;
- ultimately to evaluate the effectiveness of the service offered by the Health Promotion Unit to the clients.

1.3 MERCHANT'S QUAY HEALTH PROMOTION UNIT

This section provides a description of the service provided by the Merchant's Quay Health Promotion Unit. As the name of the Unit suggests it is not simply concerned with the distribution of needles and syringes. Thereafter the aims and objectives of the Unit are identified.

- The Health Promotion Unit is funded through the Merchant's Quay Project's mainstream funding from the Eastern Health Board, the Probation and Welfare Service, F.A.S. and from fund raising by the Merchant's Quay Project.
- The Health Promotion Unit is located within a Dublin Inner City drug service.
- The Unit is open Monday to Friday, from 2.00pm until 4.30pm and operates on a drop in basis. A minimum of five staff, all who have received training in syringe exchange provision, operate the Health Promotion Unit; one worker for the reception area, one Health Promotion Supervisor, and three workers to operate the three exchanges. A fourth worker is required to operate an additional exchange on a busy day.
- The Health Promotion Unit offers a range of needles and syringes plus sterile water, filters, swabs, citric acid, and condoms. The equipment is sealed in brown paper bags, with a '*one works/one person'* sticker.
- The Health Promotion Unit aims to ensure that all clients receive adequate supplies of syringes and needles. However for first time clients the amount given out is normally restricted to 2 barrels and 6 needles (or 6 microfines). Thereafter the quantity given to a client depends on their return rates.
- The Health Promotion Team also provides a take-away service, for those who arrive between 4.30pm and 5.00pm during the week, and to accommodate clients at weekends. This takes the form of an emergency pack. A weekend emergency pack consists of 2 microfine barrels, 3 x 2ml barrels, 6 orange needles, 3 light brown needles, 2 bottles of sterile water, 1 bag of citric acid, 3 filters, 10 swabs, and 1 box of 3 condoms.
- Limited exchanges are also offered in the mornings (similar to the emergency pack). This was implemented as a means of facilitating women with children, drug users who are

working and individuals with other exceptional circumstances. People who are working need to present proof of employment before they are eligible for the 'limited exchange'.

- The staff at the Unit offer advice on injecting behaviour, leaflets on safer injecting practices, safer sex issues, HIV testing, hepatitis B and C testing, immunisation, and internal and external referrals.
- The Health Promotion Unit is further enhanced by a first aid nursing service. This service provides clients with basic wound care, and deals with other health issues e.g. scabies, athletes foot, and any other conditions that clients present. When appropriate external referrals are made. Clients may also get medical card application forms in the Health Promotion Unit.
- Staff monitor the Health Promotion Unit using a 'card system'; which includes details of clients initials, date of birth, gender, postal code, sharing behaviour in the previous month, equipment provided and returned. At the time of writing the Report, the Health Promotion Unit was in the process of being computerised.
- The card system shows that an excess of 5,000 clients have attended the Health Promotion Unit at some point since its inception. However, no more than half of the clients attending at any given time would be considered regular clients (attendance in excess of once a week).
- In 1998, the Health Promotion Unit served an average of 67 clients a day. Mondays are the busiest days, and numbers usually exceed 100 clients. In the same year a total of 16,509 syringe exchanges were dispensed.
- The Health Promotion Unit is primarily publicised through word of mouth. Consequently, most clients are self-referred.
- The majority of clients using the service are from the Dublin Inner City.
- The primary drug of choice used by the attending clients is heroin.
- One quarter of the clients using the Health Promotion Unit are female.
- The average age of the total population of the Unit's clients is 25. Over the last year, the staff of the Unit have been particularly concerned about the increasing number of under eighteen year olds presenting at the Health Promotion Unit.
- It is impossible to estimate what percentage of the local injecting drug users are being reached by the service, as there has been no research indicating the extent of intravenous drug use in Dublin[3]. However, the Health Promotion Unit at Merchant's Quay serves the largest number of injecting drug users in the city.

1.3.1 Aims of the Health Promotion Unit

The evaluation process requires that the aims and objectives of the service be clearly outlined. These were clarified in agreement with staff at the Health Promotion Unit, thereby enabling an appropriate research strategy to be adopted, including the specification of outcome measures. The aims of the Unit are presented in **Table 1.1.**

Table 1.1 Aims of the Health Promotion Unit

- To enable clients to gain access to sterile injecting equipment, and condoms;
- To reduce the risk of contracting HIV, hepatitis B and C and other STDs;

[3] To the authors knowledge only one prevalence study has been carried out to date, by Comiskey (1998). This study estimated that there were 13,460 opiate users in Dublin. However, it is not possible to extrapolate on the basis of this data, as the results relate to 1996. Moreover, the estimate is not confined to injecting drug users, as a very broad definition of opiate use was utilised, including both problematic and non-problematic drug use.

- To increase knowledge of safer injecting and sexual practices;
- To improve health care and;
- To evaluate changes and trends in drug use.

Although a broad statement of intent of Merchant's Quay Health Promotion Unit is to promote healthy behaviour, it needs to be stated that risk behaviour does not occur in a vacuum. Healthy behaviour - and risky behaviour - are located within particular social, economic, and cultural practices. As will be discussed in detail in the next chapter, there are many good reasons why people engage in harmful behaviour, even when they intend the opposite. All these behaviours take place well away from the territory of the drug treatment agencies. While attempts can be made to tackle these behaviours on an individual client-centered basis, what needs to be changed is the broader culture within which drug use takes place. The Merchant's Quay Project is aware that promoting healthy behaviour is thus a major task of encouraging change.

1.3.2 Objectives of the Health Promotion Unit

The objectives of the Health Promotion Unit, which outline the desired outcomes, can be divided into the broad categories illustrated in **Table 1.2**;

Table 1.2 Objectives of the Health Promotion Unit

Drug Use and Injecting Practices	Reduction in the quantity of drugs consumed Reduction in the use of 'risky combinations' of drugs Reduction in the frequency of injecting Reduction in the sharing of injecting equipment Reduction in the sharing of spoons and filters Eliminating the sharing of injecting equipment
Health and Well-Being	Promoting safer injecting practices Improvement in physical health No deterioration in physical health Improvement in psychological health (well-being) No deterioration in psychological health (well-being) Increase contact with medical services Increase contact with drug treatment services Reduction in sexual risk taking

Table 1.2 illustrates that the Health Promotion Unit operates according to a hierarchy of objectives. Ideally the Unit strives to eliminate risky injecting drug use. If and when this is not possible the Unit achieves its objectives by reducing the frequency of injecting, eliminating the sharing of injecting equipment, reducing the incidence of sharing etc. This hierarchical approach places importance on what others may perceive as relatively insignificant behaviour changes. However, it accommodates all injecting drug users, by recognising the benefits of any positive behaviour change.

1.4 THE REPORT

This report is concerned with the evaluation of the Merchant's Quay Health Promotion Unit. In **Chapter Two** the key pieces of international research concerned with the effectiveness of syringe exchanges are reviewed. It will be seen that syringe exchanges have proved very successful across cultural divides, in attracting drug users, and in reducing the levels of injecting, and to a lesser degree

sexual risk behaviour among attendees. Overall, it is argued that syringe exchanges play an important role in the prevention of HIV transmission and they operate as a potential access point to a wider network of services. However, very little research has been carried out in Ireland, on the effectiveness of syringe exchanges in producing the desired behaviour changes.

Chapter Three outlines the research methods employed to achieve the objectives of the study. The method chosen to measure clients outcomes or behaviour changes was to ask clients for the same pieces of core information, in the same way, at different points in time and compare the results. A questionnaire was designed and completed by consenting clients, at the point of first contact and again at a three month interval. The highly structured questionnaires covered seven identified outcome domains, which in turn were based on the aforementioned aims and objectives of the Health Promotion Unit.

Chapter's Four and Five contains analysis of the data collected from those clients who completed the research instruments. **Chapter Four** includes a comprehensive profile of all new clients who attended the Health Promotion Unit from May 1st 1997 to October 31st 1998. Data is presented on 1337 clients. This chapter also contains a discussion of some of the areas of concern to emerge from the baseline data collected by the First Visit Intervention Sheets. **Chapter Five** is concerned specifically with client outcomes, or behaviour changes. In this chapter the follow-up data which was collected from those clients who represented at the Health Promotion Unit three months after their first intervention is analysed. Although there are some concerns around the follow-up rate, it will be seen that the Health Promotion Unit has been effective in producing a number of positive changes in clients. These include increasing client contact with drug treatment services, reducing injecting risk behaviour and drug use, and improving the health of the clients.

The report concludes with **Chapter Six and Seven,** which offers a summary of the main findings, and presents some conclusions and recommendations.

CHAPTER 2
LITERATURE REVIEW

Both the AIDS epidemic and proliferation of hepatitis C infection among injecting drug users have highlighted the importance of attracting drug users[4] to services, so that those at risk of contracting and transmitting the Human Immunodeficiency Virus (HIV) and/or hepatitis C may be advised on the best measures to take, in order to protect both themselves and others from infection. Given that there are a number of injecting drug users who are either unwilling or unable to stop injecting, syringe exchange programmes have become an important harm reduction strategy. In this chapter the concept of harm reduction in terms of policy and practice is discussed. Thereafter, international research which evaluates one of the most publicised harm reduction strategies - syringe exchanges is reviewed. It will be seen that most international research supports the effectiveness of such programmes, which have both politically and scientifically survived the last two decades. The chapter concludes by contextualising Irish drug policy within the harm reduction framework.

2.1 HARM REDUCTION

A public health approach to problem drug use views its occurrence not as a phenomenon caused by an individual's pathology, but rather as one causing extensive social problems and threatening public health. Harm reduction theory reflects this attitude and goes a step further, arguing that many of the most destructive consequences of illicit drug use are not the result of drugs per se, but rather of drug policy. Accordingly, within harm reduction there is as Strang (1999) argues, no predetermined position on drug use being inherently 'good' or 'bad'. As a policy response, harm reduction strategies are determined solely by the extent of observed and/or anticipated harm which results from drug use.

The idea of harm reduction is not new and has been described as 'old wine in new bottles'[5] (Velleman, and Rigby, 1992). However, over the past two decades harm reduction has gained increasing attention and support from practitioners and policy makers. This resulted primarily from the recognition that HIV can spread very rapidly among injecting drug users into the general population. As an approach, harm reduction has been described as having a bewildering variety of interpretations (Roche *et al*, 1997) which Single (1995) maintains has contributed to its rapid uptake and widespread appeal[6]. This has lead Mugford (1999) to argue that harm reduction has become a 'sound bite', in that everybody thinks they know what it means, and it seems reasonable to all. Within the drugs field many have argued that to concentrate on the philosophical and theoretical aspect of harm reduction distracts from the important task of implementing such strategies (Strang, 1999). The resulting lack of clarity around theory and definitions is likely to cause problems in terms of the development of policy and practice within this area. Moreover, Newcombe (1992) argues that the importance of a precise theory for, and definition of, the reduction of drug related harm is in the fact that it permits the measurement of the effectiveness of harm reduction strategies through scientific evaluation.

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[4] It often appears that there is a bewildering vocabulary which surrounds the description of individuals who take drugs and the consequences of their drug use. Many of the terms used, such as drug 'abuser' or 'misuser' have ideological overtones. Furthermore, identifying drug use as a 'problem' is in itself dubious: drug use is not always, nor even often, a problem. Hartnoll *et al* (1985) argue that it is essential to define the terms used, as any ambiguity surrounding definitions has important implications for the interpretation and generalisation of results. Throughout this Report the term 'drug user' and 'drug use' will be employed. In this context it refers to an individual who self administers non-prescribed psychoactive drugs.

[5] In the UK, harm reduction can be traced back to the old 'British System' of maintenance prescribing, which emerged as a result of recommendations of the Rollestone Committee of 1924-1926 (Berridge and Edwards, 1987). This provided a framework within which the reduction of harm to the individual drug user was paramount, even if it was also implemented as a means of allowing the drug user to led a 'useful life' (Berridge, 1999).

[6] In an attempt to develop a more theoretical framework surrounding harm reduction, Strang (1999) suggests distinguishing between the terms harm reduction and harm minimisation. He states that *harm reduction* is something that is operational (such as policies and programmes) whereas *harm minimisation* is the overall objective to be aimed at. In other words, Strang (1999:7) argues that harm reduction strategies are the "means by which the goals of harm minimisation might be achieved". Thus, a harm minimisation approach to drug use will comprise of various harm reduction strategies. However, the reality is that the terms are used synonymously. Throughout this Report, the term harm reduction will be used, and will refer to both theoretical and practical issues.

Many of the principles of harm reduction have changed over time and now maintain a more precise definition (Roche *et al*, 1997). Drucker (1995) argues that contemporary harm reduction approaches to drug use aim at altering drug policies, not the drugs themselves - and certainly not human nature. Current harm reduction practice can been seen as a response to a number of fundamental observations about drug use. These form the central concepts in the harm reduction approach to psychoactive drug use and are as follows;

1. The non-medical use of psychoactive drugs is inevitable in a society that has access to such drugs. Consequently policies and programmes cannot be based on utopian ideals of a "drug free society" (Nadelmann, 1998).
2. This non-medical use of drugs will ultimately produce significant social and individual harms. The harms caused by drug use are many and highly varied and depend upon the type of drug used, frequency and quantity of use, how it is administered, and the social and physical circumstances of drug use (Strang, 1999).
3. Reducing drug related harms can be achieved without necessarily reducing drug use (Roche *et al*, 1997), for example, by injecting with sterile injecting equipment.
4. Drug policies must be pragmatic. They must be assessed on their actual consequences, and not on whether they symbolically send the right, wrong or mixed messages (Des Jarlais, 1995). It is important to note the possibility that policies to reduce illicit drug use, may by themselves increase the harm associated with drug use.
5. Drug users are an integral part of the larger community, and as such they must be treated with dignity and integrated into society. Many of the harms coming from the use of drugs are the result of social stigmatisation of drug users rather than of drug use itself (Paone *et al,* 1995).

The principal feature of harm reduction is the acceptance of the fact that some drug users cannot be expected to cease their drug use at the present time. Thus, the key component of harm reduction programmes which distinguishes them from any other drug programme, is whether they attempt to reduce the harmful consequences of drug use, while the user continues to use. To this end, harm reduction emphasises practical rather than idealised goals (Single, 1995). Harm reduction is neutral about the long term goals of interventions, while according a high priority to short term goals.

Today a range of services which target the 'consequences of drug use' (rather than use itself) operate within a harm reduction framework. Although it has been argued that harm reduction has become 'all things to all people', it seems more realistic to acknowledge that harm reduction does not mean abstinence or use reduction (Roche, *et al* 1997). Conversely, use reduction need not lead to harm reduction.

2.2 SYRINGE EXCHANGES: A HARM REDUCTION STRATEGY

Early in the AIDS epidemic the role of injecting equipment, specifically the sharing of needles and syringes contaminated with HIV was clearly linked to the transmission of the virus. The pattern of spread among injecting drug users was extended to their sexual partners (and potentially into the heterosexual population as a whole) and to the foetus during pregnancy and delivery. Accordingly, the introduction of syringe exchange programmes in the early years of the AIDS epidemic represented the first explicit harm reduction intervention aiming to reduce HIV risk behaviour[7] without necessarily reducing illicit drug use per se (Berridge, 1998). It is not surprising that syringe exchange programmes

[7] Although the terms 'harm' and 'risk' are related, and are often used interchangeably, there are noteworthy differences in meaning. Strang (1999) states that *risk* relates to the possibility that an event might occur - be it the risk resulting from a single episode or the cumulative risk over time. On the other hand, *harm* is seen as the event itself, or as relating to the event (Strang, 1999). Risk behaviour does not however inevitably result in harm. Thus, risk behaviour, such as needle sharing, may result in individual, community and/or social harm. Harm reduction strategies more often than not aim at reducing risk behaviour, primarily due to the possible harm which may be incurred. As there are inherent difficulties with measuring harm, more often than not changes in risk behaviour are used as an indication of the effectiveness of harm reduction strategies.

have encountered conflict between drug prohibition policies and public health. By directly addressing the most obvious linkage of injecting drug use and AIDS, syringe exchange programmes offer a way to control new transmissions of HIV but they also provoke the wrath of the people who are committed to a total abstinence and "Zero Tolerance" approach.

Syringe exchange programmes operate on the assumption that drug injectors share used equipment because sterile injecting equipment is difficult to obtain (Stimson *et al* 1988; Ross *et al* 1994). For example, it is likely that the non-availability of injecting equipment in Edinburgh was one of the key factors which led to widespread needle sharing and the rapid spread of HIV infection in the 1980's (Pearson, 1991). Consequently, such programmes are designed to provide sterile injecting equipment to drug users. Used needles and syringes are returned for new ones and the supply of free and legal sterile injecting equipment is constant. In principle, if non-sterile equipment is replaced with sterile equipment it would be expected that the HIV incidence rates associated with shared needle use would decline, all other things being equal (O'Hare *et al* 1992).

The majority of syringe exchanges are not simply confined to the distribution of needles and syringes. Most services also distribute other equipment to help ensure safer drug use; for example sterile water, swabs and filters. As illustrated in the previous Chapter, Merchant's Quay Health Promotion Unit is also concerned with secondary health issues such as the prevention of infection and other health problems related to poor injecting techniques. Poor injecting methods often lead to health problems such as bruising, abscesses and thrombosis. To this end, advice is given on better injecting techniques, better preparation procedures, and on the importance of utilising multiple injecting sites. In addition to making sterile equipment available, many syringe exchanges also offer advice and information on safer sex and condom use. Moreover, as programme staff's contact with injecting drug users increases, the goal is not only to establish trust and rapport but to facilitate safer drug use, and injecting practices and also to facilitate entrance into drug treatment.

The public health argument for syringe exchanges is that the greater availability of needles and syringes will result in a reduction in the spread of HIV and that it offsets any possible health/social costs in terms of progression into injecting by novices, or the prolongation of injecting (Strang, 1990). As the prevention of HIV infection among injecting drug users does not require that they completely stop injecting drugs, syringe exchange schemes have generally been well accepted by drug injectors. This has resulted in the vast majority of drug injectors in a given city reducing, although not necessarily eliminating, their sharing of injecting equipment (Des Jarlais, 1992). Furthermore, syringe exchanges attract users to agencies, and individuals who are in contact with drug services are more likely to be amenable to health promotion than those who are not in contact (Paone *et al*, 1995). In short, contact with services increases the opportunity for HIV/AIDS education and the prospect of reducing harmful injecting procedures. However little is known about the extent of positive behaviour change that is a direct result of such contact.

Although the aim of syringe exchange programmes is to increase the availability of injecting equipment, two possible side effects of increased availability have been identified (Paone *et al*, 1995). Firstly, non-compliance in terms of syringe exchanges could simply add to the pool of injecting equipment. If syringes and needles are not returned to the exchanges, this in turn may lead to an increase in the quantity of used injecting equipment in circulation. Secondly, increased availability may encourage increased frequency of injecting. Consequently, the value of syringe exchanges are not universally accepted and remain controversial.

Nonetheless, syringe exchanges have been extensively documented, monitored and evaluated. Moreover, there is a substantial body of research indicating that injecting drug users attending syringe exchange programmes have changed their HIV risk behaviour. In the next section the key pieces of research concerned with the effectiveness of syringe exchanges in reducing risk behaviour and in producing other positive outcomes will be reviewed. It will be seen that although most research worldwide supports the argument that syringe exchanges protect against HIV (and to a lesser extent hepatitis) and help reduce risk behaviour, not all research studies concur (Elliott, 1998). This is due to a combination of the methodological issues which must be considered when interpreting research results[8] and individual programme differences. An important consideration when determining the effectiveness of any syringe exchange is the programme structure and modus operandi. Thus a number of issues including location, opening hours, attitudes towards clients and views on return rates will play an important role in determining programme effectiveness (Hart, 1991).

[8] There are methodological difficulties inherent in evaluating social interventions such as syringe exchanges. These constraints are examined in detail in Chapter Three.

2.3 REVIEW OF RESEARCH ON SYRINGE EXCHANGES

There is a large body of research indicating that syringe exchanges have succeeded in helping people to make changes in their behaviour, in order to reduce their risk of HIV infection. Syringe exchanges operate on a *knowledge* and *means* model of behaviour change, in that it is assumed that in order to change behaviour people need to know the reasons why these changes are necessary and also need the vehicle to make such changes (Homans and Aggleton, 1988). This approach presupposes that the dynamics of everyday drug use are capable of modification and in turn that their success rests on small behaviour changes in the everyday life of a drug user. This is primarily based on a model of health intervention which is essentially individual centered, as opposed to dealing with groups or communities of injecting drug users (Elliott, 1998).

As discussed previously the effectiveness of syringe exchanges in reducing the rates of HIV infection has been very difficult to determine due to the methodological constraints. To this end the majority of research concerned with evaluating syringe exchanges has concentrated on measuring the extent to which they have succeeded in reducing HIV risk behaviour, as opposed to incidences of HIV infection. This research will be reviewed below. However, some evidence has emerged to support the argument that syringe exchanges have a protective effect against HIV. In Tacoma (USA) only 3 percent of syringe exchange attendees were HIV positive compared with 8% of non-attendees (Hagan *et al*, 1993). Lower rates of zero-conversion were also found among attendees of a London syringe exchange over a one year period (Hart *et al*, 1989). There is also some evidence supporting the ability of syringe exchanges to control hepatitis (Buning, 1991). However, much of the evidence is anecdotal, and it is possible that syringe exchanges may not have a significant impact on hepatitis infection. Rhodes *et al* (1996) argues that this may be due to the relative efficiency of transmission of hepatitis compared with HIV. Equally the widespread prevalence of hepatitis prior to the opening of syringe exchanges may have had an impact (Elliott, 1998).

2.3.1 Evidence for Behaviour Change

Most injecting drug users are aware of the risks that are posed by continued injecting and needle sharing and how to effectively protect themselves and others against infection (Magura *et al*, 1989). Hence, risk behaviour cannot be attributed to ignorance about the consequences and this is so despite the fact that few injecting drug users consider themselves at risk of HIV infection (Stimson, *et al* 1988). Nevertheless, the vast majority of studies have shown that injecting drug users have changed their behaviour in order to reduce their chances of contracting HIV. For example, Stimson *et al* (1988) reported on the HIV risk behaviour of clients interviewed during the first year of a needle exchange programme in England. At the first interview 36% of the attendees at the exchange reported sharing injecting equipment in the previous 4 weeks and only 7% of these attendees stated that they did not clean the equipment. This rate of sharing is lower than the levels reported in most studies conducted prior to the start of the syringe exchange schemes in the UK. For example, in a study of drug users seeking treatment for the first time in London between 1984 and 1986, 59% of those who had injected in the last 4 weeks reported having shared injecting equipment (Sheehan *et al* 1988). The evidence points to attendees of syringe exchanges reducing levels of sharing.

Bath *et al* (1993) illustrated this by examining over a twelve year period, changes in injecting risk behaviour of a group of injecting drug users. They found a reduction in the proportion of injectors using needles and syringes that had been used previously. In 1992, one third of the sample group shared injecting equipment, which was a considerable improvement on the 79% who had shared in 1980. Hunter *et al* (1995) also found an overall reduction in sharing rates among injecting drug users in London. This they argue, was no doubt partially due to the increase in the availability of injecting equipment as a result of the growth in the number of syringe exchanges. However, Hunter *et al* (1995) believe that it is also necessary to look beyond current interventions, in that, there is evidence to suggest that a climate in which syringe sharing is no longer the norm is developing in the UK (Donoghoe, *et al* 1992; Burt and Stimson, 1993). Although it should be noted that within the UK there are important regional differences in sharing rates, although this pattern may be limited to specific areas.

Some studies have shown a degree of risk reduction even in the absence of formal prevention programmes (Des Jarlais, *et al* 1985). Such voluntary changes include personal marking of syringes; being more selective about sharing partners, by for example sharing only with a sexual partner or close friend; assessing the risk of sharing by considering the HIV antibody status of the prospective partner;

their appearance, or what is known of their drug using history; hiding syringes for use in an emergency; and not sharing when blood is visible in the syringe (Burt and Simson, 1993). Based on the outlined research there is evidence to suggest that syringe exchanges, by increasing the availability of sterile injecting equipment have played an important role in reducing the overall incidences of sharing among intravenous drug users. The next section will examine these changes in greater detail.

2.3.2 Injecting Risk Behaviour

The primary aim of syringe exchanges is to reduce risky injecting behaviour. Consequently, the vast majority of research on syringe exchanges have used a reduction in risky injecting practices as a positive outcome. Keene *et al* (1993) carried out an evaluation of specialist (pharmacy-based) and community based syringe exchanges in Wales. The evaluation covered both the implementation of the schemes and their impact on the behaviour of the clients. A comparison was made between syringe exchange clients and drug users who did not attend an exchange. Although both attendees and non-attendees were similar in terms of having shared syringes at some point in their history of drug injecting, there were significant differences in recent HIV risk behaviour. Those attending the exchange were less likely to have shared injecting equipment in the previous 12 months; only 20% of the attendees compared to 53% of the non-attendees had done so. This difference was accentuated when recent injecting behaviour was examined; in the 4 weeks prior to interview, 41% of the non-attendees had shared compared to only 9% of the attendees.

Frischer and Elliott's (1993) study of Glasgow drug users revealed similar results. They concluded that on the whole syringe exchange attendees manifested less risky injecting behaviour than non-attendees. In short, attendees of syringe exchanges injected with and passed on used equipment less frequently than non-attendees. Furthermore, syringe exchange attendees had a better knowledge of routes of HIV infection, and made and maintained more harm reduction changes in their behaviour. However, despite the reduction in injecting risk behaviour syringe exchange attendees were less likely to have received treatment for drug use and reported fewer episodes of treatment than non-attendees. Hartgers *et al* (1989) also reported some reduction in risk behaviour among attendees of syringe exchanges in Amsterdam. According to their research only 17% of the 145 injecting drug users interviewed had used borrowed needles in the month prior to interview, however 77% had lent needles to others during the month. Hartgers *et al* concluded that subjects who used the syringe exchanges to get at least 90% of their needles/syringes were significantly less likely to borrow used equipment than others but <u>not</u> less likely to lend their injecting equipment.

There is however some evidence to suggest that syringe exchanges have not reduced the levels of sharing among injecting drug users. Klee *et al* (1991) compared drug users who attended syringe exchanges regularly with those who attended them rarely or not at all. The comparison revealed that the former were significantly more likely to pass on their used injecting equipment to others. Fifty nine percent of the syringe exchange attendees lent used injecting equipment compared with 42% of the non-attendees in the two weeks prior to interview. The primary reason presented for passing on used injecting equipment was pressure from non-attending friends.

These findings were represented in Klee and Morris's (1995*a*) study which assessed the contribution that an increase in syringe availability made to injecting risk reduction. The data used came from three studies conducted in the UK, between 1989 and 1993. However only the first study conducted in 1988 and 1989 (which comprised of the data originally presented in Klee *et al's* 1991 study) revealed higher levels of lending by syringe exchange attendees. Results from the second study conducted in 1990 and 1991 illustrated that regular attendees at a syringe exchange were significantly less likely to pass on used equipment, and significantly less likely to borrow used injecting equipment. On the other hand, the third study conducted in 1991 revealed no significant relationship between sharing and syringe exchange attendance. These inconsistent findings lead Klee and Morris (1995*a*) to conclude that the tendency to pass on needles and syringes to friends, revealed among regular attendees in the first study, was as a consequence of demand outstripping supply. They stated that as a result of the large numbers of injectors in the area the demand for equipment was high and this demand had not been met by the relatively few syringe exchanges. This in turn resulted in the demand turning on those who attended the exchanges, hence the high levels of lending by attendees.

The literature reviewed above suggests that syringe exchanges have been effective in reducing injecting risk behaviour among regular attendees. However, the influence of syringe exchanges upon the sharing of injecting equipment is not simple and straightforward. It is likely to be affected by local conditions of availability of equipment, the profile of injectors, educational strategies and the user-friendliness of

services (Friedman, *et al* 1992). Furthermore, HIV risk reduction among injecting drug users has proved to be subject to peer influence (Magura *et al* 1989). For example, Friedman *et al* (1987) found that among methadone maintained clients there was a strong association between subjects` reports that they had attempted to reduce their drug related risk behaviour, and their reports that their friends had also done so. On the other hand Donoghoe *et al* (1992) found that risk behaviour was associated with the injecting of particular drugs; heroin, methadone and temazepam. Sharers were also less likely to be receiving a prescription for methadone. Donoghoe *et al* concluded that other lifestyle factors which were associated with syringe sharing were, living in unstable accommodation, living with other injectors, being unemployed and recent involvement in crime.

Moreover, one cannot ignore the possibility that syringe exchange attendees are self-selecting, and have lower rates of syringe sharing than other drug users. Some indication of self-selection was found in a study that compared clients in contact with drug agencies against those not in contact. A study by Power *at al* (1988) found that the proportion of non-agency clients (61%) located in the high risk category was significantly higher than the corresponding proportion of agency clients. In other words, 65% of the agency clients had substantially reduced their risk behaviour compared to 39% of the non-agency group. Furthermore, only 24% of the agency group shared with people other than just their partners, compared with 53% of the non-agency group. Nevertheless, the vast majority of research illustrates that syringe exchanges reduce injecting risk behaviour. Because of the measurement difference in the international research, it is difficult to estimate the specific level of risk reduction. However, the general trend has been a reduction in risky injecting behaviour by 50%-80% (Paone, *et al* 1995). No study to date has reported the total elimination of injecting risk behaviour.

2.3.3 Sexual Risk Behaviour

Although as outlined above there has been extensive research done on syringe exchanges and the reduction of drug related risk behaviour, their impact on sexual risk behaviour has received less attention. Many studies concur that changing sexual risk behaviour in drug injectors is more difficult than changing injecting risk behaviour. Studies in the UK, the US and Amsterdam all reported higher rate of risk reduction associated with equipment sharing and drug use than in sexual behaviour. Overall the research carried out indicates that there has been little or no change in the reported condom use of injecting drug users as a result of attending syringe exchanges. Hart (1989) believes that the emphasis placed on needle and syringe sharing has led to the exclusion of other risk factors.

While it is often reported that drug users who take depressants (such as opiates) are less sexually active than the norm, the WHO Collaborative Study Group (1993) found this not to be the case. In terms of reducing sexual risk behaviour, this study had ambiguous results. The WHO study of injecting drug users in thirteen cities[9], found that the majority of those who reported having a regular sexual partner never used condoms. On the other hand, those who had sexual intercourse with casual partners were more likely to use condoms.

Rhodes *et al* (1994) examined the sexual risk behaviour of injecting drug users in London. They also found that the majority of injecting drug users were sexually active. The levels of condom use were very low, with two-thirds never using condoms with primary partners, and over a third never using condoms with casual partners. Nonetheless, levels of condom use were highest among those engaging in prostitution. The main concern emerging from Rhodes *et al's* study is that those who reported having sex most often were least likely to report using condoms. Moreover, a significant proportion of those with non-injecting partners never used condoms, although they continue to share used injecting equipment themselves.

In Frischer and Elliott's (1993) study, approximately 30% of the syringe exchange attendees and non-attendees reported having casual sexual partners. Only 16% used condoms every time they had sex with their partner and 50% never used condoms. Although it is worth noting that attendees reported greater use of condoms with casual partners. In Keene *et al's* (1993) study, non-attendees of syringe exchanges were slightly more likely to be sexually active than attendees; 44% of the attendees and 61% of the non-attendees reported 'some' condom use. Problems in question wording occurred, therefore the results may not be accurate. Magura *et al* (1989) examined condom use among injecting drug users in the US. Sixty eight percent of the sample did not use condoms in the previous month and only 11% used condoms every time they had penetrative sex.

[9] Athens, Bangkok, Berlin, Glasgow, London, Madrid, Naples, New York, Rome, Rio de Janeiro, Santos, Sydney and Toronto.

McKeganey and Barnard's (1990) in-depth study of injecting drug users in Glasgow found that although the drug users were aware of the risks of HIV associated with the use of unsterile injecting equipment, their understanding of the dynamics of sexual transmission were less clear. They found that most of the injecting drug users interviewed interpreted the question relating to sexual transmission as having to do with the risk of contracting the virus from their partners, rather than the risk that they might themselves be the agent for transmitting the virus to their partner. It also became clear in McKeganey and Barnard's (1990) study that the majority of drug injectors interpreted sexual risk as having to do with the issue of frequent partner change.

All of these results show high sexual risk taking among injecting drug users. This is particularly important as there is evidence to suggest that the major route of HIV infection is shifting towards sexual routes, as injecting drug users curtail their injecting risk taking behaviour but continue to have unprotected sex (Schoenbaun et al 1989). There has been a great deal of promotion for condom use, as a means of preventing HIV infection. However, for many the introduction of condom use into long-term relationships causes problems. While there are difficulties in helping people change their sexual behaviour, such changes are possible. Donoghoe (1992) points out that changing sexual behaviour requires more than just the provision of condoms. More attention should be given to counselling, advice about safer sex and based on McKeganey and Barnard's (1990) study, increased awareness of the risks of sexual transmission of HIV.

On the whole, the reviewed research illustrates that syringe exchanges are successful on a number of measures. There is considerable evidence that those who attend syringe exchanges achieve and maintain lower risk behaviour. They have also proved successful in reaching people who are not in contact with conventional drug services (Stimson *et al*, 1991).

2.4 HARM REDUCTION: THE SITUATION IN IRELAND

Harm reduction practices, which aim to achieve 'intermediate goals' other than abstinence in drug users, (O'Hare *et al*, 1992), are comparatively new in Ireland. The move from the traditional abstinence orientated model of drug treatment to the more pragmatic harm reduction approach did not receive official endorsement until the 1991 *Government Strategy to Prevent Drug Misuse*. To the author's knowledge there has been no published research on the effects of syringe exchanges on risk behaviour in Ireland, since the implementation of the first exchange in 1989 (Butler, 1991). There has, however, been a number of publications concerned specifically with the levels of risk behaviour among IV drug users. For example, Williams *et al* (1990) investigated the extent of risk behaviour among drug users known to be HIV positive, and measured the degree of positive change in this behaviour as a result of being infected. They found a reduction in the number of drug users who reported sharing injecting equipment, and also an increase in the numbers who reported using condoms. However, despite the overall reduction in risk behaviour Williams *et al* discovered that 63% of those diagnosed as being HIV positive had continued to share injecting equipment (although at a reduced level) and one-third of those who remained sexually active did not use condoms. As all respondents in Williams *et al's* study were receiving methadone maintenance and the sample size was relatively small (n=69), it is not possible to extrapolate on the basis of these findings.

Four Irish studies have been carried out which are concerned specifically with levels of risk behaviour among attendees of syringe exchanges in Dublin. Firstly, Johnson *et al* (1994) measured the levels of risk behaviour, and the prevalence of HIV infection among syringe exchange attendees (n=81). They found high levels of both injecting and sexual risk behaviour among the syringe exchange attendees. Although half of the respondents reported that they had not shared injecting equipment in the previous 28 days, a third had shared with multiple partners. As regards sexual risk behaviour, half of the respondents reported that they had multiple sexual partners during the preceding year, and only a quarter reported always using condoms. Johnson *et al* concluded that the high levels of unsafe injecting and sexual activity indicates the need for more effective health promotion among drug users in Dublin.

In a more recent study Dorman *et al* (1997) also illustrated high levels of risk behaviour among IV drug users in Dublin. They found that over half of the participants (n=185) reported sharing injecting equipment in the previous 6 months, and 62% reported lending others their used injecting equipment within the same time period. Although the vast majority of respondents reported cleaning their injecting equipment, less than half did so effectively. Levels of sexual risk behaviour were particularly high, with

50% of the male respondents and 63% of the females never using condoms with their regular partners. Moreover, one-third of the males never used condoms with their casual partners.

In a third study Cassin *et al* (1998) compared the injecting and sexual risk behaviour of young injectors with injectors over the age of 25. All respondents were first time presenters at the Health Promotion Unit in the Merchant's Quay Project between May 1st 1997 and February 28th 1998 (n=770)[10]. Analysis revealed that young injectors were significantly more likely to report recent lending and borrowing of used injecting equipment and the sharing of injecting paraphernalia. Young injectors were however significantly more likely to report condom use. The authors suggest that the high levels of risk behaviour among young recent injectors may be due to a lack of emphasis on harm reduction strategies in recent years. Finally, Cox *et al* (1999) examined gender differences in first time attendees at the same syringe exchange (n=934). They found no significant gender difference in the reported sharing (either lending or borrowing) of injecting equipment or in condom use. However, the female clients were significantly more likely to report recently sharing injecting paraphernalia, and sharing injecting equipment with their sexual partner. This study highlighted the greater personal involvement of women with other drug users and its impact in terms of depriving them of protective factors and exposing them to high risk factors.

Unfortunately as Dorman *et al* (1997) point out it is not possible to compare the risk behaviour rates in the aforementioned studies, as the time periods over which risk behaviour was measured were different. Nonetheless, all the research is very informative in indicating levels of risk behaviour in injecting drug users in Dublin. Another source of information on risk behaviour of drug users in Ireland, is the Health Research Board's publications which present data related to 'problem drug users who present for treatment' in Ireland in 1995 (O'Higgins and Duff, 1997) and 1996 (Moran *et al*, 1997). Although there is a lot of valuable data contained in these reports, they do not provide any insight into the impact of syringe-exchanges (or any other intervention) on changing drug users behaviour.

2.5 SUMMARY

The provision of sterile injecting equipment is an important part of any strategy which aims to reduce risky drug use and HIV and Hepatitis transmission among injecting drug users. However increased access to sterile syringes has been the subject of much debate. Notwithstanding, there is no evidence to suggest that syringe exchanges increase either the amount or frequency of drug use, among attending clients. Furthermore, none of the studies conducted to date have found that the increased availability of injecting equipment as a consequence of syringe exchanges is associated with encouraging people to begin injecting. As illustrated in this chapter, international research has highlighted the benefits of syringe exchanges to attending drug injectors. It has been shown that syringe exchanges have proved successful in a number of measures. In short, they have proven to be effective in;

- Reaching drug users who are not in contact with conventional drug services;
- Delivering a basic service - distributing sterile syringes and collecting used injecting equipment;
- Improving access to sterile injecting equipment;
- Reducing the risk of contracting infectious diseases in particular HIV;
- Reducing levels of injecting risk behaviour;
- Reducing levels of sharing (lending and borrowing) of injecting equipment and;
- Accessing additional treatment services.

However there are limits to what syringe exchanges have achieved. The research indicates that they have failed to reach younger injectors, newer injectors and women (McKeganey and Bernard, 1990). Therefore, although sharing rates have reduced, and self-reported risk behaviour is lower than

[10] The data utilised in Cassin *et al* (1998) was collected in the first eight months of the evaluation of the Merchant's Quay Health Promotion Unit. The data collected from the 770 clients over this time period is included in the analysis presented in this Report.

previously, a substantial number of injecting drug users continue to share injecting equipment. There may be multiple reasons associated with this continued level of risk behaviour. Firstly, the relationship between syringe distribution and obstacles to risk reduction. The provision of clean injecting equipment does not necessarily ensure that all sharing will cease. For example, studies have hypothesised that injecting drug users whose lives are unstable because they are homeless, have greater difficulty initiating and maintaining the desired behaviour change (Paone, *et al* 1995). Consequently, among injecting drug users attending syringe exchanges, there are certain subgroups who may require services beyond syringe exchanges (Hagan *et al*, 1993) i.e. those with psychiatric complaints and those who are homeless. Secondly there is the question of resources available to syringe exchanges, and the potential demand for the service. In other words we must ask how adequate is the current distribution of syringes? As the time and place of injecting are factors which have been proven to influence sharing (Ross *et al*, 1994) wider and more accessible distribution of equipment is required. Finally, the staffing and financial resources needed to meet this type of service may not be easily attainable.

Syringe exchanges have not proved as successful in making an impact on sexual risk behaviour. Some have argued that this is primarily due to the fact that such schemes tend to focus mainly on injecting risk behaviour, with less emphasis on sexual behaviour, other than the provision of condoms. McKeganey and Barnard, (1991) argue that greater success in promoting the widespread use of condoms might be possible, if they were more clearly disassociated from' promiscuity'. However, prior to any global promotion of condom use, an awareness of the risks of sexual transmission needs to be developed.

CHAPTER 3
RESEARCH METHODOLOGY

Appropriate research design and data collection are intrinsic to the research process. This chapter outlines the research methods that were employed to achieve the objectives of the study. The first section delineates the problems with the international research that has been carried out in the area. The second section describes the research design employed in undertaking the evaluation of the Health Promotion Unit. The different stages of development of the research instruments are summarised. Thereafter, the final versions of the instruments are presented, and the limitations of the study are outlined.

3.1 PROBLEMS WITH INTERNATIONAL RESEARCH

As illustrated in the previous chapter there has been a vast amount of research carried out on the effectiveness of syringe exchanges. However, it is worth noting at this stage that there are important methodological issues which must be considered when interpreting the results of this international research. Methodological and moral constraints prevent the use of randomised controlled studies in this area of research, and, as a result researchers use a wide variety of study designs (Elliott, 1998). As illustrated in the previous chapter many studies have made comparisons between syringe exchange attendees and non-attendees, sampled from drug services. These groups are used in either a snapshot or

in serial longitudinal comparisons, and in some instances followed up as cohorts over time. Conversely, other studies have used no comparison groups, taking samples only from syringe exchanges. These are used in either single cross-sectional or follow-up studies. Other researchers have used epidemiological data to monitor the impact of syringe exchanges. For example, attempting to estimate the prevalence of drug injecting in various drug using populations prior to and after the introduction of an exchange. The problem with using any non-randomised research design is that arguments regarding the impact of syringe exchanges rest on grounds of association rather than cause and effect. Regardless, as illustrated in some detail, the large majority of studies in the field lend support to the idea that syringe exchanges have worked. However, not all research studies in the field concur, and this is in part due to the aforementioned methodological differences.

Apart from the methodological constraints, another problem with the international research reviewed in the previous chapter is that most of the research on syringe exchanges has been conducted in the UK, Australia and Amsterdam. This raises issues around the applicability of the findings to the Irish context, where there are cultural, ideological, treatment and operational differences. Moreover, most of the research has focused specifically on syringe exchanges as opposed to Health Promotion Units. However, due to the lack of Irish research in the area and the very limited local evaluation data available to date, the international research reviewed provides some valuable guidelines on empirically derived approaches to evaluating syringe exchanges. This existing information is therefore useful particularly in the process of formulating approaches to the evaluation of the Merchant's Quay Project's Health Promotion Unit. Nonetheless, caution must be employed in interpreting such information.

3.2 RESEARCH METHOD

To reiterate, the aim of the study is to develop an on-going evaluation form that can be administered to all new clients presenting at the Merchant's Quay Health Promotion Unit. The research instruments are intended to measure the impact of availability and access to the Health Promotion Unit in terms of client outcomes. For the purpose of this research an *outcome* is defined as *a change in the clients behaviour over time* (Burns, 1994:5). In designing the research instruments an appropriate balance had to be struck between drafting an instrument which would be acceptable to clients in terms of content, clarity and ease of completion, and designing a measure which would be sufficiently sensitive and comprehensive to provide the required outcome information. At the same time, the research instruments needed to be easy for the workers in the Health Promotion Unit to administer and not too time consuming, so as not to detract from their work with the clients. Moreover, flexibility was required to account for the wide range of client groups.

For the purpose of evaluating the Merchant's Quay Health Promotion Unit, it was decided to employ a *before and after* research design whereby all clients are interviewed by means of a highly structured questionnaire at the point of intake or as soon as possible thereafter[11] . The clients are asked for the same pieces of core information, in the same way, at different points in time - in this instance three months after the point of first contact, the results are then compared.

Measuring changes in an individual's behaviour is however fraught with difficulties. Any such change is a result of the interaction of three factors: the person, the environment and the intervention. At least in theory for a change to be due entirely to a particular intervention or treatment, all other variables to do with the person and his/her environment would have to remain constant. This is never the case in the real world. Family and personal relationships have their ups and downs, as do many other factors in an individual's life, all of which in theory could contribute to a change, or outcome, over time. Nevertheless it is possible to set up a basic evaluation system of the Health Promotion Unit without dwelling too deeply on the issue of attributing outcomes. If the Health Promotion Unit is consistently recording positive outcomes using the Intervention Sheets, it would be fair to assume that the Unit is

[11] From the onset, while the importance of evaluating the Health Promotion Unit was recognised by all Project staff, it was secondary to ensuring the smooth running of the Unit. The provision of a quality service to all clients was of the utmost importance. Although the Intervention Sheets are intrinsic to ensuring quality, it was inevitable that on certain occasions effective management of the Unit would require that completing the questionnaires did not take priority.

having a positive impact on client's behaviour. The strengths and weaknesses of the before and after research design employed to evaluate the Health Promotion Unit is examined in detail later in the chapter.

At the start of the evaluation, a review of the relevant literature was undertaken, and existing instruments for the measurement of the effectiveness of syringe exchanges were examined. Previous syringe exchange evaluation reports were also examined (Haydon and Stimson, 1994; Russell, 1991). Since the international research reviewed has shown that syringe exchanges are associated with a range of different outcomes, and the objectives of the Health Promotion Unit, as perceived by the staff are multiple, the instruments had to be multi-dimensional in nature. Informal interviews and discussions took place with the Health Promotion Team and other relevant staff members. The **outcome domains** identified were:

Table 3.1 Outcome Domains

- Drug use - including prescribed drugs and alcohol;
- Injecting Risk Behaviour;
- Sexual Risk Behaviour;
- Health and Well-being.

A potential list of items for each domain was drawn up. After discussions with the Health Promotion Team the items to be included in the draft version of the research instrument were agreed upon. This included some questions that were similar to instruments of known reliability and validity; such as the Opium Treatment Index (Drake *et al*, 1991a) and some new items were developed specifically for the Health Promotion Intervention Sheet.

3.3 PILOT STUDY

The first version of the questionnaire was piloted on 70 clients, with each member of the Health Promotion Team administering a number of questionnaires. Clients were asked how they felt about filling in the questionnaire, and their views on the content. Discussions were held with the Team around the client's feed back, and issues that arose during the administration of the Intervention Sheets. At this stage questions which were poorly answered, or reported as being inappropriate were disregarded. Some questions required varying degrees of modification. Those questions, which were answered well, showed an even range of responses and, were not reported as causing any problems were left on the Intervention Sheet. Some new items, which were agreed upon by the team were also added.

The main problem reported by the Health Promotion Team at this stage was the length of time it took to complete the 'First Visit Intervention Sheet' with new clients. Filling in the questionnaire itself did not take too long, however, the resulting issues that were brought up then had to be addressed by the workers, which proved very time consuming. Consequently, first visits using the questionnaire took between 20-30 minutes. While the team were not opposed to spending this time with the new clients, it did however lead to increasing pressure in the reception areas, which was in turn passed on to the Health Promotion Team. Nonetheless, at this stage it was decided not to shorten the questionnaire, rather to wait and review the situation periodically.

The second pilot study was designed to run for six months. It was intended to test both the revised version of the 'First Visit Intervention Sheet' and the '3 Month Follow-up Intervention Sheet'. The aim of this pilot study was to test the viability of the new intervention sheets over time. For the purpose of this pilot study the 'Follow-up Intervention Sheets' were administered three months after a client's first

visit. At the end of the second pilot study no significant changes were made to either the First Visit, or Follow-up Intervention Sheets[12] .

3.4 RESEARCH INSTRUMENTS

In this section the final version of the Health Promotion Unit's 'Intervention Sheet' is examined.

Three **Demographic Characteristics** were included: gender, age and postal code.

International research suggests that syringe exchange programmes appeal primarily to drug users not in contact with drug treatment services (Paone *et al*, 1995). However, there is evidence suggesting that as a point of first contact, exchanges act as an effective source of referral into treatment (Stimson *et al*, 1991). A number of **Treatment Measures** were included in the Intervention Sheet primarily to examine changes over time in clients self-reported contact with such services. To this end, clients are asked whether they are currently using any other drug service and if so where. Another question concerned with treatment was whether clients had previously undergone a detoxification, and if so how many. Workers specified on the questionnaire whether the detoxification was supervised, or whether the clients had self-detoxified. Clients were also asked whether they had ever stopped using drugs before (for any period of time). Those who answered yes, were asked how long they were drug free, and what they considered the primary reason for reusing drugs.

Although the treatment measures outlined above proved effective in highlighting whether first visit clients were currently in contact with other services, in many instances one was only able to surmise as to whether clients had previous treatment contacts. In order to address this notable omission, an additional question was included; whether the client had ever had any previous contact with a drug service. When appropriate the name and nature of the contact was also recorded. This permitted a more accurate identification of first treatment contacts.

The **Outcome Domains** and the measures included within them are described below.

3.4.1 Drug Use

One of the aims of the Health Promotion Unit is to help people employ safer drug using practices. This includes encouraging clients to use safer combinations of drugs and changing routes of administration; it is not simply encouraging clients to reduce their drug use. Consequently, a method of estimating recent drug(s)' consumption was required. Despite the inherent problems of trying to gain estimates of the frequency and type of drug use in face-to-face interviews, it was considered important to include both measures. Clients were therefore asked to report on the frequency and route of administration of their primary and secondary drug(s) over the 4 weeks prior to contact with the Health Promotion Unit. Included in this were the use of prescribed drugs and alcohol.

A second measure included in this domain was how long the client had been injecting. Des Jarlais (1992) and Paone *et al*, (1995) maintains that syringe-exchange programmes appeal primarily to people with long histories of drug injecting and less to new injectors and young injectors. However, the Health Promotion Unit would ideally aim to attract clients as soon as possible after initiating IV drug use, in order to minimise risky drug using behaviour. Clients were also asked at what age they first initiated intravenous drug use. This provided a method of validating the length of clients' injecting careers.

Clients were asked at what age they 'first used drugs'. This was a relatively subjective measure as it was left up to the clients to interpret the term 'drug', however it was stated that tobacco and alcohol were not to be included. Other legal substances were however stated by clients and included in the coding system, such as cough bottle and solvents. The final two measures included in this domain were whether clients smoked before they injected, and if so for how long were they smoking.

[12] The Intervention Sheet was reviewed again at a later date, and a number of modifications were made to it. This primarily consisted of the inclusion of a number of variables previously omitted. The research instruments employed in the Health Promotion Unit at the time of writing this report included these modifications. Where appropriate, attention will be drawn to these recent changes. As a result of the inclusion of these additional variables in May 1998, there will be some missing information in the data chapter.

3.4.2 HIV Risk Behaviour

An accepted goal of the Health Promotion Unit is to minimise the transmission of HIV, Hepatitis B and C and other sexually transmitted diseases, by reducing risk behaviour. Consequently, it was very important to have baseline information on the risk behaviour of clients at the point of first contact with the Health Promotion Unit, in order to enable a comparison at the follow-up stage. In the First Visit Intervention Sheet there are two sections concerned with HIV risk behavior, one which deals with injecting risk practices, and a second which deals with sexual risk behaviour.

Injecting practices are dealt with in some detail. Clients were asked about the frequency of use of both needles and syringes and when pertinent how they cleaned their injecting equipment. There was a general question on whether clients ever shared their injecting equipment, and more specifically whether they had shared in the four weeks prior to contact with the Health Promotion Unit. Moreover, a distinction was made between the recent lending and borrowing of used injecting equipment. This was included primarily because the lending and borrowing of injecting equipment differs markedly in terms of levels of personal risk, and risk of future transmission of HIV (McKeganey *et al*, 1988).

There was also a separate question concerned with whether clients had ever shared injecting equipment with their sexual partners. This question was included because members of the Health Promotion Team had observed that many drug users do not consider the sharing of injecting equipment with their partners as sharing per se. Consequently, it was felt that there was a need to remind clients of the potential risks involved in such activities. The final question in this section is concerned with the sharing of spoons and filters. It is important for the prevention of HIV and Hepatitis B and C that the sharing of injecting paraphernalia be perceived by drug users as potentially risky (Hunter, *et al* 1995). Moreover, the Health Promotion Unit must provide information on the possible HIV risks associated with the sharing of such paraphernalia. Apart from sharing behaviour, clients were asked in some detail about their injecting practices, this included details about injecting sites, and the preparation of the site for injecting.

With regard to sexual risk behaviour, in earlier drafts of the questionnaire clients were asked the number of sexual partners they had in the past year. This was considered very intrusive and the response rate was low, consequently this question was omitted. In its place clients were asked whether they were sexually active, and if so whether they had more than one sexual partner in the last three months. Clients were also asked whether they had a regular sexual partner, and if so whether their partner was an injecting drug user. Thereafter clients were asked the frequency of condom use. As illustrated in the previous chapter, the international research on syringe exchanges, shows that few have had a positive impact on sexual risk behaviour, in terms of increasing condom use among attendees (Donoghoe, 1992).

3.4.3 Health and Well Being

Given the well known medical problems associated with drug use and the fact that the primary aim of the Health Promotion Unit is to maintain or improve the health and well-being and subsequent quality of life[13] of the clients, it was vital to have a number of measures in this domain. Moreover, epidemiologists, clinicians, and researchers are well aware that for any medical and quasi medical intervention, quality of life must in some way be measured. Increasingly within such interventions individuals are being asked to report their own health status in a way that can be analysed quantitatively (Jenkinson, 1994). In the Health Promotion Unit a health assessment was considered to have an important clinical and research role both in order to ascertain the initial health status of the client (and areas of concern) and to measure the impact of the service on the client's health and well being.

Clearly in evaluating the Health Promotion Unit the health status of the client is an important variable. A subjective health assessment was therefore incorporated into the Intervention Sheet which asked respondents to report on their own physical and mental health. The aim was to provide a quick, and effective measure of global health. Drake *et al* (1991b) developed a scale for estimating the health status

[13] Subjective well being and health assessments historically are included under the broad 'quality of life' concept, which includes measures of health, social function, resources, happiness, life satisfaction and social stability (Albrecht, 1994).

of drug users, the **Opium Treatment Index** (OTI). The main problem with incorporating the OTI into the evaluation of the Health Promotion Unit was that it is a very lengthy questionnaire. While the benefits of the instrument are its known reliability and validity, in the end it was decided to employ a similar symptom check-list to measure clients' health and well-being, including some variables in the OTI. Many of the illnesses included in the general health question, such as abscesses, septicemia and overdoses are caused by drug use and indicative of unsafe injecting and drug using techniques. A global measure of mental and physical health was also included - by employing a global rating scale. This rating scale requires respondents to describe their state of health (physical and mental) through answering just one question, for example "Would you describe your physical health as very good, good, fair, poor or very poor". There is evidence supporting the value of such uncomplicated global ratings in terms of their simplicity and clarity (Ziebland, 1994).

In the Intervention Sheet there are also two questions concerned with Hepatitis. The first question is whether the client has ever had hepatitis B, hepatitis C or jaundice. It was decided to include jaundice in this section, as clients may be unaware of their hepatitis status, and whether they have had jaundice may indicate hepatitis B or C. Clients were also asked whether they ever had a vaccination against hepatitis B. Regarding HIV, clients were asked whether they ever had a HIV test, and if so the date of their last test. The Health Promotion Team decided that it was inappropriate to ask clients their HIV status, however some members of the team felt that it was important if such information is volunteered by a client that it be recorded, for follow-up purposes. Consequently, space was provided for this information to be recorded, and this is only done when the client consents.

The definition of health employed by the World Health Organisation "*... is a state of complete physical, mental and social well being and not merely the absence of disease or infirmity*" (cited in Albrecht, 1994:13) highlights the importance of including social, cultural, subjective and social-psychological variables that impact on independent living and perceived well-being in any measurement of health. In order to strike a balance between designing a concise questionnaire and obtaining the detailed information required to measure health, only those variables considered essential in determining the social stability of clients were included. The variables included in this domain are employment status, whether the client had any children and relevant details including care arrangements. Clients are also asked whether they have ever been to prison, and their current legal status is ascertained. Finally, the housing situation of the client is assessed.

3.4.4 Three Month Follow-up Intervention Sheet

In order to measure any change in clients' behaviour, a follow-up research instrument is required. For the purpose of this evaluation, it was decided that the Follow-Up Intervention Sheet was to be completed three months after first contact with the Health Promotion Unit (or as soon as possible thereafter). The follow-up questionnaire is largely the same as the first visit questionnaire outlined above. In short, two methods were employed to measure changes in clients' drug use, injecting and sexual risk behaviour and health and well being, firstly by comparing clients' self reported baseline behaviour at the point of first contact, with their behaviour at follow-up. Secondly, a more subjective method was employed, whereby clients were asked whether they believed that their behaviour had changed in any way since attending the Unit, and if so how. It was felt that the use of these two methods would allow for a more accurate measure of behaviour change.

3.5 LIMITATIONS OF THE STUDY

Demonstrating the impact of the Health Promotion Unit means that two key questions must be answered. Firstly, is the intervention achieving its intended objectives? Secondly, can alternative processes not associated with the service itself better explain the results of the evaluation? In other words, there is a need to rule out rival interpretations and show, as Rossi and Freeman (1985) put it "in a persuasive way that the changes are a function of the intervention and cannot be accounted for in other ways". For example, occasionally the changes in behaviour that occur may be so large that it is improbable that they could have been caused by other factors. This is unlikely to happen with people who inject drugs, where we would expect small changes in behaviour. In most cases however there will be various extraneous factors operating at the same time as the intervention, which will have an impact

on behaviour change. Moreover, a wide variety of interventions will be operating in any given city, and it will rarely be possible to identify the exact contribution of any one of them.

Ideally, establishing the impact of such an intervention requires the selection of a control that represents the condition that would have been obtained without the intervention. In short a rigorous evaluation of the Merchant's Quay Health Promotion Unit would require comparing large groups of injecting drug users attending the Unit with a control group of non-attendees. As this approach was not possible[14] the evaluation employed a quasi-experimental design. This involved a *before and after research method* with clients as their own reflexive control. The simplest form of a before and after design is indicated by its name: a set of base-line measures are taken of a group of clients, who then experience the intervention, and are then measured once more, or perhaps several times thereafter. The difference between the post-test and pre-test results is said to be the 'effect' of the intervention, although this is misleading. As respondents act as their own controls they provide the 'all other things being equal' conditions that enable the isolation of the effects of the intervention on clients so that valid causal conclusions can be drawn. However, there are well documented weaknesses to employing such a research design (Oppenheim, 1998: Elliott, 1998) and it is not feasible to attribute **all** the before–and–after differences to the effects of the intervention. It is always possible that some changes in the expected direction may have taken place even without the impact of the intervention. Moreover, there are problems of sample bias, in that needle exchange attendees could be a self-selecting low risk or even high-risk group (Elliott, 1998).

So at best, any differences in the behaviour of attendees before and after experiencing the intervention can only be interpreted as possible indicators of syringe exchange performance and not directly caused by the intervention. As Wodak (1995) points out

> *"…attributing benefit to any single intervention is impossible when multiple strategies have been implemented at about the same time. The intensity of implementation is difficult if not impossible to measure and the effect of the interventions is in all likelihood synergistic. In a categorical sense, the methodological problems cannot be resolved without a controlled trial of communities randomly allocated to a single intervention or no intervention. The ethical, logistic, financial and public health problems of attempting such a study are such that there is no alternative, especially in the urgency of the epidemic, to making a judgment on the grounds of plausibility, feasibility, cost and international experience. At issue is whether authorities in a particular country prefer to be roughly right or precisely wrong.." (Wodak,1995).*

Information collected for the purpose of the evaluation of the Health Promotion Unit was based on clients' self-reported risk behaviour. There is however a number of shortcomings associated with the accuracy of self reported survey data. Inaccurate reports may either be false positive or false negative (Skog, 1992). False positives occur when, for example, an individual erroneously claims to have used a particular drug, either due to a misunderstanding of the question or by consciously lying. False negatives on the other hand occur when respondents who have in fact used the drug in question state that they have not done so. In short, it is possible that drug users may provide inaccurate information about their past and current behaviours (Samuels *et al*, 1992). On the one hand, the respondents may be unable to recall past behaviour. Patterns of drug use and sexual practices are complex and undergo changes over time; consequently it may be very difficult for respondents to recall their behaviour accurately (Bradburn *et al*, 1987). Conversely, the respondents may be able to remember their behaviour but be unwilling to reveal sexual and drug using practices that may be stigmatized and even illegal (Siegel and Bauman, 1986). Be it deliberate or unintentional, invalid self-reported information about sensitive behaviour such as drug using practices and sexual behaviour can bias results.

Notwithstanding these concerns a variety of approaches have shown that intravenous drug users often provide reasonably accurate self-reports of drug use (McElrath*, et al* 1994) and sexual behaviour (Kleyn *et al,* 1993; Rhodes *et al*, 1996). However, the research suggests that the time frame should be kept as short as possible so as to minimize recall bias. Consequently, in the questionnaires employed by the Health Promotion Unit, respondents were asked to recall information primarily from two retrospective

[14] There are enormous difficulties in obtaining two identical groups, an experimental group and a control group, for any matched-sample before-and-after research design (Oppenheim, 1998). In this instance these difficulties were compounded by the fact that the individuals in question were drug users, and as such members of a 'hard to reach' population. Moreover, the time and finances necessary to secure the identification of a control group were not available.

periods: behaviour over the previous four weeks and over the previous three months (Bradburn *et al*, 1987). Some effort was also made to validate clients self reported drug use by comparing self-reports with physical evidence of injecting.

Another drawback of employing the before and after research methodology is that it is difficult to determine what can be considered a successful follow-up rate. In general, a 1 in 4 rate of return at follow-up would be a relatively optimistic estimate (Burns, 1994). However the large numbers of clients attending the Merchant's Quay Health Promotion Unit on any given day, makes it extremely difficult to estimate what percentage of clients present only once. If it turns out that once off attendance is common, it would inevitably effect the follow-up rates. However, anecdotal evidence from the Health Promotion Team suggested that it could be expected that at least 20% of the new clients would attend on a regular basis. Despite the weaknesses of the before and after research design, this methodology is considered appropriate, and it has been used in the evaluation of UK syringe exchanges and proved very effective (Stimson *et al*, 1988).

3.6 DATA ANALYSIS

The data collected from the intervention sheets were entered into SPSS/PC. Two separate databases were created, one for the First Visit Intervention Sheets, and the second for the Three Month Follow-up Intervention Sheets. At the initial stage analysis was conducted on each database separately. However, in order to compare clients' behaviour change over time, a new database was formed, which consists of the baseline and follow-up data of the 370 clients who represented for the three month follow-up. Categorical variables were analysed using chi-square analysis to test differences between groups. As will become apparent in Chapter Four the data are not normally distributed, consequently non-parametric tests are employed when analysing continuous variables, such as age and length of time injecting. In order to examine differences in self reported behaviour for such continuous variables, Mann Whitney Tests were employed to compare groups. Finally in Chapter Five when behavioiur change is examined, variables were transformed into dichotomous variables when possible, and McNemar Tests were employed to examine the behaviour change. As non-parametric tests are less powerful than parametric tests, in the sense that the result is less likely to be statistically significant when there is a relationship between two variables (Cramer, 1998) a 0.05 level of significance was employed for the McNemar Tests.

3.7 SUMMARY

It has been illustrated in this chapter that in undertaking the evaluation of the Health Promotion Unit a research instrument had to be designed which not only measured the changes in clients behaviour over time, but which was compatible with, and caused the minimal interference to, the day to day working of the Unit. It was decided that the only reliable way to actually measure an outcome or change among clients attending the Unit, was to ask them the same core questions, in the same way, at different points in time and compare results. The core questions were concerned with the following; substance using, risk behaviour, social circumstances, and health and wellbeing. The research instrument was designed to be completed by clients at first attendance, and then at 3 monthly intervals. Although there are limitations to the methodology employed, it was considered to be the most appropriate and effective method of measuring the changes in attending clients over time.

CHAPTER 4
PROFILE OF FIRST VISIT CLIENTS

This chapter presents an analysis of baseline data collected from all clients at first-visit to the Health Promotion Unit between May 1st 1997 to October 31st 1998. The data presents the total population of new clients attending the Unit within this specified time period (*n*=1337). The data herein provides comprehensive information on clients' socio-demographic details including gender, age, and home circumstances. Thereafter, data on each of the outcome domains; drug use, injecting risk behaviour, sexual risk behaviour, and health and well-being will be conveyed. All percentages are based on valid responses adjusted for missing data. Missing data includes information not collected by staff at the Health Promotion Unit and non-responses by clients. It should however be noted that all clients agreed, at least in part, to complete the questionnaires.

4.1 SOCIO-DEMOGRAPHIC DETAILS

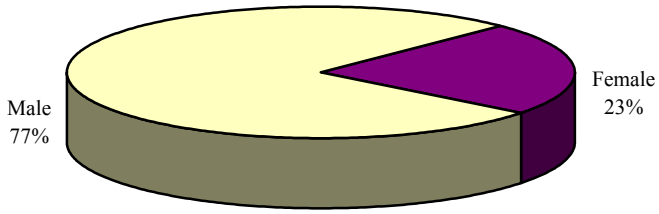
This section presents demographic information on the first visit clients attending the Health Promotion Unit. International research (Pearson, 1991) and to a certain extent national studies (O'Higgins 1998; Cullen, 1997) illustrate that drug use, and in particular injecting drug use is not distributed randomly across the population. The intention of this section is to provide some insight into the characteristics of the injecting drug using population in Dublin. Throughout this Chapter, gender and age are considered important variables. Consequently, when relevant, gender and age differences are presented.

4.1.1 Gender

Figure 4.1 illustrates that 23% of first visit clients were female (*n*=313). In Ireland data collected by the Health Research Board for the Greater Dublin Area illustrates that 22% of the total treatment contacts in 1995 were female (O'Higgins and Duff, 1997) this increased slightly to 28% in 1996 (Moran *et al*, 1997). The problem with these figures is firstly that they represent non-opiate and opiate users. Secondly they are based on drug users who actually present for treatment and it is generally recognised that only a small proportion of drug users (Hartnoll *et al*, 1985) and in particular female drug users (Anglin *et al*, 1987; Paone *et al*, 1995) are in contact with drug treatment services. Comiskey (1998) has however attempted to estimate the prevalence of opiate use in Dublin. The estimated total number of

opiate users was put at 13,460 and the ratio of male to female opiate users was estimated to be 3:1. The gender difference of first time attendees at the Health Promotion Unit is the same. This indicates that the Health Promotion Unit is successful in attracting new female drug users (Cox *et al*, 1999).

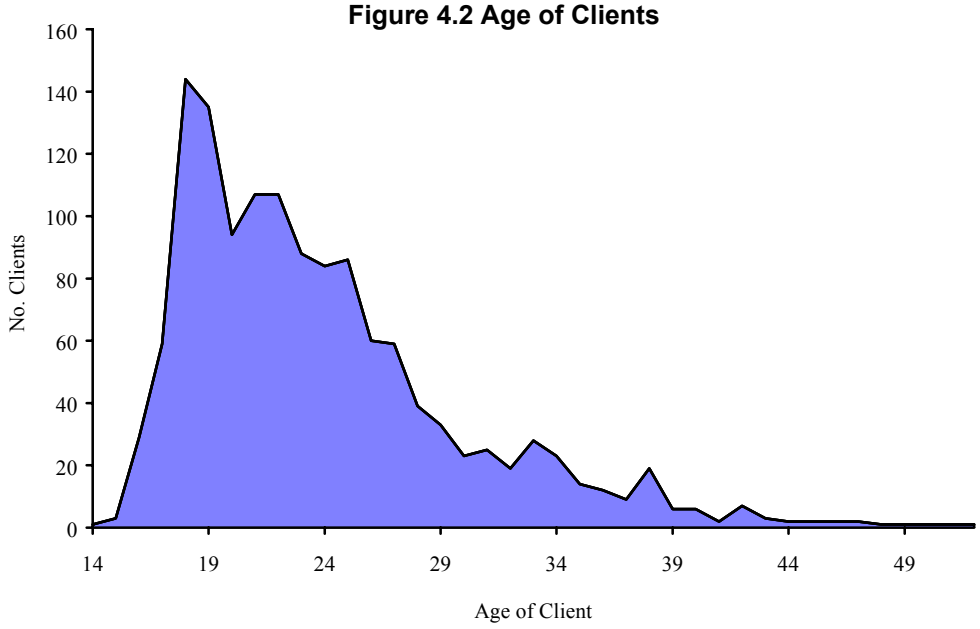
Figure 4.1 Gender of Clients



4.1.2 Age

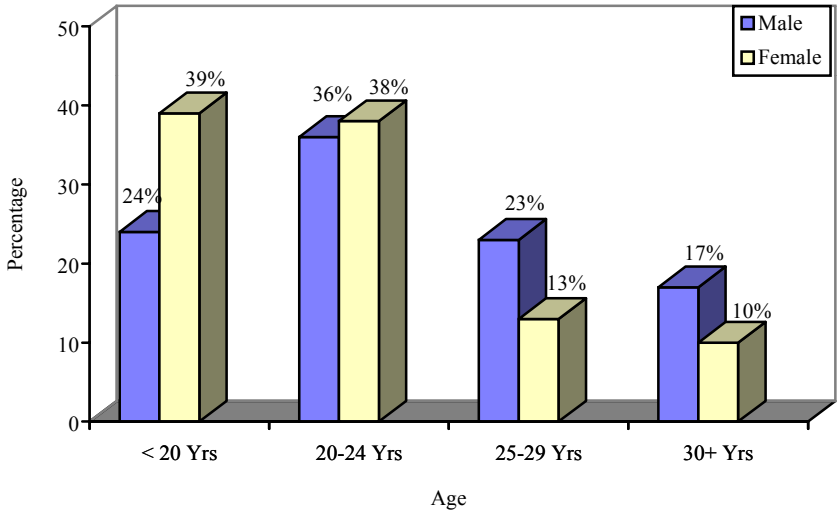
Figure 4.2 graphically illustrates the age distribution of first visit clients attending the Health Promotion Unit. The age range of new clients at the Unit is 14 to 52 years. The mean age of first visit clients is 24 years, and the mode is 18 years.

Figure 4.2 Age of Clients



There were notable gender differences in the age of first visit clients at the Health Promotion Unit. Analysis revealed female clients were significantly younger than their male counterparts (z = -5.98, $p<0.001$). The mean age of male clients was 24.3 years old (median =23, range = 14-52), conversely female clients were on average 22.2 years old (median=21, range =15-42). **Figure 4.3** illustrates the gender differences in the age of first visit clients. Moreover, it highlights the fact that female presenters are proportionately more likely to be teenagers than their male counterparts. Conversely, male clients are proportionately more likely to be over the age of 25 years.

Figure 4.3 Age of First Visit Clients by Gender



4.1.3 Area of Residence

Table 4.1 shows the area of residence of the new presenters at the Health Promotion Unit. It is immediately apparent that the vast majority of clients (84%) attending the Unit are from the Greater Dublin Area. These results are support other Irish data which illustrate that intravenous drug use is primarily an urban problem, more specifically a Dublin phenomenon (O'Higgins, 1998; Moran, *et al*, 1997). At the same time however, one would expect the majority of attendees to be from the locality.

Table 4.1 Area of Residence

Area	First Visit Clients n	First Visit Clients %
North Inner City (D1 & D7)	215	16
South Inner City (D2 & D8)	195	15
Remaining North Dublin	270	20
Remaining South Dublin	438	33
Remaining Counties	117	9
N. Ireland & U.K.	7	1
No Fixed Abode	87	6
Total	1329	100

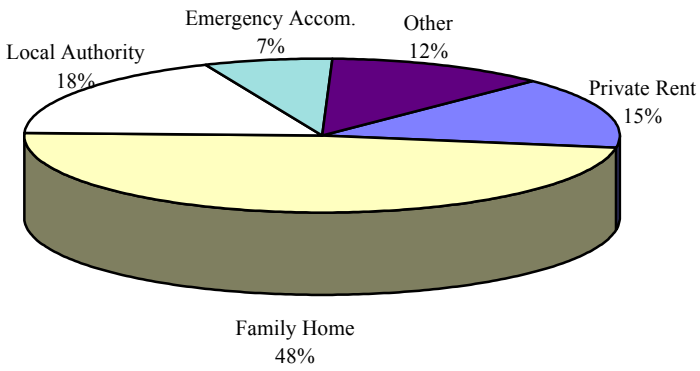
*Missing Observations = 8

As illustrated in Table 4.1 this proved to be the case, in that the largest proportion of new clients presenting at the Health Promotion Unit is from Dublin 8 (0.13) and Dublin 7 (0.9). These communities, which are in the immediate vicinity of the Merchant's Quay Project, are also disproportionately affected by drug use. It is also worth noting that the vast majority of clients who reported having 'no fixed abode' were staying in some form of emergency accommodation or sleeping rough in Dublin.

4.1.4 Home Circumstances

Figure 4.4 illustrates the current accommodation of first visit clients (*n*=1325). Just under half of the first visit clients reported living in their family home (*n*=645). There was no significant gender difference in the percentage of male (50%) and female (43%) clients who reported this.

Figure 4.4 Accommodation Type



A significant minority of first visit clients reported being homeless[15] . However, the percentage of clients who reported being homeless when asked about their current accommodation (19%) does not correspond with the percentage of clients who reported having no fixed abode (6%) as illustrated in Table 4.1. This is primarily due to the fact that clients who reported staying in emergency accommodation or staying with friends more often than not gave the postal code of this accommodation as their area of residence. In short, it was rough sleepers who were most likely to report having no fixed abode.

Of those clients who were considered homeless on the basis of their current accommodation, Figure 4.4 illustrates that 7% reported living in emergency accommodation (n=90) the majority of whom were staying in hostels (n=83) and only a few in B&B's. The remaining homeless clients as indicated in Figure 4.4 by 'Other' reported staying in a squat (n=7), with friends/relatives (n=82), or sleeping rough (n=67). This level of homelessness is cause for concern. Figure 4.4 illustrates that first visit clients are more likely to report being homeless, than to report living in Local Authority accommodation. Moreover, there was a gender difference, although not statistically significant, in the reported levels of homelessness, in that 18% of male first visit clients reported being homeless, compared with 22% of the female clients. Research undertaken within the Merchant's Quay Project indicates that the issue of homelessness among attending clients is a major problem[16] .

In order to attempt to estimate the extent to which clients are 'at risk' of becoming homeless all were asked whether they regarded their current accommodation as temporary or permanent. **Table 4.2** illustrates that female clients were significantly more likely than male clients to report living in temporary accommodation (x^2=6.66; df=1; p<0.01). Moreover, 39% of the total population of new presenters reported currently living in what they regarded as temporary accommodation. This figure is substantially larger than (yet includes) those who reported being currently homeless.

Table 4.2 Accommodation Type by Gender

Accommodation Type	Male %	Female %	Total %
Temporary	37	45	39
Permanent	63	55	61
Percentage	100	100	100
Total	1022	311	1333

*Missing Observations = 4

[15] For the purpose of this research homeless clients are defined as those who reported living in a hostel, a B&B, a squat, staying with friends or sleeping rough. In other words a fairly narrow definition of homelessness was employed, as those who reported living in unsuitable temporary accommodation, or facing eviction are not included. Thus it is possible that such a definition will underestimate the extent of homelessness among the client group.

[16] Research has been undertaken by the Research Office on homelessness and drug use. The Report entitled "Where-Ever I Lay my Hat: A Study of Out of Home Drug Users" is available from the Research Office.

An examination of those clients who were 'housed' revealed that many felt insecure in their current accommodation. For example, 36% of those living in local authority accommodation viewed it as temporary, 45% of those privately renting also regarded their accommodation as temporary, as did 17% of those currently in the family home.

Clients were also asked whether they were currently living with an injecting drug user. **Table 4.3** illustrates that over a quarter of new attendees reported that they shared accommodation with an injecting drug user. Moreover, female drug users were significantly more likely than their male counterparts to report this (x^2=6.66; *df*=1; *p*<0.01). Table 4.3 illustrates that 37% of new female presenters reported living with an injecting drug user, compared with 25% of their male counterparts. The importance of this data is grounded in the fact that international research has found that living with an injecting drug user is related to the sharing of injecting equipment and paraphernalia, primarily because it creates a social environment that leads to sharing (Donoghoe *et al*, 1992; Magura *et al*, 1989).

Table 4.3 Living Status by Gender

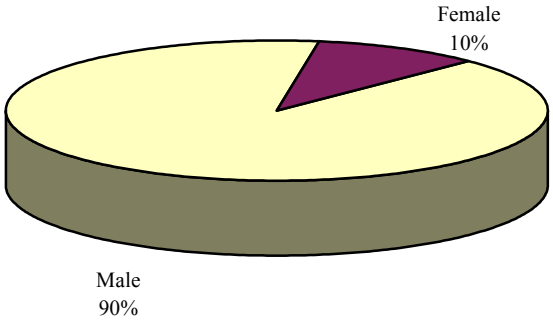
Living with IVDU	Male %	Female %	Total %
Yes	25	37	28
No	75	63	72
Percentage	100	100	100
Total	1020	307	1327

*Missing Observations = 10

4.1.5 Legal Status

Over half of the first visit clients (51%) reported that they had been to prison at some point in time (*n*=1329). Moreover, analysis revealed that there was a highly significant gender difference in having previously experienced imprisonment (x^2=136.08; df=1; p<0.001). Fifty nine percent of the male clients reported having been to prison (n=604) compared with only 22% of the female clients (n=67). **Figure 4.5** graphically illustrates that of those clients who report having been to prison, only 10% were female. These figures must however be examined in terms of the prison population. In short the Irish prison population is predominately male, and only 2% percent of the population are women. Moreover, it has been estimated that at least 40% of the prison population have a history of serious drug use.

Figure 4.5 Imprisonment by Gender



Clients were also asked about their drug use in prison. Unfortunately, this information was not included in the First Visit Intervention Sheets at the outset of the evaluation. Therefore this data is not available for the total population of first visit clients over the time period under investigation. From the valid data (n=350) what is known is that 55% of those who have been to prison report using drugs therein (n=192). Of these 44% reported that they injected drugs in prison (n=85) the majority of whom (70%) reported sharing their injecting equipment (n=60).

Clients were also asked about their current legal status. **Table 4.4** illustrates that 8% of first visit clients reported being on temporary release. The percentage of clients serving any type of community based sanction as an alternative to custody is very low, particularly when compared with the percentage who have been to prison.

Table 4.4 Legal Status of Clients

Legal Status	Temporary Release %	Suspended Sentence %	Community Service %	Probation %	Bail %
Yes	8	3	1	5	2
No	92	97	99	95	98
Percentage	100	100	100	100	100
Total	1286	1279	1276	1278	1328

4.2 TREATMENT STATUS

At first visit all clients were asked whether this was their first time in treatment. Just under half the clients (48%) reported that they had never attended any other drug treatment service (n=1332). Female clients were significantly more likely to report no previous treatment contact than males (x^2=9.32; df=1; p<0.01). Forty six percent of the male clients reported that this was their first time in treatment, compared with 56% of their female counterparts. This is probably related to the fact that the clients who reported no previous contact with drug treatment services were significantly younger than those who had previous contact (Z = -9.37; p<0.001). Clients who reported no previous contact with treatment services were on average 22.4 years old (median = 21, range 14-52) compared with an average age of 25 years among those reporting previous treatment contact (median = 24, range 16-51).

Although over half of the new presenters at the Health Promotion Unit had at some point in their drug using career attended a drug treatment service, only 21% reported being currently in contact with any such service (n=1337). **Table 4.5** shows the agencies with whom clients reported being in contact at the time of presentation at the Unit.

Table 4.5 Other Drug Services Attended

Service	Frequency *n*	Percentage %
Baggot Street	17	6
Trinity Court	61	22
Aisling Clinic	21	7
City Clinic	8	3
Anna Liffey	3	1
Other Exchange	27	10
Coolmine	17	6
CASP	11	4
Doctor (for physeptone)	27	10
Drug Addiction Counsellor	6	2
Other[17]	85	29
Total	283	100

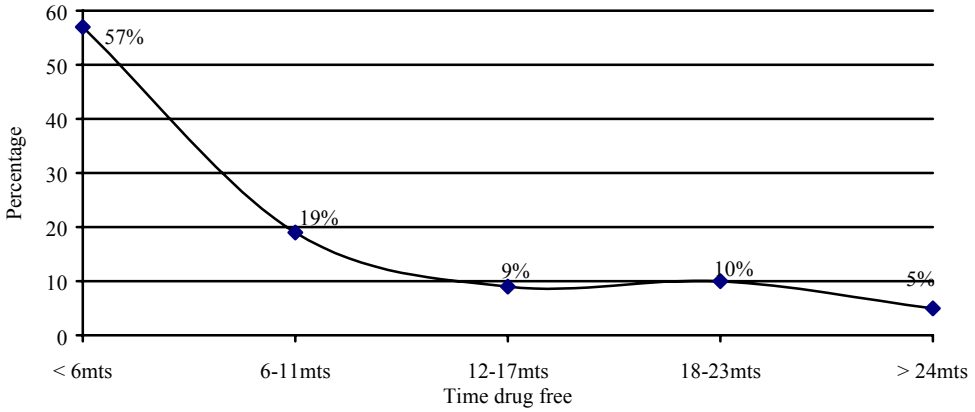
Clients were also asked whether they had previously undergone a detoxification either supervised or non-supervised, however this was not specified in the initial stages of utilising the Intervention Sheets. Fifty four percent of the clients reported that they previously had a detoxification. Analysis revealed that clients who reported having undergone a detoxification were significantly older than those who had not

[17] The organisations included under this category included Inchicore Health Centre, EHB Ballymun, the Methadone Bus, Ballyfermot Health Centre, Cuan Mhuire, Castle Street Health Centre, Ruthland Centre, Finglas Health Centre, and Mountjoy Clinic.

(z= -6.06, p< 0.001). Clients who reported having had a detoxification were on average 25 years (median =23, range 16-50) while their counterparts were on average 23 years (median = 21; range 14-52).

Clients were also asked whether they had ever stopped using drugs. Sixty four percent of the clients reported that they had stopped using drugs for a period of time. The number of clients who reported that they had stopped using drugs for any period of time (n=860) was larger than the number who reported having had a detoxification (n=721). This is probably due to the vagueness of the detoxification question, in that clients who had self-detoxified did not necessarily consider it a detoxification per se. The time periods in question ranged from one week to 20 years. **Figure 4.6** graphically illustrates clients reported 'time clean'. It is immediately apparent that the vast majority of clients relapsed within the first six months of being drug free.

Figure 4.6 Time Drug Free



In order to attempt to gain some understanding of the issues surrounding relapse clients were asked to state what they felt was the main reason for their lapse. A variety of responses were given, however some trends did emerge. **Table 4.6** highlights the most common responses to the question.

Table 4.6 Reasons for Lapse

Reasons for Lapse	Frequency *n*	Percentage %
Peer Pressure	165	20
Boredom	164	20
Depression	72	9
Temptation too much	67	8
Personal Problems	46	6
Released from Prison	38	5
Family Problems	37	4
Methadone ran out	20	2
Partner still using	17	2
Other	199	24
Total	825	100

*Missing Observations=35

4.3 DRUG USE

Clients were asked in detail about their drug use, as it was considered vital to get a measure of new presenters' current drug use. To this end, all clients were asked about their recent drug use, four weeks prior to contact with the Health Promotion Unit. However, a brief history of clients' drug using career was also required. In this section, the drug using history of clients is presented, followed by an analysis of clients' drug use at the time of presenting at the Health Promotion Unit.

4.3.1 Drug Using History

Clients were asked an open-ended question concerning the first drug they ever used. Both tobacco and alcohol were excluded from this, however some legal substances were included, such as solvents. **Table 4.7** presents the results.

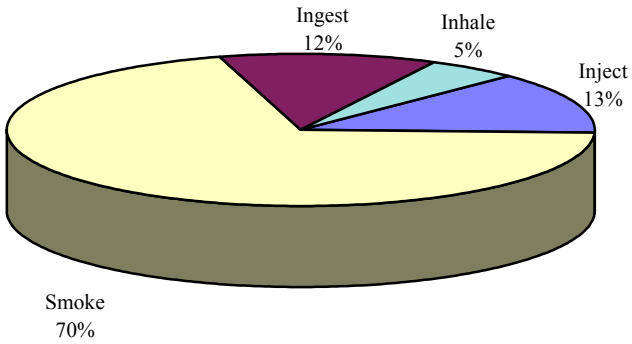
Table 4.7 First Drug Used

First Drug Used	Frequency *n*	Percentage %
Cannabis	669	51
Heroin	408	31
Ecstasy	73	5
Cocaine	58	4
Other opiates	25	2
Solvents	23	2
Benzodiazepines	22	2
Speed	22	2
Hallucinogens	20	1
Total	1320	100

*Missing Observations=17

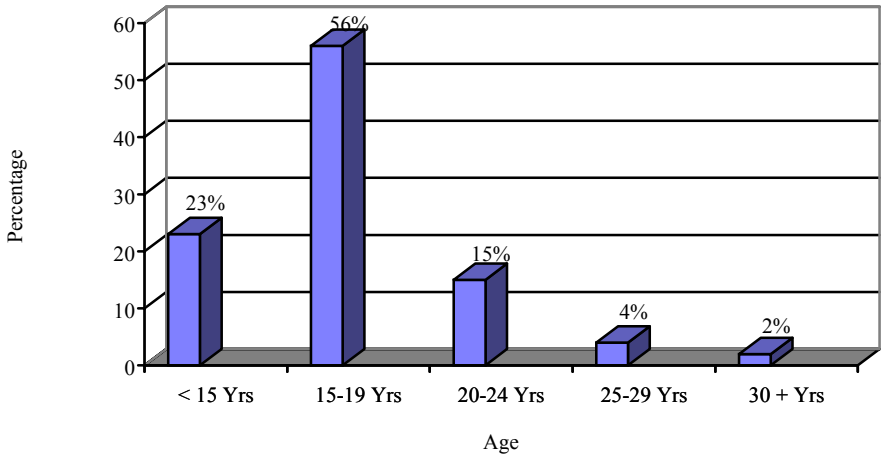
Over half of the clients (51%) reported that cannabis was the first drug they used. A significant minority of the clients (31%) reported commencing their drug using careers with heroin use. However, **Figure 4.7** shows that the majority of the clients who initiated drug use with heroin, did not inject the drug. Only 13% of the new attendees injected their first drug, all of whom reported using heroin as their first drug, the remaining 18% of those who used heroin as their first drug smoked the drug.

Figure 4.7 Route of Administration of First Drug



Clients were also asked at what age they first used drugs. **Figure 4.8** illustrates that 79% of the new attendees were teenagers when they first used drugs. The mean age for first drug use for the population was 17 years and the mode age was 16. There was a very wide age range among the client population, that is ranging from 7 to 42 years of age. Analysis revealed that there was no significant difference between the age at which male (17.24 years) and female (17.5 years) clients initiated drug use.

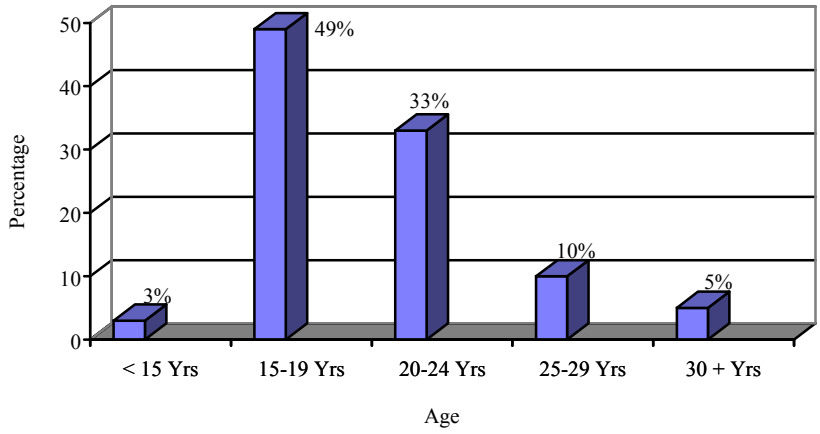
Figure 4.8 Age First Drug Use



Considering the nature of the service provided, it was not surprising that the vast majority of new presenters (99%) reported that they had injected a drug at some point in their drug using careers. Ninety five percent of those who had injected, reported heroin as being the first drug that they took intravenously. The remaining clients reported first injecting with cocaine, N.A.P.S (morphine sulphate tables) or amphetamines.

Figure 4.9 illustrates the age at which clients initiated intravenous drug use. Unlike age of first drug use, almost half the clients were over the age of 20 years when they started injecting. The mean age of first injecting was 20 years, and the mode age was 18. Again there was no significant gender difference in age of first IV drug use, male clients were on average 20.3 years of age, while female clients were 19.6 years.

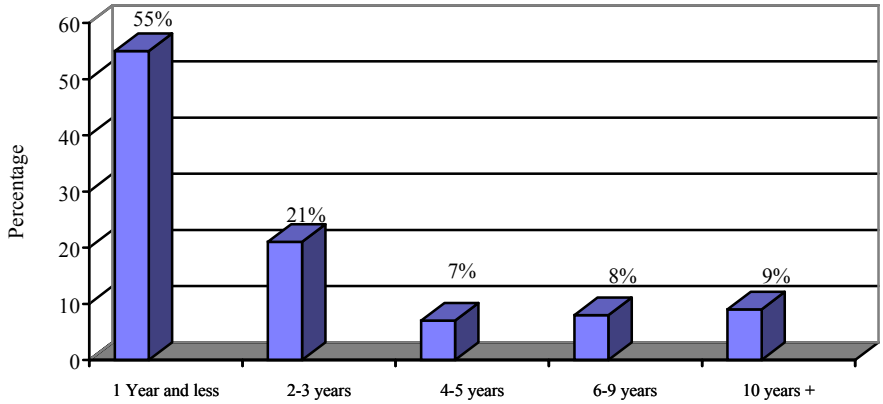
Figure 4.9 Age First Injected



4.3.2 Length of Time Injecting

All new presenters who reported having injected drugs were asked how long they had been intravenous drug users (n=1320). **Figure 4.10** shows that over half of the new presenters (55%) at the Health Promotion Unit were injecting drugs for less than one year. Moreover, almost one third (30%) reported that they were injecting for less than six months.

Figure 4.10 Length of Time Injecting



Analysis revealed that there was a significant gender difference in length of injecting careers. Male clients had significantly longer injecting careers than their female counterparts ($z= -5.9$, $p<0.001$). They reported having injected for an average of 3.4 years (median = 1 year, range 0-33 years) conversely female clients had been injecting for an average of 1.7 years (median = 7 months, range 0-25 years). Analysis supported the fact that length of time injecting is inextricably linked with age. When comparing recent injectors (i.e. less than 6 months) with those more established in their injecting careers (i.e. in excess of 6 months) , analysis revealed that recent injectors were significantly younger ($z= -8.88$, $p<0.001$). Recent injectors were on average 21.7 years of age (median = 21 years, range 15-42), while their counterparts were however on average 24.7 years (median = 23, range 14-52).

The length of clients injecting careers was also related to previous treatment contact, in that clients who reported no previous treatment contact had significantly shorter injecting careers than their treatment counterparts ($z= -16.81$, $p<0.001$). The average length of time injecting for clients in treatment was 4.6 years (median = 2 years, range 0-33 years) compared with an average of 1.2 years (median = 6 months, range 0-25 years) for clients reporting no previous contact with treatment services. Analysis also revealed unsurprisingly that length of injecting career was related to having had a detoxification ($z=-8.69$, $p< 0.001$). Clients who reported having had a detoxification injected for on average 3.7 years, (median=1.5 years, range 0-30 years), compared with those who had no previous detoxification, who injected for an average of 2.1 years (median = 8 months, range 0-33 years).

4.3.3 Current Drug Use

All clients were asked to detail their drug use over the four weeks prior to first contact with the Health Promotion Unit. **Table 4.8** illustrates the primary drug of choice of the new presenters at the Unit. The majority of clients (92%) reported using heroin as their primary drug. Ninety two percent of the clients reported injecting their primary drug (*n*=1324) the vast majority of whom also reported using heroin and other opiates as their primary drug. The remaining clients reported that they either smoked (*n*=53), injected (*n*=50) or sniffed their primary drug (*n*=5).

Table 4.8 Primary Drugs Used

Primary Drug Used	Frequency *n*	Percentage *%*
Cannabis	12	1
Heroin	1219	92
Stimulants	23	2
Other opiates	15	1
Physeptone	58	4
Total	1327	100

*Missing Observations =10

Table 4.9 shows how often clients reported using their primary drug over the four weeks prior to contact with the Unit. The majority of clients (83%) reported using their primary drug at least once a day. Over a quarter of the new presenters reported levels of drug use in excess of 4 times a day.

Table 4.9 Frequency of Use of Primary Drug

Frequency	Frequency *n*	Percentage *%*
More than 4 times a day	358	27
Daily	743	56
4-6 times a week	80	6
1-3 times a week	106	8
Less than once a week	40	3
Total	1327	100

*Missing Observations = 10

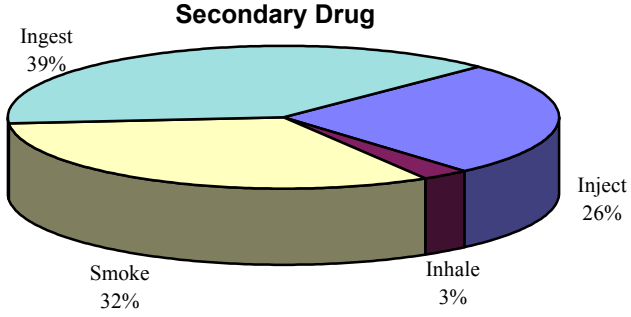
Sixty four percent of new attendees at the Unit reported that they were poly drug users i.e. that they regularly used other drugs apart from their primary drug of choice. Female first visit clients were as likely as males to report poly drug use. There was no statistically significant relationship between age and poly drug use, however it was related to length of time injecting (z =-3.58, p< 0.001). Poly drug users were injecting for on average 3.2 years (median = 1 year, range 0-28) while clients who reported non poly drug use were on average injecting for 2.7 years (median =10 months, range 0-33 years).

Table 4.10 Secondary Drugs Used

Secondary Drug Used	Frequency *n*	Percentage *%*
Cannabis	249	30
Heroin	51	6
Stimulants	181	21
Other opiates	32	4
Benzodiazepines	204	24
Physeptone[18]	124	15
Total	841	100

Table 4.10 illustrates the secondary drugs that clients reported using. As heroin was largely the primary drug of choice, levels of opiate use were much lower when secondary drug use was examined. Conversely levels of cannabis use were higher. A significant minority of clients (n=138) reported using cocaine as their secondary drug (included in Table 4.10 under stimulants) most of whom not only reported injecting the drug but also reported using heroin as their primary drug.

Figure 4.11 Route of Administration of Secondary Drug



[18] There is space on the Intervention Sheet to indicate whether clients who reported using physeptone were getting a prescription for the drug. Unfortunately this was not always filled in correctly. Thus there is some ambiguity around the numbers who were taking street and/or prescribed physeptone.

Figure 4.11 illustrates the route of administration of secondary drugs. As expected levels of intravenous drug use were much lower than for primary drug, just over a quarter of new presenters injected their secondary drug. As indicated previously, most of these clients also injected their primary drug. **Table 4.11** shows the frequency of use of secondary drugs. Although secondary drugs were used less frequently than primary drugs, 41% of clients reported using their secondary drug at least once a day.

Table 4.11 Frequency of Use of Secondary Drug

Frequency	Frequency *n*	Percentage %
More than 4 times a day	50	6
Daily	292	35
4-6 times a week	92	11
1-3 times a week	259	31
Less than once a week	142	17
Total	835	100

4.4 INJECTING RISK BEHAVIOUR

All clients who reported injecting drug use were asked for detailed information on their injecting practices. This section presents the relevant data. Firstly, clients' injecting techniques are addressed. At the point of first contact an attempt is made to assess the injecting behaviour of all new presenters. When necessary, advice is given on how to improve injecting techniques so as to minimise the risks to the individual. Thereafter, the levels of sharing of injecting equipment and injecting paraphernalia is examined.

4.4.1 Injecting Behaviour

Ninety seven percent (*n*=1299) of the clients reported that they were injecting drug users (i.e. they injected either a primary or secondary drug). In the majority of cases, when permission was granted, clients' upper extremities were examined for evidence of needle marks to determine skin condition at injecting sites. This information is recorded on the Intervention Sheets primarily as a means of validating clients' self reported drug use. Obviously this data relates only to clients who inject in their arms. **Table 4.12** illustrates the most common injecting sites reported by clients. The majority of clients (85%) reported injecting in their arm. Table 4.12 shows that five percent of first visit clients reported injecting into particularly dangerous sites, i.e. the groin and the neck. These clients are informed by Health Promotion staff of the dangers of these practices, and are encouraged to either cease intravenous drug use or when possible to change their injecting site.

Table 4. 12 Injecting Sites

Injecting Site	Frequency *n*	Percentage %
Arm	1098	85
Leg	28	2
Hands	80	6
Feet	19	1
Neck	13	1
Groin	48	4
Buttocks	13	1
Total	1299	100

*Missing Observations = 38

However, it should be noted that the majority of clients (83%) reported that they rotated their injecting site (*n*=1300). Only 17% of new clients reported always injecting in the same site. Forty two percent of

clients reported that they always change sites, and the remaining 41% of new presenters stated that they sometimes altered IV sites. As the skin contains bacteria, it is advisable for all injecting drug users to clean the injecting site with a sterile swab before and after injecting. **Table 4.13** illustrates that 60% of new attendees at the Health Promotion Unit did not *always* clean their injecting site prior to drug use. Clients are provided with sterile swabs to encourage them to employ more hygienic injecting practices.

Table 4.13 Cleaning Injecting Site Prior to Drug Use

Clean Injecting Site	Frequency *n*	Percentage %
Always	521	40
Sometimes	299	23
Never	491	37
Total	1311	100

*Missing Observations = 26

Table 4.14 illustrates that female clients were significantly more likely to report having problems in finding an injecting site than their male counterparts (x^2=88.31; df=2; p<0.001). Almost one third of the female clients reported that they always had problems in this regard, compared with only 13% of their male counterparts. This may be due to the fact that women generally have smaller veins than men, which not only leads to problems finding an injecting site, but may also lead to a number of injecting related complaints such as abscesses (Litt, 1981). This is probably compounded by the fact that female clients are more likely to be recent injectors, and as such may have poor injecting techniques.

Table 4.14 Problems Finding Injecting Sites by Gender

Problems Finding IV site	Male %	Female %	Total %
Always	13	31	18
Sometimes	33	43	35
Never	54	26	47
Percent	100	100	100
Number	1003	304	1307

*Missing Observations=30

All clients were asked whether they injected themselves. **Table 4.15** illustrates that female clients were significantly less likely to report that they injected themselves (x^2=63.33; *df*=2; *p*<0.001). Over one third of the female clients reported that they had never injected themselves, compared with 16% of male first visit clients. Analysis revealed that clients who reported always injecting themselves were significantly older than those who did not (*z*=-5.56, *p*<0.001). Moreover, whether clients reported always injecting themselves was also related to length of their injecting careers. Clients who reported always injecting themselves were significantly more likely to have a more established injecting career i.e. injecting in excess of 6 months (x^2=70.51; *df*=1; *p*<0.001). Sixty percent of the recent injectors reported always injecting themselves compared with 82% of the long-term injectors.

Table 4.15 Injecting Status by Gender

Inject Self	Male %	Female %	Total %
Always	81	58	76
Sometimes	3	8	4
Never	16	34	20
Percent	100	100	100
Number	998	300	1298

*Missing Observations=39

Clients were asked how often they normally used a needle and a syringe. **Table 4.16** illustrates the extent to which clients reported reusing needles and syringes. What is clear from the data presented in

this table is that the vast majority of clients employ some protective strategies to reduce the risk of contracting infections, by either only using needles and syringes once, or in the majority of cases, by cleaning the needles and syringes before reuse.

All clients who reported that they cleaned their needles (n=1004) and syringes (n=1089) before reuse were asked for details on how they cleaned their equipment. Methods of cleaning were quite varied, and were no doubt influenced by clients knowledge of cleaning methods and access to cleaning materials such as bleach and sterile water.

Table 4.16 Reuse of Needles and Syringes

Frequency of Use	Needles		Syringes	
	n	*%*	*n*	*%*
Once	234	18	143	11
> 1 but clean	1004	77	1089	83
> 1 but do not clean	68	5	78	6
Total	1306	100	1310	100

Table 4.17 illustrates the cleaning methods employed by first visit clients. At the point of first contact all clients are told how to clean their injecting equipment. While this is not guaranteed to make injecting with used injecting equipment safe - infections from bacteria and hepatitis are still possible - it is recommended if and when clients re-use injecting equipment. Clients are encouraged to use bleach and (sterile) water when cleaning their equipment. If they do not have any bleach they are advised to use washing-up liquid mixed with water, but are warned that it is not as effective as bleach.

Table 4.17 Cleaning of Injecting Equipment

Method of Cleaning	Needles		Syringes	
	n	*%*	*n*	*%*
Bleaching	632	63	638	59
Cold Water	245	25	312	29
Boiling Water	95	10	93	9
Soapy Water	22	2	32	3
Total	994	100	1075	100

4.4.2 Sharing of Injecting Equipment

A number of questions on the Intervention Sheet were concerned with clients' sharing of injecting equipment. All clients who reported having injected (n=1323) were asked whether they ever shared, that is either borrowed or lent, injecting equipment. They were also asked for information on the lending and borrowing of injecting equipment over the four weeks prior to contact with the Health Promotion Unit. **Figure 4.12** illustrates that 41% of the new attendees reported that they never shared injecting equipment (n=1309). Thus the remaining fifty nine percent of clients reported that they had shared injecting equipment at some point in their injecting career.

As regards this group of sharers, analysis revealed that there was no gender or age differences in reported levels of sharing. However a number of variables, related to life style factors were associated with the sharing of injecting equipment. Moreover, there was a highly significant relationship between the length of a clients injecting career and reportedly having shared injecting equipment (z = -9.64; p< 0.001). Clients who reported having shared equipment were injecting for on average 3.7 years (median = 1.5 years, range 1-33 years) compared with an average of 1.9 years of injecting (median 6 months; range 0-30 years) for the non-sharers.

Although not statistically significant homeless clients (0.64) were proportionately more likely than their housed counterparts (0.57) to report having shared injecting equipment at some point in their injecting careers. Analysis revealed that living with an injecting drug user was related to the sharing of injecting equipment (x^2=13.62; df=1; p<0.001). Sixty seven percent of clients who reported living with an IV drug user reported sharing injecting equipment, compared with 56% of clients not living with a drug injector.

Clients who reported having had a HIV test were significantly more likely to report having shared injecting equipment than those who were not tested (x^2=22.2; df=1; p<0.001). Sixty six percent of clients tested for HIV infection reported having shared equipment at some point in time, compared with 52% of those not tested. This could suggest that clients who have shared injecting equipment in the past, were concerned about their HIV status and consequently sought a HIV test. Conversely, it could indicate that clients, having had a HIV test, did not consider themselves at risk of infection and so continued to share injecting equipment. Due to the lack of time frame it is difficult to ascertain the nature of the relationship between HIV testing and sharing of injecting equipment.

Figure 4.12 Sharing of Injecting Equipment

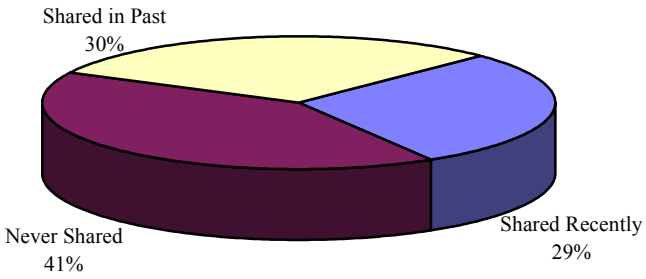
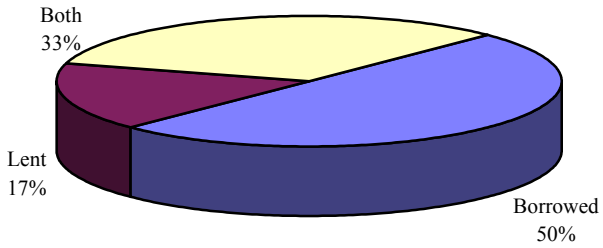


Figure 4.12 shows that 29% of clients reported sharing injecting equipment recently, that is in the four weeks prior to contact with the Health Promotion Unit. Recent sharing behaviour can be broken down into the lending and/or borrowing of used injecting equipment. As discussed in Chapter Three it is important to make distinctions between these behaviours as they differ markedly in terms of levels of personal risk, and risk of future transmission of HIV and hepatitis (McKeganey *et al*, 1998).

Figure 4.13 shows that half of the clients who reported recent sharing (n=383) stated that they borrowed used injecting equipment from others. This is hardly surprising in view of the fact that all clients are new presenters at the Health Promotion Unit, and moreover 48% of these clients reported that contact with the Unit was their first treatment contact in their drug using careers. Conversely, Figure 4.13 illustrates that 17% of those who recently shared, reported lending used injecting equipment to others. The remaining 33% of this group reported both the lending and borrowing of used injecting equipment. There was no gender difference in terms of recent sharing (either borrowing or lending) of injecting equipment.

Figure 4.13 Recent Sharing Behaviour



As the greatest risk is associated with the borrowing of others' used injecting equipment, and a significant proportion of clients engage in this behaviour, it is therefore examined in some detail. Analysis revealed that there was no gender difference in the reported borrowing of used injecting equipment. However, those clients who reported borrowing used injecting equipment in the four weeks prior to contact with the Health Promotion Unit were significantly younger than those who reported not borrowing (z=-4.27, p< 0.001). Those who reported borrowing equipment were on average 22.4 years of age (median 21 years, range 15-46 years) compared with non-borrowing counterparts who were on average 24 years of age (median 23 years, range 15-52 years).

Further analysis illustrated that various life style factors of the first visit clients proved to be related to the borrowing of injecting equipment. Firstly, homeless clients were significantly more likely than their housed counterparts to report the recent borrowing of used injecting equipment (x^2=5.81; df=1; p<0.05). Twenty three percent of the housed population reported this behaviour, compared with 31% of the homeless population. The findings of this study supported international research (Donoghoe *et al*, 1992) which states that close proximity with other injecting drug users leads to the sharing of injecting equipment. First visit clients who reported living with an injecting drug user (x^2 =7.44; df=1; p<0.01) and having a sexual partner who was an injecting drug user (x^2=6.77; df=1;p<0.01) were significantly more likely to report recently borrowing injecting equipment.

Clients were also specifically asked whether they shared their injecting equipment with their sexual partner. This was included, as anecdotal evidence suggests that many do not consider such behaviour as sharing *per se*. **Table 4.18** illustrates that female clients were significantly more likely to report sharing injecting equipment with their sexual partner (x^2=89.73; df=1; p<0.001). This gender difference is related to the sexual behaviour of female clients, which will be discussed in detail in the next section. However, there is no evidence to suggest that clients who reported sharing with their sexual partner where less likely to view such behaviour as sharing, in that only 8 clients who reported sharing with their partner, stated that they never shared works.

Table 4.18 Sharing of Injecting Equipment with Partner by Gender

Share IV Equipment with Partner.	Male	Female	Total
	%	%	%
Yes	13	37	18
No	87	63	82
Percent	100	100	100
Number	1000	304	1304

*Missing Observations=33

Finally, the sharing of injecting paraphernalia was also examined. More specifically, all clients were asked whether they had shared spoons and/or filters in the four weeks prior to contact with the Health Promotion Unit. **Table 4.19** shows that female clients were significantly more likely to report having shared injecting paraphernalia in the four weeks prior to contact with the Unit (x^2=9.19; df=1; p<0.01). Sixty three percent of the female new presenters reported having shared spoons and filters in the month prior to contact with the Unit, compared with 53% of the male clients.

Table 4.19 Sharing of Injecting Paraphernalia by Gender

Share Injecting Paraphernalia	Male	Female	Total
	%	%	%
Yes	53	63	55
No	47	37	45
Percentage	100	100	100
Total	999	305	1304

*Missing Observations=33

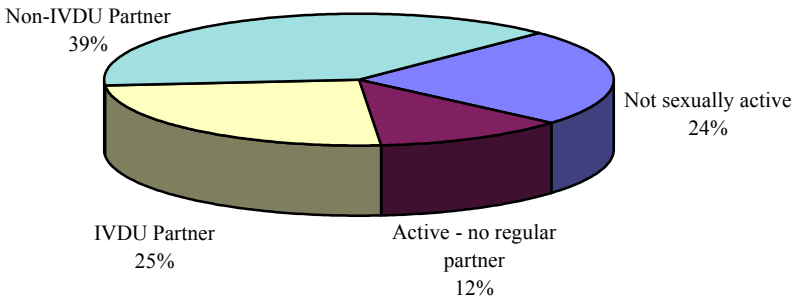
Analysis revealed that the sharing of injecting paraphernalia was related to age (z=-6.24, p<0.001), in that those who reported sharing were significantly younger than those who reported not having done so. Sharers were on average 23 years of age (median 22 years, 15-42 years) and non sharers were on average 25 years (median 24 years, 15-51 years).

As with the borrowing of used injecting equipment, analysis revealed that the sharing of injecting equipment was similarly related to proximity with other drug users. Those who reported sharing injecting paraphernalia were significantly more likely to report both living with an injecting drug user (x^2=14.89; df= 1; p<0.001) and having a drug user as a sexual partner (x^2= 11.34; df=1; <0.001). Furthermore, the data illustrates that clients who reported sharing injecting paraphernalia were significantly more likely to report having shared injecting equipment at some point in time (x^2=150.38; df=1; p<0.001) and the recent borrowing of injecting equipment (x^2=174.34; df=1; p<0.001).

4.5 SEXUAL RISK BEHAVIOUR

Information is collected on clients' sexual behaviour. One quarter of first visit clients reported that they were not sexually active (n=1322). Of the remaining clients **Figure 4.14** illustrates that 12% reported having no regular sexual partner, 39% had a regular partner who was not an injecting drug user and one quarter reported having a regular partner who injected drugs.

Figure 4.14 Sexual Behaviour of Clients



While there was no significant difference between male and female clients in terms of having a regular partner, **Table 4.20** shows that of those clients who were sexually active, female clients were significantly more likely than their male counterparts to report having a regular sexual partner who is an injecting drug user (x^2=152.87; df=1; p<0.001). Of those clients who were sexually active, sixty eight percent of the female clients reported having a regular partner who was an injecting drug user, compared with only 24% of the male clients.

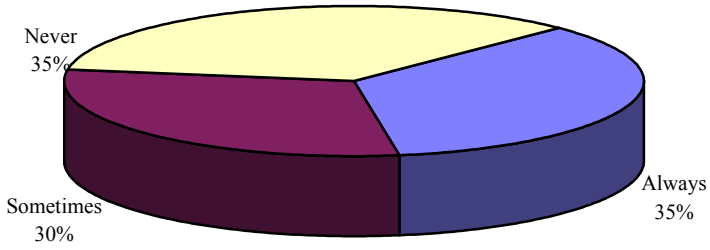
Table 4.20 IVDU Sexual Partner by Gender

Injecting Sexual Partner	Male %	Female %	Total %
Yes	24	68	34
No	76	32	66
Percentage	100	100	100
Total	744	229	973

*Missing Observations =31

Clients were asked how often they used condoms. **Figure 4.15** shows that only 35% of clients reported using condoms all the time. Moreover, just over one third of the first visit clients reported never using condoms.

Figure 4.15 Condom Use



Analysis revealed that there was no significant gender difference in reported condom use. However, forty one percent of the female clients reported never using a condom, compared with 34% of the male clients. There was however a significant relationship between condom use and age (x^2=13.9; *df*=2; *p*<0.001). Clients over the age of 25 were significantly more likely than those under 25 to report never using a condom. Thirty one percent of clients under 25 years reported never using condoms, compared with 43% of those over 25 years.

Further analysis revealed that clients who reported having regular sexual partner were significantly more likely to report never using a condom (x^2=32.22; df=2; p<0.001). **Table 4.21** illustrates that 41% of clients with regular sexual partners never use condoms, compared with 25% of the clients who reported having no regular sexual partner. This may be due to the fact that clients find it difficult to introduce the use of condoms into a long-term relationship.

Table 4.21 Condom Use by Sexual Status

Condom Use	Regular Partner		No Regular Partner	
	n	*%*	*n*	*%*
Always	278	32	177	40
Sometimes	236	27	157	35
Never	351	41	110	25
Total	865	100	444	100

*Missing Observations = 28

4.6 HEALTH AND WELL- BEING

On the Intervention Sheets clients are asked a number of questions concerning their health and well-being. The data gathered from these questions are presented in this section. The extent to which clients have been in contact with medical services is also examined. It will be seen that there are some significant gender differences in terms of both health complaints and medical contact.

4.6.1 Health Complaints

All clients were asked whether they ever had a HIV test. Just under half of the new clients (49%) reported that they had a HIV test in the past (*n*=1299). Analysis revealed that having had a HIV test is related to both clients' age and the length of injecting careers. Clients who reported having had a HIV test were on average significantly older than clients who had not been tested (*z*= -9.54; *p*<0.001). Those who had been tested for the virus were on average 24.3 years (median 23, range 14-52 years), compared with an average of 22 years for those who had not been tested (median 21 years, range 15-42 years). Clients who were tested also had a significantly longer injecting career (*z*= -9.53; *p*<0.001). Those tested injected for an average of 4.6 years (median 2 years, range 0-30 years) while those who reported not having been

tested injected for on average 1.5 years (median 6 months, range 0-33 years). These results suggest that young recent injectors, while engaging in risk behaviour, are not getting tested for HIV infection.

Clients were also asked whether they ever had jaundice, hepatitis B and/or C. **Table 4.22** illustrates the extent to which clients reported being aware of having these infections. Whether clients reported having any of these infections, was no doubt largely influenced by whether they had received a medical diagnosis from a doctor. As levels of medical contact are relatively low among injecting drug users, the percentage of clients who reported having jaundice, hepatitis B and C in Table 4.22 is probably underestimated. There were no significant gender differences in the reported experiences of jaundice and/or hepatitis infection.

Table 4.22 Hepatitis (B and C) and Jaundice

Medical Complaint	Jaundice		Hepatitis B		Hepatitis C	
	n	*%*	*n*	*%*	*n*	*%*
Yes	105	8	88	7	239	19
No	1066	85	1063	84	905	71
Don't Know	91	7	114	9	122	10
Total	1262	100	1265	100	1266	100

In view of the risk of hepatitis B infection to injecting drug users, all clients were asked whether they had received a vaccination against hepatitis B. **Table 4.23** illustrates that there was a highly significant relationship between having had a hepatitis B vaccination and gender. Male clients were significantly more likely to report having had a vaccination for hepatitis B than their female counterparts (x^2=17.34; df=1;p<0.001). Only eleven percent of the female clients reported having had the vaccination, compared to 22% of the male clients.

Table 4.23 Vaccination for Hepatitis B by Gender

Vaccination Hepatitis B	Male %	Female %	Total %
Yes	22	11	19
No	75	86	78
Don't Know	3	3	3
Percentage	100	100	100
Total	1002	306	1308

*Missing Observations=29

Analysis revealed that having had the hepatitis B vaccination was also related to having been to prison (x^2=96.13; df=2; p<0.001). **Table 4.24** illustrates that thirty percent of the clients who reported having been to prison reported having had a vaccination against hepatitis B, compared with only 8% of the clients who have never been to prison.

Table 4.24 Vaccination for Hepatitis B by Experience of Prison

Vaccination Hepatitis B	Been in Prison %	Never in Prison %	Total %
Yes	30	8	19
No	68	88	78
Don't Know	2	4	3
Percentage	100	100	100
Total	661	639	1300

*Missing Observations=37

As discussed in Chapter Three a symptoms check list was employed to determine the extent to which clients suffered from a number of complaints associated with drug use. **Table 4.25** shows that seventy two percent of the clients reported that they were suffering from insomnia. Sixty two percent of the new presenters reported that they had been suffering from weight loss over the previous three months. On the other hand, the numbers of clients who reported suffering from abscesses and septicemia were relatively low.

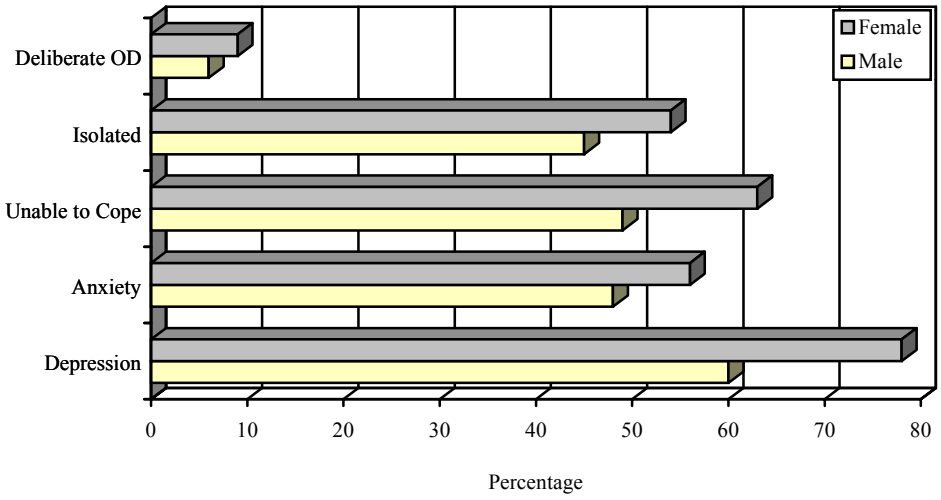
Table 4.25 Physical Health Complaints

Medical Complaint	Abscesses %	Septicemia %	Weight Loss %	Insomnia %
Yes	16	1	62	72
No	84	99	38	28
Percentage	100	100	100	100
Total	1279	1272	1279	1283

There was no significant gender difference in the reported physical complaints of clients. However, as illustrated by **Figure 4.16** female clients were significantly more likely to report suffering from a number of mental health complaints. It is difficult to know whether this is due to the fact that women are more likely to admit experiencing these problems, or because they are in fact more likely to actually experience such symptoms.

Regardless, Figure 4.16 illustrates that female clients are significantly more likely than their male counterparts to report suffering from depression (x^2=30.16; df=1; p< 0.001). Over three quarters of the female clients (78%) reported suffering from depression over the three months prior to first contact with the Unit, compared to 60% of the male clients. Likewise, female clients were significantly more likely than male clients to report being unable to cope (x^2=16.38; df=1; p<0.001). Sixty three percent of the female clients reported not being able to cope, whereas only 49% of the male clients reported this. Significant gender differences were also found in the extent to which clients reported feeling isolated (x^2=7.86; df=1; p<0.01). Moreover, Figure 4.16 illustrates that female clients were more likely to report having deliberately overdosed in the three months prior to contact with the Health Promotion Unit.

Figure 4.16 Mental Health Complaints by Gender



A global measure of mental and physical health was included on the Intervention Sheets. All clients were asked to rate their physical health and mood on a five point scale ranging from very bad to very good. **Table 4.26** illustrates that over one third of the clients (36%) reported that their physical health was O.K., while 33% reported that their health was bad. Although the difference was not statistically significant female clients were more likely than male clients to report that their physical health was bad.

Table 4.26 Physical Health by Gender

Rate Health	Male		Female		Total
	n	%	*n*	%	%
Very Bad	97	10	33	11	10
Bad	317	33	109	37	33
O.K.	352	36	103	35	36
Good	185	19	41	14	19
Very Good	24	2	9	3	2
Total	975	100	295	100	100

*Missing Observations = 67

Table 4.27 shows how clients rated their mood on a similar five point scale. Forty one percent of the male clients rated their mood as 'bad' compared with 45% of the female clients. Conversely, female clients were less likely to rate their mood as being 'good', only 5% of the female clients reported this, compared with 11% of the male clients.

Table 4.27 Mood by Gender

Rate Mood	Male		Female		Total
	n	%	*n*	%	%
Very Bad	80	8	21	7	8
Bad	401	41	132	45	41
O.K.	375	39	125	43	39
Good	104	11	14	5	11
Very Good	14	1	0	0	1
Total	974	100	292	100	100

*Missing Observations = 71

4.6.2 Medical Contact

Fifty two percent of the clients reported that they had a medical card (n=1314). All clients who report having no medical card and are entitled to one, are given an application form when they visit the Health Promotion Unit. **Table 4.28** illustrates that women were significantly more likely to report having a medical card than their male counterparts (x^x=40.94; df=1; p<0.001). Less than half of the male clients reported having a medical card, compared with 68% of the female clients.

Table 4.28 Medical Card by Gender

Medical Card	Male %	Female %	Total %
Yes	47	68	52
No	53	32	48
Percentage	100	100	100
Total	1009	305	1314

*Missing Observations=23

Clients were asked in some detail about their contact with medical services over the three months prior to presenting at the Health Promotion Unit. Forty two percent of the clients reported that they had no contact with medical services over the time period under investigation. The remaining 58% of clients reported some form of medical contact. **Table 4.29** illustrates that the female clients were significantly more likely than their male counterparts to report having had some medical contact in the three months prior to attending the Health Promotion Unit (x^2=23.96;df=1;p<0.001).

Table 4.29 Medical Contact by Gender

Medical Contact	Male %	Female %	Total %
Yes	55	70	58
No	45	30	42
Percentage	100	100	100
Total	1014	307	1321

*Missing Observations=16

Further analysis revealed that there is a relationship between previous drug treatment contact and reporting contact with medical services (x^2=19.53; *df*=1; p<0.001). This is highlighted by the fact that clients who reported previous drug treatment were significantly more likely to report having medical contact in the previous three months. Similarly, clients who reported being currently in treatment were significantly more likely to report recent medical contact than their non treatment counterparts (x^2= 17.59; *df*=1; p<0.001).

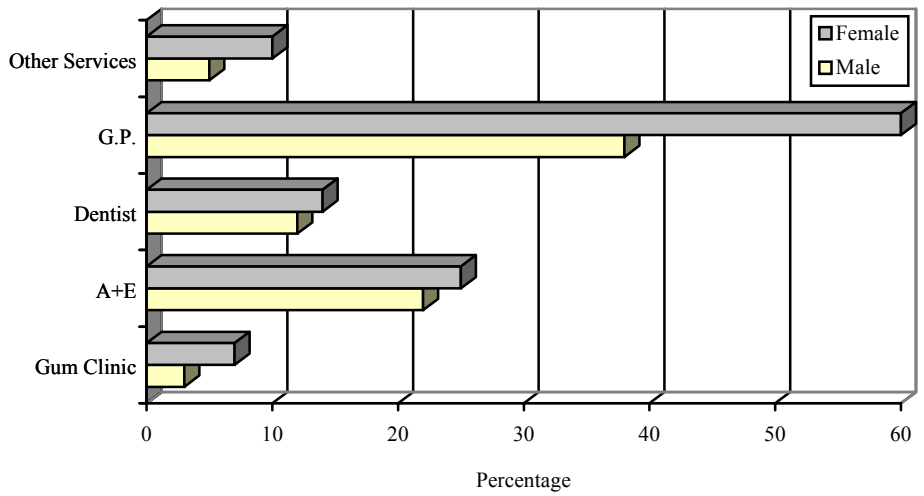
Table 4.30 illustrates the nature of the medical contact for the total population of first visit clients. Forty three percent of the population reported that they had been in contact with their G.P within the previous three months. Just under a quarter of the new presenters (22%) had been to A+E , and 13% had been to a dentist. Levels of contact with the GUM clinic and other specialist medical services were very low, at 4% and 6% respectively.

Table 4.30 Type of Medical Contact

Medical Contact	Gum Clinic %	A+E %	Dentist %	G.P %	Other Services %
Yes	4	22	13	43	6
No	96	78	87	57	94
Percent	100	100	100	100	100
Total	1315	1316	1315	1317	1310

Figure 4.17 illustrates the gender differences in reported medical contacts. It is immediately apparent that female clients are more likely to report all types of medical contact. Analysis revealed that women were significantly more likely to report having been to their GP (x^2=48.75; df=1; p<0.001). Sixty percent of female clients reported such medical contact compared with only 38% of their male counterparts. Similarly female clients were significantly more likely to report having been in contact with 'other medical services' (x^2=7.87; df=1; p<0.01). Ten percent of female clients reported this compared to 5% of the male clients. Finally, female clients were also significantly more likely to report having been to the GUM clinic in the previous three months (x^2=8.24; df=1; p<0.01).

Figure 4.17 Medical Contact by Gender



4.7 DISCUSSION

This chapter has presented a comprehensive profile of the 1337 new clients who attended the Merchant's Quay Project's Health Promotion Unit over the 18 months under investigation. Some important issues emerged from the analysis undertaken, and this section will discuss these main areas of concern in relation to other research findings. It will also be seen from the baseline data collected at first visit, that it is possible to conclude that the Health Promotion Unit is effective in three regards; firstly, in making initial contact with female injecting drug users; secondly, in attracting recent injectors to the service and; finally in initiating contact with a large proportion of young injectors.

4.7.1 Gender

Twenty three percent of new presenters at the Health Promotion Unit were female. A number of studies have identified barriers to women entering treatment. These include women's lack of economic resources (Hodgins *et al*, 1997) child care concerns (Cuskey, 1982) and the perceived insensitivity of the treatment setting to women's problems (Reed, 1987). However, the male to female gender ratio of 3:1 indicates that the Health Promotion Unit is successful in attracting and initiating contact with female drug users. Moreover, the time interval between first IV drug use and presentation at the Unit was significantly shorter for women. First visit female clients were injecting for on average 1.7 years, while their male counterparts reported injecting for on average 3.4 years. If women were deterred from attending the Unit, the delay between onset of intravenous drug use and first presentation should be greater (Cox *et al*, 1999).

The earlier presentation at the Health Promotion Unit by female drug users may in part be due to the fact that the rate of physical deterioration is, as other research indicates, more rapid among injecting women so they quickly reach the state of requiring treatment (Cox *et al,* 1999; Gossop *et al,* 1994). Despite their shorter injecting careers, new female presenters were significantly more likely to report injecting related problems, such as difficulty finding an IV site. They were also significantly more likely to report suffering from a range of physical and mental health complaints. Yet they were more likely to report being in contact with medical services. Seventy percent of the female clients reported contact with medical services in the previous three months, compared with only 55% of the male clients. International research suggests that more often than not health related problems precipitate women's entrance into drug treatment (Rosenbaum and Murphy, 1987). This may in part explain the earlier presentation at the Health Promotion Unit by female clients. Moreover, female clients were significantly more likely to report that presentation at the Health Promotion Unit was their first treatment contact. Fifty six percent of women reported that they had never attended any other drug treatment service compared with 46% of their male counterparts.

In addition this study highlights important gender differences in terms of the extent of personal involvement with other drug users. Female first visit clients were significantly more likely to report living with an injecting drug user. In addition, they were also significantly more likely to report being involved in a sexual relationship with an injecting drug user, and to share injecting equipment with their sexual partner. This greater personal involvement of women with other drug users has consequences in terms of health related problems, and risk behaviour. International research indicates that such life style factors are predictors of risk behaviour. For example Darke *et al*, (1994) found that having a regular sexual partner who is an injecting drug user increases the likelihood of engaging in risk behaviour. Furthermore, living with an injecting drug user is related to increased risk behaviour (Klee *et al*, 1990). In short, the social opportunities created by living in close proximity with other injecting drug users creates an environment in which risk behaviour flourishes.

This study supports the above findings. Female clients, in particular those with injecting partners, were also more likely to report the sharing of injecting equipment and injecting paraphernalia. The norm of sharing within injecting couples is particularly problematic, and difficult to change. Some injectors will be unaware that their partners have shared or are sharing with others (Klee *et al*, 1991a). On the other hand changing such behaviour patterns may threaten the relationship (Klee *et al*, 1990). In sum, the greater personal involvement of women with other drug users could have considerable impact on the prognosis and clinical intervention by simultaneously depriving them of protective factors and exposing them to high risk factors (Cox *et al*, 1999). This in turn has implications for service providers.

This study has also highlighted important gender differences in terms of male presenters at the Health Promotion Unit. It has been shown that 90% of the first visit clients who reported having been to prison were male. While it is recognised that these figures when viewed in context are representative of the prison population as a whole, they are still cause for concern. The importance is in determining the role imprisonment plays in initiating and maintaining drug use. Prisons are now well recognised as having significant levels of drug availability and individuals within prison are at risk of contracting HIV and both hepatitis B and C as a result of increased risk behaviour (O'Higgins, 1998). Moreover, the valid data in this Report illustrates that of the 55% of clients who reported using drugs in prison, 70% reported sharing their injecting equipment.

The links between drugs and crime are complex and it is not possible to assume a causal relationship. In fact research in the UK suggests that many drug users were involved in crime before they commenced drug use (Auld *et al*, 1986). Findings in this study suggest that 'criminal/deviant lifestyles' can lead to heroin and other drug use. Nonetheless, according to Keogh (1997) 43% of individuals apprehended for indictable offenses in the Dublin Metropolitan (Garda) Area were known drug users, and they were in turn responsible for 66% of all detected crime in the area. Unfortunately, based on the data collected from first visit clients it is not possible to determine whether clients were active drug users prior to their experience of imprisonment. However based on drug availability in prisons, it is feasible that in some instances drug use, in particular IV drug use, may be initiated in prisons.

However one advantage of prior imprisonment is that a large proportion (0.30) of those who were in prison reported having had a vaccination against hepatitis B. Moreover, they were significantly more likely than their non-prison counterparts to report having had the vaccination. The suggestion is that as a captive group of injecting drug users it is easier for them to receive their vaccination (3 timed interval dose) for hepatitis B within the prison environment. However, the overall low reported levels of vaccinations (19%) among the population of new presenters at the Health Promotion Unit is cause for concern.

4.7.2 Age

According to the 1996 Annual Report for the European Monitoring Centre for Drugs and Drug Addiction, Ireland is among a handful of countries consistently reporting increases in heroin use by new groups of young people. This is highlighted by the fact that the average age of drug users in treatment in Ireland is the lowest in Europe (23.6 years). Just over 65% of individuals treated for drug problems in Ireland were under the age of 25 compared with 43% in the UK (EMCDDA, 1997). Due to the fact that recent injectors are likely to be younger, there exists a complex relationship between age and length of injecting career. In this study recent injectors (i.e. less than 6 months) were significantly younger than clients who were more established in their injecting career (i.e. injecting in excess of 6 months). Recent injectors were on average 21.7 years of age, their counterparts were however on average 24.7 years of age.

The mean age of new clients at the Health Promotion Unit is 24 years. As the age range is vast (14-52 years) this figure is deceptive. When alternatively viewed, over one quarter of new presenters at the Unit (28%) were under 19 years of age; and a further 36% of new presenters were under the age of 24. The mean age of new clients attending the Unit is higher than the mean age of first treatment contacts for the Greater Dublin Area in 1995 and 1996 (O'Higgins and Duff, 1997; Moran *et al*, 1997). Moreover, in both of these years almost half of the new presenters were teenagers, compared with only 28% of the new attendees at the Health Promotion Unit. This is primarily due to the fact that the vast majority of new presenters at the Unit are injecting drug users (99%) compared with only a quarter of the new treatment contacts recorded by the Health Research Board (Moran *et al*, 1997). Analysis revealed that there was a gender difference in age of first visit clients. Female clients were significantly younger than male clients. Female clients were on average 22.2 years, and the male clients were on average 24.3 years.

There are two main areas of concern which both national (Cassin *et al*, 1998) and international research (Fennema *et al*, 1997) have associated with age, firstly, the relationship between age and treatment contact, and secondly the relationship between age and risk behaviour. Research has illustrated that age is related to previous treatment contact, in that young injectors are less likely to attend drug treatment services, including needle-exchanges (Paone *et al*, 1995). Findings of this study support this, in that clients who reported no previous treatment contact were significantly younger than those in contact with other services. The average age of clients who reported no previous treatment contact was 22.4 years, compared with 25 years among those who reported previous contact.

In relation to risk behaviour, research has shown that younger injectors report higher levels of HIV risk behaviour when compared with older injecting drug users (Cassin *et al*, 1998; Battjes *et al*, 1992). This is compounded by the fact that drug users who have recently initiated injecting have also been shown to be more likely to engage in risk behaviour (Fennema *et al,* 1997). Analysis revealed that age is related to injecting risk behaviour. Clients who reported the recent borrowing of used injecting equipment were significantly younger than those who reported not borrowing injecting equipment. Borrowers were on average 22.4 years, while their non-borrowing counterparts were on average 24 years of age. Similarly, clients who reported sharing injecting paraphernalia were significantly younger than non-sharers. Age was also related to injecting practices, in that younger clients were less likely to inject themselves. This is also related to the fact that younger clients have a significantly shorter injecting career. Regarding sexual risk behaviour clients over the age of 25 years were significantly more likely to report never using a condom. Thirty one percent of clients under 25 years reported never using condoms compared with 43% of those over the age of 25 years.

The findings of this study point to high levels of risk behaviour amongst young injectors. This is compounded by the fact that young injectors were significantly less likely to report having had a HIV test; consequently they are less likely to be aware of their HIV status. These findings suggest that the harm reduction message has not reached young recent injectors (Cassin *et al,* 1999). However the fact that such a large proportion of the population of first visit clients attending the Health Promotion Unit were young injectors with no previous treatment contact is a positive outcome. The challenge is to maintain contact with this vulnerable group of young injectors.

4.7.3 Housing

Throughout this discussion it is being argued that HIV risk behaviour is complex and related to, and influenced by, various extraneous factors. One life-style factor that international research has associated with injecting risk behaviour, is the quality of drug users' housing circumstances, in particular unstable accommodation (Donoghoe *et al,* 1992).

In this study 48% of the total population of new presenters at the Health Promotion Unit reported living in the 'family home'. Furthermore, 33% reported living in local authority or private rented housing. Analysis revealed that a significant minority of clients reported being homeless (19%). Due to the relatively narrow definition of homelessness employed (those *at risk* of being homeless were not included) and the transient nature of homelessness this figure no doubt underestimates the extent of homelessness among the population of new presenters at the Unit. Evidence for this lies in the fact that 39% of the total population reported that they were currently living in 'temporary accommodation'. Viewed another way 26% of the clients who reported living in what may be considered stable accommodation (i.e. local authority, private rented and family home) reported this accommodation as being temporary.[19]

The problem of homelessness among this population is compounded by the fact that analysis revealed that homeless clients were significantly more likely than their housed counterparts to report having shared injecting equipment at some point in their drug taking career (Cox and Lawless, 2000). Moreover, they were significantly more likely to state that they borrowed used injecting equipment in the four weeks prior to contact with the Unit. Finally, while not statistically significant, homeless clients were proportionately more likely to report having recently shared injecting paraphernalia.

Access to adequate housing is a major social problem, particularly in urban areas where the majority of drug injectors are located. The link between lack of adequate housing and sharing risk behaviour may be further compounded when injectors, out of necessity, share accommodation with other drug injectors (Donoghoe *et al*, 1992). Research in the UK illustrates that drug users who live with other people, particularly other injectors, are more likely to engage in injecting risk behaviour (Crisp *et al*, 1994). Very little research has been carried out at a national or international level. This is primarily due to the fact that homelessness among the age group predominantly engaging in illicit drug use (those under 25) is a relatively recent phenomenon (McCarty *et al*, 1991). Moreover, most of the research that has been carried out has concentrated on drug use among the homeless, as opposed to homelessness among drug users. The research that has been conducted both nationally (Cox and Lawless, 1999) and internationally (Flemen,1997) suggests that homelessness is a growing problem among drug users and

[19] It is worth noting that since the introduction of the Housing (Miscellaneous Provisions) Act 1997, there has been an increase in the number of individuals evicted for 'drug related anti-social behaviour' this in turn may increase the likelihood of a drug user perceiving such accommodation as being temporary.

can influence their drug using patterns and risk behaviour. The findings of this study highlight the need for a thorough analysis of the relationship between drug use and homelessness.

4.7.4 Injecting Risk Behaviour

In this study HIV risk behaviour was divided into two categories, injecting risk behaviour and sexual risk behaviour. Injecting risk behaviour is primarily concerned with the sharing of injecting equipment and paraphernalia i.e. spoons and filters. Thirty percent of the new presenters at the Health Promotion Unit reported having shared injecting equipment in the past. A further twenty nine percent of the clients reported having shared injecting equipment in the four weeks prior to contact with the Unit. The term 'sharing' involves two activities, the lending and borrowing of injecting equipment, which differ markedly in terms of levels of risk. Of those new presenters who reported recently sharing (*n*=383), 50% reported borrowing used injecting equipment, 17% reported lending their injecting equipment to others, and the remaining 33% reported both the recent lending and borrowing of injecting equipment.

The lending of injecting equipment occurs when an individual is asked to make his/her injecting equipment available to another person. Thus, the practice carries with it little personal risk to the lender. This form of sharing according to Klee et al (1990) is due to either a lack of concern for the welfare of others or the motivation may be to 'help out' when another drug user is in distress. Although lending is low risk to the lender, it is high risk to others, as the person who lends the equipment may have HIV or hepatitis. Thus, borrowing used injecting equipment is an activity which involves high levels of personal risk .

The levels of borrowing exhibited by the new presenters at the Health Promotion Unit are high. Research has indicated that there are a number of reasons why injecting equipment is borrowed (Ross *et al*, 1994). The primary reason being difficulty in obtaining new injecting equipment. However, it is not solely due to the lack of 'general availability' of injecting equipment but as Ross *et al* (1994) argue, to the availability at the time and place of injecting, in other words 'situational availability'. The high levels of borrowing by new clients at the Unit may in part be due to the fact that levels of current contact with other treatment services were so low (21%).

A number of barriers to safer injecting practices have been identified apart from availability of injecting equipment. Factors such as poly drug use (Klee *et al*, 1991), high frequency drug use and cocaine use (Darke *et al*, 1994) increase the likelihood of injecting risk behaviour. As stated previously the social environment also plays a vital role. For example, homelessness (Klee *et al*, 1990; Donoghoe *et al*, 1992) and imprisonment (Crisp *et al*, 1994) have been shown to be predictors of risk behaviour. However, one cannot ignore the fact that sharing is a social behaviour, which Barnard (1993) argues is expressive of social ties between people and is also attributed with social meaning. As illustrated previously among the population of first visit clients, sharing is something that is primarily undertaken with injecting sexual partners. The problem is that sharing in such circumstances is generally not regarded as a risky practice by those involved, but rather as a normal part of an intimate relationship (Burt and Stimson, 1993). It is worth noting that the fact that sharing occurs is not always indicative of unsafe injecting practices. The vast majority of new presenters reported cleaning their injecting equipment prior to use. However, it was illustrated that not all cleaning methods used were effective.

Another area of concern in terms of injecting risk behaviour was the fact that over half (55%) of the population of first visit clients reported sharing injecting paraphernalia. The sharing of spoons and filters is likely to be a major cause of the spread of HIV infection and hepatitis (Rhodes *et al*, 1994). Filters collect infections, they are moist, warm and provide the perfect breeding ground for bacteria. The high levels of sharing of injecting paraphernalia highlighted in this study suggest a need to focus on informing new attendees of the risks involved.

Finally, preliminary analysis of the data collected from first visit clients indicates the presence of a group of injecting drug users who engage in multiple risk behaviours. The evidence for this lies in the fact that clients who reported sharing injecting equipment were significantly more likely to report both the sharing of injecting paraphernalia (x^2=150.38; df=1; p<0.001) and infrequent condom use (x^2=26.04; df=2; p<0.001).

4.7.5 Sexual Risk Behaviour

Many harm reduction strategies, in particular syringe-exchange programmes have been accused of ignoring sexual risk behaviour and concentrating primarily on injecting risk behaviour (Paone *et al*,

1995). Yet the potential harms associated with 'unsafe' or unprotected sex are immense. As drug users continue to reduce the risks directly associated with drug use, sexual transmission is increasingly becoming the primary route of HIV infection (Des Jarlais and Friedman, 1987; McKeganey and Barnard, 1991). Moreover, Rhodes *et al* (1994) argue that the next stage of the HIV epidemic among drug injectors is likely to be significantly associated with whether or not, and with whom, sex is safe. Despite evidence that drugs, in particular opiates, impair sexual functioning and lower the levels of sexual activity (Mirim *et al*, 1980) 76% of new presenters at the Health Promotion Unit reported being sexually active. Analysis revealed that levels of reported condom use were very low, with only 35% of the new presenters reportedly always using condoms.

A number of issues for concern emerged from the data presented in this chapter. Firstly, 39% of the population reported having a non-drug using partner, and these clients were significantly more likely to be male. International research supports the fact that male drug injectors are less likely than their female counterparts to have injecting sexual partners. For example, in Klee *et al's* (1990) study male respondents reported a preference for non-drug using female sexual partners. The low levels of condom use and the high degree of sexual mixing between injecting drug users and non drug users are cause for concern. The potential for the spread of HIV into the non-drug using population would, therefore seem considerable, particularly when one considers that that over half the population of new attendees have never been tested for HIV and are therefore unaware of their status. This is particularly worrying in view of the fact that research has identified an increased sexual risk of HIV infection to the female non-injecting sexual partner of male drug users (Klee *et al*, 1990: McKeganey and Barnard, 1991). Moreover, research from the United States reports that the majority of documented cases of women with AIDS are among injecting drug users or the partners of male drug injectors (Cohen *et al*, 1989).

Analysis revealed that 64% percent of the population reported having a regular sexual partner. Moreover, one quarter of the population reported having a regular sexual partner who was an injecting drug user. As discussed previously women were significantly more likely than men to report this. In this study it was revealed that clients who have a regular sexual partner were significantly more likely to report never using condoms. The difficulties of introducing condom use into a long-term relationship and the possible consequences, may lead an individual to view unprotected sex as being the easier option. McKeganey and Barnard (1991) argue that one approach to promoting condom use within a relationship may be through encouraging a sense of responsibility among drug injectors, not only for their own health, but also for that of their sexual partner.

International research suggests that the reported levels of condom use among drug injectors are almost identical to those among the heterosexual population in general (McKeganey *et al*, 1988). Rhodes *et al* (1994) argue that the perception of unprotected sex as 'normal' in heterosexual relationships is upheld by drug users and non drug users alike. This illustrates the extent of social change necessary to make any impact on reported levels of condom use among drug users. Consequently it is not surprising that international research has consistently shown that changing sexual risk behaviour is more difficult than changing injecting risk behaviour (Donoghoe, 1992). The success of harm reduction strategies is inextricably linked with the social, cultural and political context in which such strategies operate. Moreover, in order for individual behaviour changes to be possible, changes in social norms and social contexts are required. It is essential to recognise the importance of sexual norms in influencing whether or not unsafe sex occurs. In short, sexual norms cut across drug-using and non-using population.

One final issue worth mentioning is the well established association between the sex industry and drug use (Plant *et al*, 1989). Although this issue is not examined in this study, it still has implications for the adoption of safer sex practices among injecting drug users. In short, research argues that prostitution is one way in which HIV may spread to the general heterosexual population (Plant *et al*, 1989). However, increased condom use has been reported among injecting prostitutes in Amsterdam (Van den Hoek *et al*, 1990) and among prostitutes in general in London (Day *et al*, 1988). Thus, although it is only one possible route of transmission, there is a need to be aware of the implications of using sex workers as scapegoats thus marginalising them further.

CHAPTER 5 OUTCOME MEASURES

This chapter examines the effectiveness of the Health Promotion Unit in terms of reported changes in clients' behaviour over the time period under investigation. Although the primary objective of the Health Promotion Unit is to dispense sterile injecting equipment and maintain acceptable return rates, it nevertheless recognises the importance of all behaviour changes, however gradual or minor, among injecting drug users. To this end clients' self reported changes in drug use, injecting risk behaviour, sexual risk behaviour and health and well-being are investigated.

5.1 CLIENT FOLLOW-UP RATES

As presented in the previous chapter 1,337 new clients attended the Health Promotion Unit within the specified 18 month time period, and of those a total of 370 clients represented three months after initial contact with the Unit. In other words, 28% of first visit clients represented at follow-up. It is difficult to determine whether this is a satisfactory follow-up rate as previous evaluations of syringe exchanges, as discussed in Chapter Three, have employed different methodologies. For example, Robertson *et al* (1988) when measuring changes in risk behaviour initially interviewed 986 drug users, and follow-ups were completed on the first 50 consecutive drug users to represent. Stimson *et al* (1988) in evaluating the impact of a syringe-exchange on attendees' risk behaviour, required that all new clients complete a brief Intake Sheet at first attendance. A First Client [Evaluation] Questionnaire concerned with client's risk behaviour was completed during the first month of attendance. Only 16% of the 2,449 new clients who filled in the Intake Sheet completed the questionnaire. Moreover, only 34% of the clients attended the syringe-exchange through to five visits. Conversely, Stephens *et al* (1991) in evaluating the impact of an intervention programme on risk behaviour actively followed up on the sample of clients initially interviewed. Consequently, their follow-up rate was much higher. In short there is no yardstick to determine an acceptable follow-up rate of attendance. However, given the relatively lengthy follow-up period employed in this study and the chaotic lifestyle of attending clients, a 28% follow-up rate is reasonable. Notwithstanding, the Health Promotion Unit strives to achieve a higher retention rate.

Table 5.1 Frequency of Presentation of Follow-Up Clients

Attendance	Number of Clients	Percentage of Clients
Attended twice	70	20
Attended 3 times	72	21
Attended 4 times	44	12
Attended 5 times	33	9
Attended 6 times	43	12
Attended 7 times	28	8
Attended 8 times	17	5
Attended 9 times	12	3
Attended 10 or more times	37	10
Total	356	100

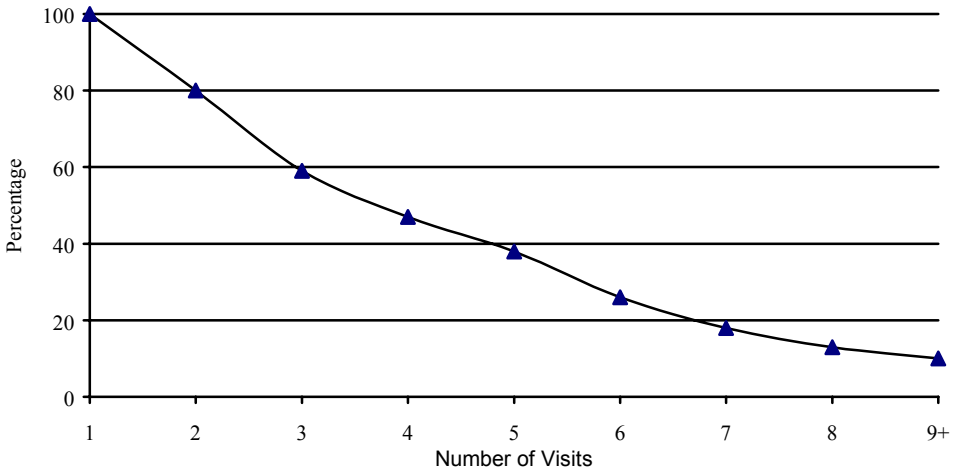
*Missing Observations = 14

The follow-up clients (n=370) reported a total of 1,930 visits between their first visit and follow-up interventions. The average number of visits per client was 5 (range 2-29) over the three month time period. **Table 5.1** presents the frequency of presentation of follow-up clients. It illustrates that 21% of

clients attended the Unit 3 times between first visit and follow-up. On the other hand, 10% of the clients attended the Unit ten times or more over the three month follow-up period.

Conversely, **Figure 5.1** graphically illustrates clients' visits over the follow-up time period. It shows the gradual decline in the number of clients representing at the Unit. A total of 80% of the clients presented twice at the Health Promotion Unit between first visit and follow-up. Fifty nine percent of the clients attended the Unit three times, and this dropped to less than half (47%) of the clients who attended the Unit four or more times.

Figure 5.1 Number of Visits over Three Month Follow-up



In the 1,930 visits a total of 7,738 syringes were distributed among the follow-up clients. Each client therefore received on average 22 syringes (range 0-229) or 4 syringes per visit. However it is worth noting that the number of syringes given per client varied, depending on prior return rates, and places of residence. For example, if a presenting client resided outside County Dublin it is at the discretion of the worker to decide how many syringes to dispense to that individual, within reason. A total of 3,386 syringes were returned to the Health Promotion Unit. In other words, 44% of the syringes distributed by the Unit were returned. At the time of writing this report the Health Promotion Unit had introduced the use of personal 'sharps bins' for safer, improved return rates.

5.2 PROFILE OF FOLLOW-UP CLIENTS

The baseline data collected from the 370 follow-up clients was examined in order to determine whether the profile of these clients differed significantly from the profile of the total population of first visit clients. Analysis revealed that there were no significant differences. However, there were some differences in the characteristics of the follow-up clients compared with the total population that are worth highlighting. Eighty percent of the follow-up group were male, the remaining 20% were female. At first visit the ratio of male to female first visit clients was 3:1, and at follow-up the male to female ratio was 4:1. This suggests that female clients were less likely to represent at the Unit.

There were also some changes in the area of residence of the follow-up clients. At follow-up 19% of clients were from the south inner city compared with 15% of the first visit clients. This suggests that the proximity of the service to clients may have some influence on maintaining further contact with this client group. Moreover, clients from the remaining North and South Dublin area were less likely to represent at follow-up. This may be due to the emergence of treatment facilities within these localities.

Finally, when the current accommodation of the 370 follow-up clients was compared with the total population some notable differences emerged. Follow-up clients were more likely to report living in the family home. Fifty six percent of follow-up clients reported this compared with 48% of first visit clients. This may indicate that the family environment provides the necessary support for the clients, which in turn increases their likelihood of representing. At the same time, follow-up clients were

proportionately more likely to report living in emergency accommodation. Fourteen percent of the follow-up clients reported this, compared with 7% of the first visit clients.

5.3 BEHAVIOUR CHANGES OVER TIME

This section examines the effectiveness of the Health Promotion Unit in terms of client outcomes. In other words, it looks at how effective the Unit is in impacting on clients' drug use, injecting and sexual risk behaviour, and promoting contact with other treatment and medical services. As discussed previously two methods of measuring clients' behaviour change were included in the study. One method was by comparing clients' self reported baseline behaviour at the point of first contact with their behaviour at follow-up. Secondly, a more subjective method was employed whereby clients were asked whether they believed their behaviour had changed as a result of attending the Health Promotion Unit. In this section the baseline and follow-up data for the 370 follow-up clients is presented.

In looking at data collected from clients on their self reported behaviour, at first visit and follow-up intervention, they can be presented in two different ways. Firstly, the data can be used to illustrate the frequency of occurrence of the behaviour at the two time periods under investigation; for example, the number of clients who reported the use of various primary drugs at both first visit and follow-up. When presented in this fashion the data permits an examination of the two groups over the two time periods. Conversely, the data can be used to illustrate the changes in the proportion of clients reporting behaviour changes over the time period under investigation. In this instance, analysis is concerned with the number of clients who have reported a behaviour change from one occasion to the next, and the nature and direction of such change, for example, the numbers of clients who reported a change in primary drug use, either to or from heroin use.

5.3.1 Drug Use

Table 5.2 illustrates the primary drugs used by clients at the point of first contact with the Unit and at the three month follow-up stage. It shows that at follow-up less clients reported using heroin as their primary drug, than at first visit. At first visit 94% of clients reported using heroin, compared with 87% of the clients at follow-up. Table 5.2 also illustrates that there was an increase in the number of clients at follow-up who reported using physeptone as their primary drug. The number of clients who reported the use of 'Other'[20] as their primary drug of choice at both first visit and follow-up was very low.

Table 5.2 Primary Drug Used

Primary Drug	First Visit		Follow-Up	
	n	*%*	*n*	*%*
Heroin	346	94	321	87
Physeptone	15	4	31	8
Other	8	2	17	5
Total	369	100	369	100

Missing Observations = 1

Table 5.2 does not accurately show the changes in the number of clients who reported using either heroin or physeptone at follow-up. However, **Table 5.3** illustrates the nature of the changes in reported use of heroin as a primary drug. For the purpose of this table all primary drugs with the exception of heroin were combined to form one category, 'Other'. In Table **5.3** the changes are highlighted by the numbers in italics. It illustrates that a total of 41 clients, or 15% of those who reported using heroin as their primary drug at first visit (n=345) had changed to using another primary drug at follow-up. Conversely, 16 clients or 70% of those who reported using a primary drug other than heroin at first visit (n=23) changed to utilising heroin as a primary drug at follow-up. Analysis revealed that the difference

[20] At first visit the drugs included under the category other were cannabis, benzodiazepines, speed, cocaine, N.A.P.S (morphine sulphate tables) and crack. The same drugs were included in the 'Other' category at follow-up along with ecstasy.

in the proportion of clients who reported the use of heroin as their primary drug at follow-up compared with first visit was statistically significant (McNemar x^2=10.1; p<0.01).

Table 5.3 Changes in Primary Drug Use: Heroin

First Visit	Follow-Up Visit	
	Heroin	Other
Heroin (*345*, 94%)	(*304*,83%)	(*41*,11%)
Other (*23*, 6%)	(*16*,4%)	(*7*,2%)

Missing Observations = 2.

Similarly analysis revealed that there was a significant change in reported physeptone use over the two time periods under investigation (McNemar x^2=6.25; p<0.05). **Table 5.4** illustrates the changes in the reported use of physeptone as a primary drug at first visit and follow-up. A total of 26 clients, or 7% of those who reported the use of 'Other' drug at first visit (n=353), reported changing to physeptone as a primary drug at follow-up. Furthermore, all of these clients reported heroin as their primary drug at first visit. However, Table 5.4 also shows that a further 10 clients changed their primary drug from using physeptone at first visit, to 'Other' - more specifically heroin - at follow-up.

Table 5.4 Change in Primary Drug Use: Physeptone

First Visit	Follow-Up Visit	
	Physeptone	Other
Physeptone (15,4%)	(5,1%)	(10,3%)
Other (353,96%)	(26,7%)	(327,89%)

Missing Observations = 2

Regarding routes of administration of primary drugs, **Table 5.5** illustrates the reported routes by clients at first visit and follow-up. This table shows that by follow-up a substantial number of clients had relinquished injecting drug use as the route of administration of their primary drug. There was a corresponding increase in the number of clients reporting oral routes of administration. These changes in behaviour are related to the change in preference in primary drug use, outlined above, in that the reduction in reported heroin use explains the accompanying decline in reported intravenous drug use. Conversely, the increase in reported use of physeptone at follow-up, explains the increase in the numbers of clients ingesting their primary drug, as illustrated in Table 5.5

Table 5.5 Route of Administration of Primary Drug

Route	First Visit		Follow-Up	
	n	*%*	*n*	*%*
Inject	342	93	325	88
Smoke	12	3	15	4
Ingest	14	4	29	8
Total	368	100	369	100

In order to examine whether the Health Promotion Unit was effective in promoting the adoption of safer routes of drug use, the changes in the number of clients reporting injecting their primary drug was examined in detail. Analysis revealed a significant change in the proportion of clients reporting this behaviour at follow-up as illustrated in **Table 5.6** (McNemar x^2=5.35; p<0.05). Thirty six of the clients, or 11% of those who reported injecting their primary drug at first visit (n=341), had changed their route of administration by follow-up, to a safer means of administration. On the other hand, 18 clients reported changing from an alternative route to injecting their primary drug at follow-up.

Table 5.6 Changes in Injecting

First Visit	Follow-Up Visit	
	Non-IV	IV

IV (*341*,93%)	(*36*,10%)	(*305*,83%)
Non-IV (*26*,7%)	(*8*,2%)	(*18*,5%)

Missing Observations=3.

Table 5.7 illustrates the overall reduction in the percentage of clients who used their primary drug 4 or more times a day at follow-up, from 30% to 24%. There was however, an increase in the number of clients who reported using their primary drug once a day. At first visit 52% of clients reported this, while 56% of clients reported daily drug use at follow-up. Analysis revealed that the changes in reported frequency of use in excess of four times a day, were statistically significant (McNemar x^2=4.13; $p<0.05$). **Table 5.8** illustrates that 70 clients or 67% of those who reported using their primary drug in excess of 4 times a day (n=104), had reduced their frequency of use by follow-up.

Table 5.7 Frequency of Use of Primary Drug

Route	First Visit		Follow-Up	
	n	***%***	***n***	***%***
More than 4 times a day	105	30	86	24
Daily	183	52	202	56
4-6 times a week	26	7	19	5
1-3 times a week	29	8	43	12
Less than once a week	9	3	9	3
Total	352	100	359	100

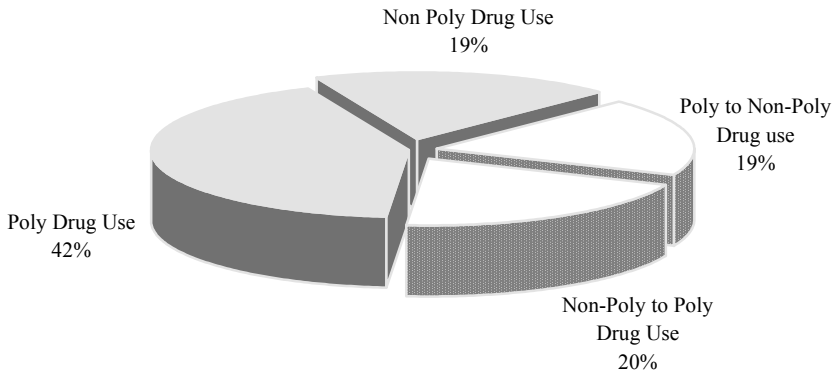
Table 5.8 Changes in Frequency of Primary Drug Use

First Visit	Follow-Up Visit	
	< 4 times a day	> 4 times a day
> 4 times a day (*104*,30%)	(*70*,20%)	(*34*,10%)
< 4 times a day (*238*,70%)	(*191*,56%)	(*47*,14%)

Missing Observations=28

Regarding poly drug use analysis revealed that that there was no significant change in the number of clients reporting using more than one drug, between first visit and follow-up. However **Figure 5.2** illustrates that 42% of follow-up clients reported poly drug use at both first visit and follow-up (n=154). A further 19% of clients reported non-poly drug use at first visit and at follow-up (n=68). Furthermore, Figure 5.2 shows the changes in reported poly drug use. Twenty percent of the clients (n=72) who reported non-poly drug use at first visit, were poly drug users at follow-up. Conversely, 19% of the clients changed from poly drug use at first visit, to not using any secondary drugs at follow-up.

Figure 5.2 Changes in Poly Drug Use



5.3.2 Injecting Risk Behaviour

One of the primary aims of any needle-exchange is to enable clients to reduce both the borrowing and lending of used injecting equipment, and to promote safer injecting practices. In this section changes in the injecting behaviour of the 370 clients who represented at the three month follow-up period are examined. The Unit is also concerned with promoting more hygienic injecting practices, particularly in terms of improving injecting techniques. To this end, **Table 5.9** illustrates the number of clients who reported injecting themselves at first visit and follow-up. At first visit 24% of clients reported that they did not inject themselves, this decreased to 16% at follow-up.

Table 5.9 Injecting Status

Inject Self	First Visit		Follow-Up	
	n	*%*	*n*	*%*
Yes	274	76	310	84
No	87	24	60	16
Total	361	100	370	100

Analysis revealed that there were significant changes in the proportion of clients reporting injecting themselves over the time period under investigation (McNemar x^2=10.25; p<0.01). **Table 5.10** illustrates that 56 clients, or 64% of those who reported not injecting themselves at first visit (n=87) were injecting themselves by follow-up.

Table 5.10 Changes in Injecting Status

First Visit	Follow-Up Visit	
	Not Inject Self	Inject Self
Inject Self (*273*,76%)	(*26*,7%)	(*247*,69%)
Not Inject Self (*87*,24%)	(*31*,9%)	(*56*,15%)

Missing Observations=10

One of the main safer injecting techniques promoted by the Unit is the cleaning of the injection site prior to injecting. **Table 5.11** illustrates the number of clients who reported cleaning their injection site prior to injecting at first visit and at follow-up. At first visit 64% of the clients reported cleaning their injection site, this increased to 84% at follow-up.

Table 5.11 Clean Injecting Site

Clean Skin	First Visit		Follow-Up	
	n	*%*	*n*	*%*
Yes	147	40	206	56
No	219	60	163	44
Total	366	100	370	100

Table 5.12 illustrates that there were significant changes in the number of clients who reported such behaviour (McNemar x^2=23.2; p<0.001). Ninety six clients, or 44% of those who reported that they did not clean their injecting site at first visit (n=132), reported that they always did so at follow-up.

Table 5.12 Changes in Cleaning Injecting Site

First Visit	Follow-Up Visit	
	Don`t Clean Site	Clean Site
Clean Site (*147*,40%)	(*39*,11%)	(*108*,29%)
Don't Clean Site(*219*,60%)	(*123*,34%)	(*96*,26%)

Missing Observations=4

As discussed in detail in the previous chapter the lending and borrowing of used injecting equipment differs markedly in terms of personal risk. The Health Promotion Unit aims to eliminate, as far as possible, both of these risky behaviours. **Table 5.13** illustrates that at follow-up there was a reduction in the percentage of clients who reported the recent borrowing of injecting equipment. At first visit 23% of clients reported borrowing used injecting equipment in the previous four weeks, while only 15% of the follow-up clients reported such borrowing.

Table 5.13 Borrowed Injecting Equipment

Borrowed Equipment	First Visit		Follow-Up	
	n	*%*	*n*	*%*
Yes	85	23	55	15
No	278	77	312	85
Total	363	100	367	100

Analysis revealed that there was a significant change in the number of clients who reported borrowing injecting equipment at follow-up, compared with rates of borrowing among first visit clients (McNemar x^2=10.11; p<0.01). **Table 5.14** illustrates that 60 clients, or 71% of those who reported borrowing used injecting equipment at first visit (n=85), did not engage in this activity in the four weeks prior to follow-up. However, 29 clients or 11% of those who did not borrow used injecting equipment at first visit (n=275), reported doing so at follow-up. As discussed in detail in Chapter Four the sharing of injecting equipment is a complex behaviour, not inevitably eliminated by increased availability of injecting equipment.

Table 5.14 Changes in Borrowing Behaviour

First Visit	Follow-Up Visit	
	No Borrowing	Borrowing
Borrowing (*85*,24%)	(*60,*17%)	(*25*,7%)
No Borrowing (*275*,76%)	(*246*,68%)	(*29*,8%)

Missing Observations =10

Table 5.15 shows the percentage of clients who reported lending their used injecting equipment at first visit and at follow-up. It illustrates that 15% of clients reported lending used injecting equipment at first visit and this dropped to 9% at follow-up. As the lending rates exhibited by the population as a whole at first visit were less than the borrowing rates, a less dramatic change in this activity occurred at follow-up.

Table 5.15 Lending Injecting Equipment

Lent Equipment	First Visit		Follow-Up	
	n	*%*	*n*	*%*
Yes	56	15	33	9
No	309	85	335	91
Total	365	100	368	100

Nonetheless, **Table 5.16** shows that there was a significant change in the numbers of clients reporting the recent lending of used injecting equipment (McNemar x^2=7.93; p<0.01). Forty two clients, or 76% of those who reported lending used injecting equipment at first visit (n=55), had ceased engaging in this activity by follow-up. Alternatively, 19 clients or 6% of those who reported not lending at first visit, had lent injecting equipment in the four weeks prior to follow-up.

Table 5.16 Changes in Lending Behaviour

First Visit	Follow-Up Visit	
	No Lending	Lending
Lending (*55*,15%)	(*42*,12%)	(*13*,3%)
No Lending (*308*,85%)	(*289*,80%)	(*19*,5%)

Missing Observations=7.

At first visit and follow-up, clients were also asked about the sharing of injecting paraphernalia (i.e. spoons and filters), in the four weeks prior to contact with the Unit. **Table 5.17** illustrates that at first visit 54% of the clients reported sharing injecting paraphernalia, at follow-up 53% of the clients reported such behaviour. Analysis revealed that there was no significant change in the percentage of clients reporting the sharing of injecting paraphernalia at first visit and follow-up. Nevertheless, 36% of those who reported sharing paraphernalia at first visit (n=194) had ceased by follow-up and 41% of those who reported not engaging in such activity at first visit (n=165) did so at follow-up.

Table 5.17 Sharing Injecting Paraphernalia

Injecting Paraphernalia	First Visit		Follow-Up	
	n	*%*	*n*	*%*
Yes	197	54	194	53
No	166	46	172	47
Total	363	100	366	100

5.3.3 Sexual Risk Behaviour

The Health Promotion Unit aims to promote safer sexual behaviour. To this end it advocates the use of condoms among all clients attending the Unit. As illustrated in the previous chapter this is particularly, though not exclusively, an issue among clients who have sexual partners who are injecting drug users. In this section the sexual activity of the 370 clients who represented at the three month follow-up period is examined, and a comparison made between their behaviour at first and follow-up. Analysis revealed that there was no significant change in the number of clients who reported being sexually active at first visit and follow-up. At first visit 73% of the sample reported being sexually active this increased slightly to 79% at follow-up.

Table 5.18 illustrates that the percentage of clients who reported having a regular sexual partner did not change much over the three month time period. At first visit 61% of clients reported having a regular sexual partner, this increased slightly to 64% at follow-up. Further analysis revealed that there was no significant difference in the proportion of clients reporting changes in whether they have a regular sexual partner. However, 50 clients, or 23% of those who reported having a regular sexual partner at first visit (n=223), did not at follow-up. On the other hand, 61 clients or 44% of those who did not have a regular sexual partner at first visit (n=140), reported having a regular partner at follow-up.

Table 5.18 Regular Sexual Partners

Regular Sexual Partner	First Visit		Follow-Up	
	n	*%*	*n*	*%*
Yes	223	61	235	64
No	140	39	133	36
Total	363	100	368	100

Clients were asked whether they had a regular sexual partner who was an injecting drug user. There was no difference in the percentage of clients (32%) who reported this at first visit and follow up. However, analysis revealed that there were individual changes which were statistically significant (McNemar x^2=5.19; p< 0.05). **Table 5.19** shows that 49 clients, or 45% of those who reported having an IV partner at first visit (n=109), did not at follow-up. On the other hand 28 clients, or 12% of those who reported not having an IV partner at first visit, reported having an IV partner at follow-up.

Table 5.19 Changes in Injecting Sexual Partner

First Visit	Follow-Up Visit	
	No IV Partner	IV Partner
IV Partner (*109*,32%)	(*49*,14%)	(*60*,18%)
No IV Partner (*227*,68%)	(*199*,59%)	(*28*,9%)

Missing Observations = 34.

Table 5.20 illustrates the percentage of clients who reported using condoms at first visit and at follow-up. Sixty two percent of clients reported that they never used condoms at first visit, this dropped to 57% at follow-up[21]. Further analysis reveals that the changes in reported condom use were not statistically significant (McNemar x^2=2.25; p<0.13). **Table 5.21** illustrates that 73 clients, or 33% of those who reported never using condoms at first visit (n=222), reported using them at follow-up. However Table 5.21 also shows that in addition condom use changed in the other direction, in that 55 clients, or 40% of those who reported using condom at first visit (n=138) reported not using them at follow-up.

Table 5.20 Condom Use

Condom Use	First Visit		Follow-Up	
	n	*%*	*n*	*%*
Uses Condoms	139	38	159	43
Never	224	62	208	57
Total	363	100	367	100

Table 5.21 Changes in Condom Use

First Visit	Follow-Up Visit	
	Never	Uses Condoms
Uses Condoms(138,38%)	(*55*,15%)	(*83*,23%)
Never (222,62%)	(*149*,42%)	(*73*,20%)

Missing Observations=10

In the previous chapter it was illustrated that clients who had a regular sexual partner were significantly more likely to report never using a condom. Analysis was carried out on the data in an effort to determine whether clients who had regular partners changed their condom use. **Table 5.22** illustrates that changes in reported condom use among this sub-section of the population were not statistically significant (McNemar x^2=2.08; p<0.14). However, 41 clients, or 29% of those who reported not using condoms at first visit (n=143), reported using them at follow-up.

[21] The variable condom use was recoded to form a dichotomous variable for the McNemar analysis. Accordingly, if an individual reported using a condom sometimes or never, due to the continued level of risk behaviour, they were classified as not using condoms.

Table 5.22 Changes in Condom Use with Regular Sexual Partner

First Visit	Follow-Up Visit	
	Never	Uses Condoms
Use Condom (77,35%)	(*28*,13%)	(*49*,22%)
Never (*143*,65%)	(*102*,46%)	(*41,*19%)

5.3.4 Treatment and Medical Contact

As illustrated in the previous chapter only 21% of all first visit clients (n=1337) reported being currently in contact with any other drug treatment service. Reported levels of contact with medical services were substantially higher among first visit clients (58%). The Health Promotion Unit aims to increase clients' contact with both drug treatment and medical services. To this end clients are often referred on to other services. In this section, clients' reported contact with other services are examined, and changes in such contacts, over the time period of investigation, analysed.

Table 5.23 illustrates the percentage of clients who reported being in contact with other drug treatment services at first visit and at follow-up. At the point of first contact 20% of the clients reported being in contact with other drug treatment services, this increased to 26% at the three month follow-up period. Analysis revealed that the change in the proportion of clients reporting contact with other drug treatment services between first visit and follow-up were not statistically significant. Nevertheless, 67 clients, or 23% of those who reported no contact with any other drug treatment service at first visit (n=294), reported such contact at follow-up.

Table 5.23 Contact with Other Drug Treatment Services

Treatment Contact	First Visit		Follow-Up	
	n	*%*	*n*	*%*
Yes	75	20	95	26
No	295	80	274	74
Total	370	100	369	100

At both first visit and follow-up all clients are asked whether they have undergone a detoxification in the previous three months. **Table 5.24** shows that over half of the clients (55%) reported at first visit having undergone a detoxification in the previous three months, compared with 25% of the clients at follow-up. Analysis revealed that there was a significant change in the number of clients reporting having had a detoxification at follow-up visit (McNemar x^2=66.96;p<0.01). This is due to the fact that as illustrated in **Table 5.25** the 148 clients who reported having undergone a detoxification in the three months prior to their first visit (n=204), had not undergone another detoxification by follow-up. However, it is worth noting that 36 clients, or 22% of those who reported not having undergone a detoxification at first visit (n=165), reported having had one prior to their follow-up visit. This result is not surprising, as in order for clients to attend the Health Promotion Unit it is generally accepted that they must be active drug users. In short, one would expect that if clients were detoxifying they would not be attending the Unit. The suggestion is that the group of follow-up clients are self selecting, in that clients who have detoxified between first visit and follow-up are less likely to represent at the Unit.

Table 5.24 Previous Detoxification

Detoxification	First Visit	Follow-Up

	n	*%*	*n*	*%*
Yes	205	55	92	25
No	165	45	277	75
Total	370	100	369	100

Table 5.25 Changes in Detoxification

First Visit	**Follow-Up Visit**	
	No Detoxification	Detoxification
Detoxification (*204*,55%)	(*148*,40%)	(*56*,15%)
No Detoxification (*165*,45%)	(*129*,35%)	(*36*,10%)

Missing Observations=1

In order to promote contact with medical services, all clients who do not have a medical card and are entitled to one, receive the appropriate application form at the Health Promotion Unit. **Table 5.26** shows that at first visit 51% of the clients reported having a medical card, this increased to 54% at follow-up. Although the changes in the proportion of clients reporting having a medical card at follow-up were not statistically significant, 48 clients, or 27% of those who had no medical card at first visit (n=178), reported having one by follow-up.

Table 5.26 Medical Card Holders

Medical Card	**First Visit**		**Follow-Up**	
	n	*%*	*n*	*%*
Yes	187	51	200	54
No	178	49	166	46
Total	365	100	366	100

Table 5.27 illustrates the number of clients who reported having had some type of medical contact in the three months prior to first visit and follow-up. At first visit 56% of the clients reported contact with medical services; this increased slightly to 57% at follow-up. On the other hand **Table 5.28** shows the nature of these changes in reported medical contact. Although these changes were not statistically significant, this table illustrates that 77 clients, or 48% of those who did not report any medical contact at first visit (n=161), reported such contact at follow-up.

Table 5.27 Medical Contact

Medical Contact	**First Visit**		**Follow-Up**	
	n	*%*	*n*	*%*
Yes	206	56	212	57
No	161	44	158	43
Total	367	100	370	100

Table 5.28 Changes in Medical Contact

First Visit	**Follow-Up Visit**	
	No Medical Contact	Medical Contact
Med. Contact (*206*,56%)	(*74*,20%)	(*132*,36%)
No Med. Contact (*161*,44%)	(*84*,23%)	(*77*,21%)

Missing Observations=3

Promoting medical contact also entails encouraging clients to engage in specialist contact such as having a HIV test, and receiving the hepatitis B vaccination. **Table 5.29** illustrates that at first visit 42% of clients reported having had a HIV test in the previous three months. At follow-up 24% of the clients reported having had the test. **Table 5.30** shows the nature of the changes in clients' reporting having had the test. Thirty six clients, or 18% of those who reported not being tested in the three months prior to their first visit (n=203), had done so by follow-up. The majority of clients who reported having had a HIV test in the three months prior to first visit, were not tested again in the three months prior to follow-up.

Table 5.29 HIV Test

HIV Test	First Visit		Follow-Up	
	n	*%*	*n*	*%*
Yes	151	42	89	24
No	206	58	277	76
Total	357	100	366	100

Table 5.30 Changes in Reported HIV Test

First Visit	Follow-Up Visit	
	No HIV Test	HIV Test
HIV Test (*150*,42%)	(*100*,28%)	(*50*,14%)
No HIV Test (*203*,58%)	(*167*,48%)	(*36*,10%)

Missing Observations=17

Regarding the hepatitis B vaccination **Table 5.31** illustrates that 16% of the first visit clients reported having had the vaccination in the three months prior to their first visit. At follow-up 18% of the clients reported having had the vaccination prior to follow-up. Although the changes in reportedly having had a vaccination were not statistically significant 31 clients, or 10% of those who reported not having had a vaccination at first visit (n=301), reported having had one at follow-up. Moreover, 32 clients or 55% of those who reported having had a vaccination at first visit (n=58), also reported having had the vaccination in the three months prior to follow-up. This is primarily due to the fact that the vaccination against hepatitis B consists of a course of three injections over a six month time period.

Table 5.31 Vaccination Against Hepatitis B.

Vaccination Hep B.	First Visit		Follow-Up	
	n	*%*	*n*	*%*
Yes	58	16	66	18
No	303	84	302	82
Total	361	100	368	100

5.3.5 Health and Well Being

As discussed in Chapter Three a subjective health assessment was included in the first visit and follow-up intervention sheets. In this section changes in clients' physical and mental health are explored. Analysis revealed that there were no significant changes in the number of clients who reported having hepatitis B, hepatitis C or jaundice between first visit and follow-up. However, a number of clients at follow-up did report being affected by the aforementioned conditions, who did not at first visit. For example 11 clients, or 3% of those who reported not having hepatitis B at first visit (n=319) reported having it at the three month follow-up. Similarly, 24 clients or 8% of those who reported not having hepatitis C at first visit (n=285) reported the symptoms of hepatitis C at follow-up.

Table 5.32 illustrates the changes in reported physical health complaints over the time period under investigation. This table shows that there was a significant change in the number of clients reporting weight loss over the three month follow-up period. Eighty six clients or 40% who reported weight loss at first visit (n=215) did not report this at follow-up. Moreover, 68 clients or 56% of those who did not report weight loss at first visit (n=121), did not report any deterioration in the weight at follow-up.

Table 5.32 Changes in Physical Health Complaints

Physical Complaint	First Visit % (n)	Follow-Up % (n)	x^2	p Value
Weight Loss	64(221)	54(195)	7.36	<0.01*
Abscesses	16(56)	17(62)	0.22	<0.6
Insomnia	70(245)	69(250)	0.01	<0.9
Overdose	16(46)	13(46)	0.91	<0.34

There were a number of changes in clients' mental health complaints over the time period under investigation. **Table 5.33** illustrates that there was a drop in the number of clients who reported suffering from all mental health complaints, between first visit and follow-up. For example Table 5.33 shows that 65% of clients at first visit reported suffering from depression, this dropped to 58% at follow-up. Moreover, 70 clients or 31% of those who reported suffering from depression at first visit (n=224), did not report this at follow-up. Table **5.33** illustrates that there was a 9% drop in reported rates of anxiety at follow-up. Further analysis revealed that 77 clients or 44% of those who reported suffering from anxiety at first visit (n=177), did not at follow-up. Not only was there a decrease in the percentage of clients reporting this mental health complaint, Table 5.33 also shows that there was a sizable drop in the percentage of clients reporting suicidal tendencies at follow-up. Forty nine clients or 68% of those who reported feeling suicidal at first visit (n=72), were not at follow-up.

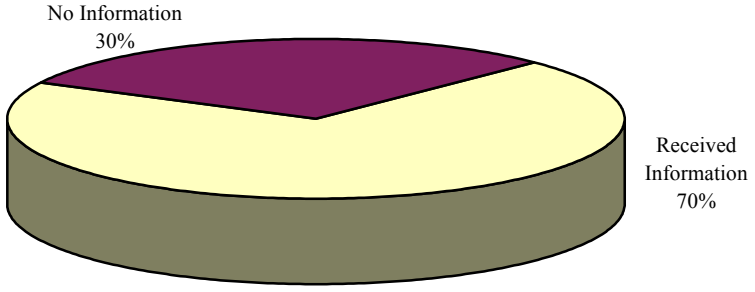
Table 5.33 Changes in Mental Health Complaints

Health Complaint	First Visit % (n)	Follow-Up %(n)	x^2	p Value
Depression	65(228)	58(210)	5.48	<0.01*
Anxiety	53(182)	44(158)	4.46	<0.05*
Unable to Cope	52(182)	47(170)	3.67	<0.05*
Isolated	49(168)	43(155)	2.4	<0.12
Suicidal	27(76)	15(50)	7.14	<0.01*

5.3.6 Advice and Information

In order to encourage behaviour change in clients it is essential that the Health Promotion Unit provide clients with the necessary advice and information to enable them to make the appropriate changes. To this end, the Unit aims to provide all clients with information on safer drug use, safer injecting techniques and safer sex. All follow-up clients were asked whether they received this information over the three months they had been attending the Health Promotion Unit. **Figure 5.3** illustrates that the majority of clients (70%) reported that the Unit provided them with information on safer injecting techniques.

Figure 5.3 Information on Safer Injecting Techniques



Likewise, **Figure 5.4** shows that 71% of the follow-up clients reported that they had received information on safer drug use. While **Figure 5.5** illustrates that the majority of clients reported receiving information specifically on safer sex. Unsurprisingly analysis revealed that there was a relationship between a clients' reported receiving information on safer drug injecting techniques and safer drug use. In short, clients who reported receiving information on safer drug use were significantly more likely to report receiving information on safer injecting techniques (x^2=112.15; df=2; p<0.001). Equally clients who reported receiving information on safer drug use were significantly more likely to report that they received information on safer sex. The suggestion is that the majority of follow-up clients were satisfied with the advice and information provided by the Health Promotion Unit. However, there exists a small minority of clients who were not satisfied with the information provided by the Unit, and these clients were proportionally more likely to report that the Unit could be improved upon, as will be discussed later.

Figure 5.4 Information on Safer Drug Use

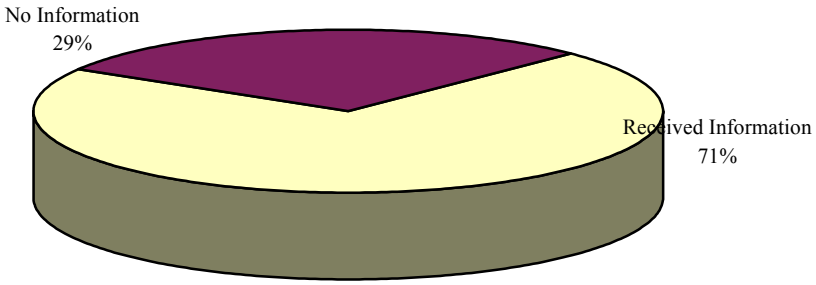
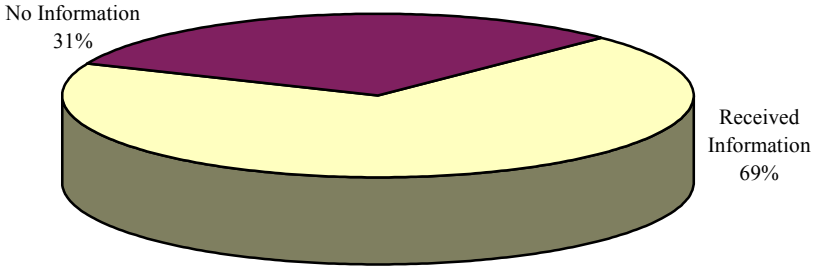


Figure 5.5 Information on Safer Sex



5.4 SELF REPORTED CHANGES IN BEHAVIOUR

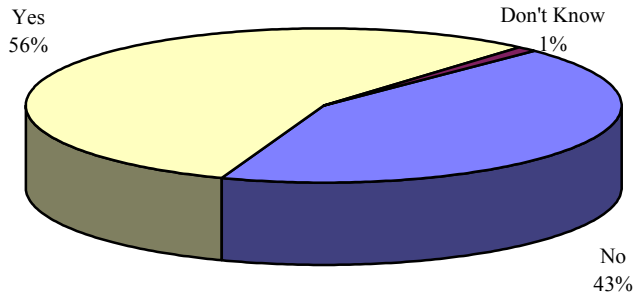
As discussed previously two methods of measuring clients' behaviour changes over the three month follow-up period were employed. One method, as presented above, was by comparing clients self

reported baseline behaviour at the point of first contact with their behaviour at follow-up. The second method permitted a more subjective analysis of behaviour change, by asking clients whether they believed that their behaviour had changed since first attending the Unit. In this section clients' self reported behaviour changes are examined.

5.4.1 Drug Use

All follow-up clients were asked whether they believed that their drug use had changed in any way since they first attended the Health Promotion Unit. **Figure 5.6** below illustrates that fifty six percent of the follow-up clients (n=207) reported changes in their drug use since attending the Health Promotion Unit.

Figure 5.6 Self-Reported Changes in Drug Use



The majority of the 207 clients who reported changes in their drug use, reported positive changes. These self reported changes in drug use can be broken down into the categories outlined in **Table 5.34**;

Table 5.34 Categories of Behaviour Change: Drug Use

- 58% reported a reduction in their drug use
- 23% reported an increase in their drug use
- 7% reported cessation of drug use for a period of time
- 3% reported using safer methods of drug use
- 5% reported changing their primary drug to physeptone
- 4% reported an increase in knowledge re: safer drug use

Table 5.34 illustrates that over half of the clients (58%) reported that they felt that their drug use had reduced since first attending the Health Promotion Unit. Moreover, 7% of clients reported that they had stopped using drugs for a period of time, between first visit and follow-up. On the other had 23% of the clients reported that there had been an increase in their drug use over the three month follow-up period. Finally Table 5.34 confirms the previously identified changes to physeptone use illustrated in Table 5.4.

On the follow-up questionnaire a section was provided which enabled clients to state in their own words how they felt their drug using behaviour had changed over the three month follow-up period. **Figure 5.7** presents some of the comments made by clients. This figure illustrates the diversity of behaviour changes reported by clients. The selection of comments from clients presented in Figure 5.7 illustrates that behaviour changes ranged from changes in choice of primary drug to period of being drug free. The information provided in Figure 5.7 highlights how important minor behaviour changes are in promoting harm reduction among the client group.

Figure 5.7 Clients' Reported Changes in Drug Use

"I've stopped using coke since coming here"-*21 yr-old male student*

"I've cut down a lot, I was on three or four bags of heroin a day now I'm only on one bag a day"-*Male drug user staying in a hostel in Dublin 8*

'Now I'm on phy and not injecting anymore"-*Male client who had been injecting heroin for 17 years*

"I'm not using regularly anymore'-*Mother of three from the North Inner City*

"I stopped using for a while to clear my head"-*24-yr-old male seeking methadone programme*

"I'm smoking more but injecting less"-*Male poly drug user*

"My heroin habit has dropped, I have only had about six turn on's in the last month and I'm now on phy"-*Male drug user who at first visit injected 4 or more times a day*

"Now I'm only dabbling"-*39-yr-old male from Co. Wicklow*

"I have been drug free for the last 6 weeks"-*26-yr-old female now on physeptone*

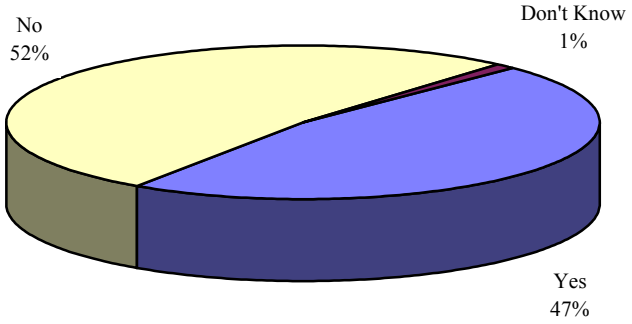
"I'm using less heroin than when I came here first- I'm not strung out now"-*Street worker who has been injecting for the last six months*

"I've gone back to smoking and cut down on my habit"-*44-yr-old male who has been injecting on/off for 25 years*

5.4.2 Injecting Behaviour

In addition, all follow-up clients were asked whether they believed that their injecting practices had changed in any way since they first attended the Health Promotion Unit. **Figure 5.8** illustrates that 47% (*n*=174) of clients did report that their injecting practices had changed.

Figure 5.8 Self Reported Changes in Injecting Behaviour



As with the changes in drug use, the majority of clients who reported changes in their injecting practices, reported positive changes. **Table 5.35** illustrates the categories of behaviour change

Table 5.35 Categories of Behaviour Change: Injecting Practices

- 38% reported employing more 'hygienic' injecting practices
- 24% reported being more 'careful' when injecting

- 19% reported having learnt how to inject correctly
- 9% reported increased awareness of safer practices
- 6% reported rotating their injecting site
- 4% reported no longer sharing injecting equipment

Table 5.35 illustrates that thirty eight percent of the clients reported that their injecting behaviour had changed, in that as a result of attending the Health Promotion Unit they employed more hygienic injecting methods. This included for example using swabs prior to injecting and cleaning injecting equipment. A further 19% of the clients reported that they had learnt how to inject properly. As illustrated in Chapter Four a number of clients did not know how to inject themselves. As a learnt behaviour, novices often use inappropriate techniques, or as illustrated previously get other people to inject them. In terms of safer injecting techniques it is better for drug users to be in control of the situation and inject themselves. Finally, **Figure 5.9**presents some of the statements made by clients regarding changes in their injecting practices, since first visit.

Figure 5.9 Clients' Reported Changes in Injecting Practices

"I've learnt how to inject myself now"-*19-yr-old female who at first visit was being injected by her partner*

"I'm not sharing works anymore"-*Rough sleeper in Dublin Inner City*

"I am now more aware of viruses such as Hep B and Hep C"-*Female Client who engages in high risk sexual behaviour*

"Since I have been coming here I have always used citric"-*35-yr-old client who has been injecting for 9 years*

"I now understand the risks of sharing"-*20-yr-old male who uses with others in a squat*

"I've found advice on safer injecting practices very good"-*27-yr-old female who reported having never attended any drug service at first visit*

"I won't share spoons and filters now"-*32-yr-old male who has recently commenced injecting following a drug free period of 5 years*

"Before I used to blow my veins, now I know how to inject safely"-*26-yr-old male who at first visit reported the problem of abscesses*

"I've stopped injecting for a while so I can clean up my arms"-*Male drug user who has recently initiated IV drug use*

"I use swabs now and I'm more aware of cleaning before injecting"-*22-yr-old drug user who reported at first visit not cleaning site before injecting*

"I use clean 'works' all the time and always clean my injecting site with swabs "-*32-yr-old male staying with friends and relatives*

"I take more care of myself"-*23-yr-old female from Dublin 8*

5.5 DISCUSSION

In this chapter, clients' baseline self reported risk behaviour was compared with their behaviour at follow-up. The ultimate aim was to evaluate the effectiveness of the Merchant's Quay Project's Health Promotion Unit in terms of client outcomes - or changes in clients' behaviour over time. As discussed previously in this Report, measuring behaviour change in individuals is fraught with difficulties. To summarise, any behaviour change is a result of the interaction of three factors; the person, the environment and the intervention. In theory for an identified behaviour change to be due entirely to an intervention, all other variables to do with the person and his/her environment would have to remain constant. This is of course never the case; various extraneous factors operate at the same time as any given intervention, which will invariably have an impact on behaviour change. Moreover, a wide variety of interventions will be in operation in any given city, and it will rarely be possible to identify the exact contribution of any one of them.

Over the two years, while the evaluation of the Merchant's Quay Health Promotion Unit was being conducted a number of changes were occurring in Dublin, as regards drug treatment. For example, the last few years have seen an increase in community based responses, largely funded by Local Drug Task Forces. This in turn has lead to an increase in the availability of prescribed physeptone. No doubt these changes have had an impact on the behaviour of injecting drug users in Dublin, and the impact of such interventions is largely inseparable from that of the Health Promotion Unit. The positive behaviour changes identified in this Chapter are no doubt a result of a combination of factors, many external to the Health Promotion Unit. However the fact that follow-up clients consistently reported positive outcomes,

suggests that the Health Promotion Unit contributed to these changes. In short, while all behaviour changes cannot be solely attributed to attending the Health Promotion Unit, international research has consistently shown that attending a syringe exchange impacts on drug injectors' risk behaviour. What follows is a summary of the key outcomes identified in this Chapter.

5.5.1 Drug Use

Many of the objectives of the Health Promotion Unit are directed at changing clients' drug using behaviour. This includes reducing the use of risky combinations of drugs, changing routes of administration, and reducing the frequency of use of drugs. In short, although the ultimate aim of the Unit may be the cessation of intravenous drug use, all behaviour changes in this direction, no matter how insignificant they may seem, are beneficial. The analysis in this chapter illustrated that the Health Promotion Unit has been effective in impacting on clients' drug use.

It was shown that at follow-up there was a significant reduction in the percentage of clients reporting the use of heroin as their primary drug. At first visit 94% of clients reported the use of heroin, this dropped to 87% at follow-up. Moreover, there was a corresponding increase in the number of clients who reported the use of physeptone as their primary drug at follow-up. Analysis also revealed a significant change in the number of clients who reported injecting their primary drug at first visit. Thirty six clients or 11% of those who reported IV drug use at first visit, had ceased to administer their primary drug intravenously at follow-up. This change in IV drug use at follow-up is no doubt related to changes in choice of primary drug.

As the aforementioned changes in drug use are relatively dramatic, the suggestion is that they are largely due to external factors, in particular, the increase in the number community based treatment programmes prescribing physeptone. However, the suggestion is that, as the level of treatment contact was so low at first visit (21%), the Health Promotion Unit played a significant role in referring clients on to other treatment services where prescribed physeptone is available.

5.5.2 Injecting Practices

As illustrated previously the Health Promotion Unit aims at impacting upon clients' injecting practices. To this end, the Unit strives not only to reduce the sharing of injecting equipment and paraphernalia, but also to encourage the adoption of safer injecting practices among the client group. The analysis presented in this chapter illustrates that the Unit has proved largely effective in this regard. Moreover, the quantitative data presented in this Chapter supported the comparative analysis of baseline and follow-up data collected from clients.

Firstly, the analysis in this chapter illustrated that over the three month follow-up period there were significant changes in clients' injecting practices. More specifically, at follow-up there was a substantial reduction in the percentage of clients who reported that they did not inject themselves. At first visit 24% of clients reported that they did not inject themselves, this decreased to 16% at follow-up. Injecting is a learnt behaviour. As many of the first visit clients attending the Health Promotion Unit were young, recent injectors, they were not yet accomplished at administering an injection. At follow-up clients reported being more hygienic in their injecting practices. For example, there was an increase in the number of clients who reported cleaning their injecting site prior to IV drug use. At first visit 40% of clients reported this, compared with 56% at follow-up.

It has been shown that there was a significant reduction in the proportion of clients who reported the recent borrowing of injecting equipment at follow-up. At first visit 23% of the client group reported borrowing used injecting equipment; this dropped to 15% at follow-up. More detailed analysis demonstrated that 60 clients who reported borrowing used injecting equipment at first visit, reported not engaging in this behaviour in the month prior to follow-up. In other words, 71% of those who reported borrowing used injecting equipment at first visit had eliminated this behaviour by follow-up. There were also significant changes in the proportion of clients who reported the recent lending of used injecting equipment. At first visit 15% of the client group reported lending others their used injecting equipment; this dropped to 9% at the three month follow-up intervention. Put another way, 76% of the clients who reported lending other their used injecting equipment at first visit (n=42), did not engage in this behaviour in the four weeks prior to follow-up. However, the follow-up clients did not report similar changes in the sharing of injecting paraphernalia. Over half the client group reported the

sharing of spoons and filters at first visit (54%) and at their three month follow-up visit (53%). This suggests that there is a need to stress the risk of viral infection as a result of the sharing of injecting paraphernalia such as spoons and filters with the clients attending the Unit.

5.5.3 Sexual Behaviour

As discussed in Chapter Two, traditionally syringe exchanges have concentrated on injecting risk behaviour, less attention has been paid to sexual risk behaviour. Moreover, international research suggests that changing sexual behaviour is more difficult. A combination of these two factors has resulted in little or no changes in the sexual behaviour of drug users attending syringe exchanges. Nonetheless, the Health Promotion Unit aims to change clients' sexual behaviour, more specifically to promote the use of condoms. At first visit 62% of clients reported never using condoms; this decreased by 5% at the three month follow-up. The data presented in this chapter illustrated that there was also an increase in condom use among those least likely to use them, that is individuals with a regular sexual partner. Forty one clients or 29% of those who reported never using condoms at first visit, reported using them at follow-up. One issue of concern to emerge from this research is the high level of movement in and out of 'regular sexual relationships'. Fifty clients, or 23% of those who reported having a regular sexual partner at first visit did not at follow-up. While, 61 clients or 44% of those who did not have a regular sexual partner at first visit reported having a regular partner by follow-up. This has implications in terms of condom use and transmission of HIV and hepatitis. As illustrated in Chapter Four, individuals who were in a regular sexual relationship were significantly more likely than their counterparts to report never using condoms. Thus the large number of clients moving in and out of such relationship, while not using condoms increases the likelihood of transmission of HIV and hepatitis.

5.6 SUMMARY

In this chapter, it has been highlighted that the Health Promotion Unit was effective in not only providing an appropriate service to attendees but also in producing the desired outcomes. It illustrates that the Health Promotion Unit was successful in initiating contact with 'hard to reach' injecting drug users such as; women, young injectors and recent injectors. Features of the Health Promotion Unit such as, the inner city geographical location, high staff ratio and the provision of refreshments, allow for the drop in nature of the service, in which high levels of social interaction occurs among attendees. This no doubt has a major impact on the effectiveness of the Unit, as to what extent it remains unknown. It is also worth noting that the evaluation process did not interfere with the daily activities of the Unit and it not only produced positive outcomes but also a profile of attendees.

In summary, the Unit has the ability to reduce the frequency of injecting, the incidence of sharing and to promote cleaner injecting practices and behaviour. To a lesser extent, it has the ability to increase condom use and more importantly to increase use among those who reported having a regular sexual partner. In summary, there were notable changes in the behaviour of follow-up clients according to each of the various outcome domains; drug use, injecting risk behaviour, sexual risk behaviour, contact with services and health and well-being. However, there were less significant changes in regard to the sharing of injecting paraphernalia. While it is recognised that any behaviour change is as a result of the interaction of three factors: the person, the environment, and the intervention, the fact that the Health Promotion Unit is consistently recording favourable outcomes would lead one to assume that the Unit is having a positive impact on clients' behaviour. The main outcomes are summarised in Table 5.36 below;

Table 5.36 Main Outcomes

Drug Use and Injecting Practices	12% reduction in nos. using heroin 7% increase in nos. using physeptone 11% reduction in nos. injecting 67% reduction in nos. injecting four or more times a day 64% increase in nos. self injecting 44% increase in nos. employing cleaning practices

	71% reduction in nos. borrowing injecting equipment 76% reduction in nos. lending injecting equipment 33% increase in nos. using condoms 29% increase in nos. using condoms with their partner
Health and Well Being	23% increase in nos. contacting other drug services 27% increase in nos. having a medical card 48% increase in nos. contacting medical services 18% increase in nos. having a H.I.V test 10% increase in nos. having a hepatitis B vaccination 22% increase in nos. having a detox 72% reduction in nos. overdosing 44% reduction in nos. feeling anxious 42% reduction in nos. feeling isolated 62% reduction in nos. reporting abscesses 40% reduction in nos. reporting weight loss

CHAPTER 6
SUMMARY AND RECOMMENDATIONS

The Merchant's Quay Project commenced the evaluation of it's Health Promotion Unit in 1997 in order to determine the effectiveness of the service provided to its clients. To date, no similar evaluation has been undertaken in Ireland. The data gathered over the 18 months of the evaluation process, not only provided the desired outcome measures but also permitted a detailed profile of injecting drug users in Dublin. In this section a summary of the main findings and their implications are located within a broader social context.

6.1 SUMMARY

Harm Reduction

1. Harm reduction has proved successful as a public health response to drug use because it emphasises practical and achievable objectives. Moreover, it is neutral about the long term goals of an intervention.

The principle feature of harm reduction is the acceptance of the fact that all drug users cannot be expected to cease their drug use at the present time (Single,1995). It presupposes that the dynamics of every day drug use are capable of modification (Burt and Stimson, 1993), and that any change no matter how small, is significant. This study has shown that harm reduction strategies, more specifically syringe exchange programmes, are an effective means of reducing the levels of risk behaviour among those not prepared to cease using drugs. The fact that 1,337 new attendees presented at the Health Promotion Unit over an 18 month period, illustrates the demand for such a service. Moreover, the appeal of such a service lies primarily in the fact that it aims to reduce risk behaviour without necessarily reducing drug use.

Syringe Exchanges: A Model of Behaviour Change

2. Presentation at a syringe exchange provides drug injectors with the knowledge and means necessary to reduce risk behaviour.

Syringe exchanges operate on a *knowledge* and *means* model of behaviour change. This is based on the assumption that in order to change behaviour, people need to know the reasons why such changes are necessary and be provided with the means to make these changes. This study illustrates that syringe exchanges can provide the knowledge (information on safer injecting) and means (i.e. sterile syringes) necessary to promote and sustain behaviour change among injecting drug users.

International research shows high levels of accurate knowledge about HIV transmission among injecting drug users (Burt and Stimson, 1993). However, the findings of this study indicate that levels of knowledge vary according to routes of transmission. The suggestion is that individuals are very aware of the risks of transmission via sharing of injecting equipment but lack accurate knowledge on other routes (ie. paraphernalia and sexual transmission). While syringe exchanges provide the means to change behaviour by increasing the 'general availability' of clean injecting equipment, 'situational availability' is not addressed by the majority of syringe exchanges. For example, injecting drug users do not have access to clean injecting equipment in the evenings[3] or at weekends in Dublin. Consequently, forward planning is required by injecting drug users, in order to prevent any possible need to share.

However research has shown that there is a gap between knowledge of HIV transmission and the continuation of high risk behaviour, suggesting that even with the knowledge and means to change, there may be further obstacles to risk reduction. These include for example, social situations between friends and acquaintances, other situational contexts and lifestyle factors (Donoghoe *et al*, 1992).

Injecting Risk Behaviour

3. Syringe/needle sharing proved to be an exceptional rather than a normal occurrence. Moreover, the Health Promotion Unit was effective in reducing the levels of such behaviour. On the other hand, the reported levels of sharing injecting *paraphernalia* was high, and did not reduce over time.

This study has illustrated that the provision of sterile injecting equipment can have a positive impact on levels of sharing. At follow-up, clients were proportionately less likely to report the recent borrowing of used injecting equipment. Moreover, a reduction was also seen in the number of clients who reported recently lending used injecting equipment to others. Although the ultimate aim of any syringe exchange is to eliminate sharing, this is not possible without identifying the social, environmental and cultural context within which this behaviour occurs. For example, international research has shown that living with an injecting drug user (Darke *et al*, 1994), homelessness (Flemen 1987; Cox and Lawless, 2000), poly-drug use (Donoghoe *et al*,1992) and cocaine use (Klee *et al*, 1990) are all predictors of injecting risk behaviour. Due to cultural differences there is a need to identify such predictors within an Irish

[3] One Health Centre in Dublin (Ballymun) is open between 6.00pm and 8.30pm one day a week.

setting. Once this has been achieved, it would be possible through a syringe exchange intervention to equip drug users with the protective factors necessary to reduce their vulnerability in such circumstances.

This study showed very high levels of sharing of injecting paraphernalia in Dublin. Over half the clients reported such behaviour. Unfortunately, the Health Promotion Unit was not successful in significantly reducing levels of reported sharing of injecting paraphernalia. Although the Unit provides the means to reduce such sharing behaviour, the suggestion is that there is a lack of knowledge among injecting drug users around the risks of such behaviour. Greater emphasis needs to be placed on the sharing of spoons and filters, and on the fact that they are identified routes of transmission of HIV and hepatitis.

Sexual Risk Behaviour

4. Most injecting drug users are sexually active and accompanying levels of risk behaviour are high. While syringe exchanges have the potential to increase levels of condom use, sustained behaviour change requires a societal response.

This research supports international studies (WHO,1993) which illustrate that the majority of drug users (75%) are sexually active. Thirty nine percent of first visit clients reported having a regular sexual partner who was not an injecting drug user and a further 25% of clients had an injecting drug using partner. Moreover, clients with regular sexual partners were significantly more likely to report never using condoms. This is compounded by the fact that this study suggests that there are high levels of movement in and out of 'regular' sexual relationships. Thirty percent of follow-up clients had moved either in or out of a regular sexual relationship within the three-month follow-up period. These findings highlight the importance of advising drug injectors about sexual risk behaviour in addition to injecting risk behaviour.

International research has shown that levels and patterns of condom use among drug users does not differ substantially among the general heterosexual population (McKeganey *et al* 1988; Donoghoe, 1992). Research has also demonstrated that syringe exchanges have failed to impact significantly on levels of condom use largely due to lack of emphasis on sexual routes of HIV transmission (Hart,1989). If knowledge, attitudes and practices regarding sexual risk behaviour were put higher on the agenda for both drug workers and drug users, more noticeable behaviour changes might be possible. However, in order to sustain such behaviour changes, changes in sexual norms and cultural contexts are required. It is essential that sexual norms cut across the drug using and non-drug using population.

Treatment Contact

5. Contact with syringe exchanges promotes contact with other services, and operates as a potential gateway into drug treatment.

The Health Promotion Unit proved successful in attracting drug users who were not currently in contact with other drug treatment services. International research has shown that those in contact with drug treatment services are more likely to adopt and sustain harm reduction strategies (Paone et al, 1995). The majority of clients (80%) reported that they were not attending any other service at first visit. The evaluation revealed that there was a 23% increase in the number of attendees reporting contact with other drug treatment services by follow-up. The fact that a high proportion (0.3) of clients were recent injectors may explain why levels of first treatment contact were so low. International research illustrates that syringe exchanges appeal primarily to older individuals (Paone *et al*, 1995), who are more established in their injecting careers (Battjes *et al*, 1992). However, the Health Promotion Unit proved successful in attracting young drug users, who have recently initiated intravenous drug use (Cassin *et al*,1998).

Health and Well Being

6. Syringe exchanges have the ability to alleviate the isolation experienced by many injecting drug users. This in turn can have a positive effect on their health and well-being.

The Health Promotion Unit offers a holistic approach to its clients, and is therefore not only concerned with risk behaviour. It is accepted that an individual's drug use will impact on his/her overall health and well-being. To this end, the Unit aims, in as far as possible, to address the physical and emotional health problems of attendees. However, as health and well-being are intertwined with quality of life, the Unit recognises that addressing such issues is gradual and takes time. The short follow-up time period employed in this study, means that dramatic changes in health and well-being were not expected.

There were no significant changes in clients reported physical health, however, it should be noted that at the same time there was no deterioration. There were more notable changes in clients emotional well-being. At follow-up clients were significantly less likely to report being depressed, suffering from anxiety and feeling unable to cope, among other complaints. This research illustrates that a syringe exchange can, by simply providing a safe place where there is somebody to talk to, improve clients well-being and overall quality of life.

6.2 RECOMMENDATIONS

This study has clearly demonstrated the effectiveness of needle exchanges as a public health initiative, while at the same time highlighting a number of deficits in service provision and policy. The process of evaluating the Health Promotion Unit contributes to, not only the daily operational issues of the service provided by the Merchant's Quay Project, but also to similar exchange programmes operating in Ireland.

Syringe exchange programmes should be conceptualised as an integral part of public health efforts to reduce HIV and hepatitis C infection among injecting drug users. They should also be part of a comprehensive approach to drug use that will improve access to drug treatment. This section presents general recommendations on improving the efficiency, effectiveness and future development of syringe exchanges as a harm reduction strategy.

Improving Access to Injecting Equipment in the Greater Dublin Area

Ensuring adequate and easy access to the supply of sterile injecting equipment is essential. There is a clear need to increase the number of syringe exchanges operating in the Greater Dublin Area as it is unrealistic to expect the existing services to cope with the potential demand. The diversity of responses in the UK, and the development of syringe exchange schemes outside drug services, may strengthen a public health campaign to prevent the spread of HIV and hepatitis infection among injecting drug users in Dublin. To this end, the following strategies which aim to supplement existing services are outlined. They have the potential to ensure 24 access and non restrictive availability of sterile injecting equipment for all injecting drug users.

- **Greater access to needle exchange services at a local and community level.**

- **The provision of strategically placed vending machines to increase the availability of injecting equipment.**
- **Increased availability of sharps bins, in publicly accessible places to ensure safe means of disposal of injecting equipment.**
- **Syringe exchanges to be extended to services other than drug agencies** (i.e. Community Health Centres, Services for the Homeless).
- **Pharmacies to be involved in the distribution of sterile injecting equipment**.
- **Mobile Services to provide needle exchanges in the evenings and at week-ends**.
- **Detached services to promote harm reduction to injecting drug users who fail to initiate and/or maintain contact with drug services**.

Service Development

In order to maximise the effectiveness of low threshold services, a more holistic approach to the needs of drug injectors must be adopted. This research highlights the diverse range of issues with which drug injectors present at a Health Promotion Unit. This is further compounded by the fact that drug injectors frequently report low levels of contact with other services. Recognising the fact that not all drug users maintain contact with syringe exchanges there is a need to develop the services available at the point of first contact. To this end the following developments in service provision are recommended;

- **Primary health care including hepatitis vaccinations, HIV and TB screening, available as an integrated part of drug service provision throughout the city.**
- **Workshops to be provided at needle exchanges and drop-in centres for injecting drug users, as a means of promoting safer injecting techniques.**
- **Development of more flexible prescribing options, to include graduated prescribing services from injectable to oral methadone.**
- **Introduction of dedicated services for the vulnerable and hard to reach injecting drug users, i.e. women and young injectors.**
- **Implementation of peer based users groups, whereby active injecting drug users utilise their knowledge and expertise in an attempt to influence current social norms and the rituals within the drug using culture.**
- **Employment of active drug users to act as health agents in the promotion of drug related harm**.
- **Provision of legal advice to form an integral part of drug service provision.**
- **Greater integration and coordination of services for marginalised groups.**
- **The provision of specialist training to all drug workers on hepatitis C transmission and safe sex practices, to ensure a more effective intervention.**

Publicity, Promotion and Information

A comprehensive public health campaign is needed to place HIV and hepatitis C on the forefront of the public health agenda. Such a campaign must include the provision of accessible, informative and relevant harm reduction material, to the general population and more specifically to injecting drug users. To help achieve this, the recommendations are;

- **Wider publicising and co-ordination of existing services.**

- **Culturally appropriate health promotion leaflets and posters aimed at injecting drug users widely distributed in targeted areas** (e.g. in drug services, homeless services, GP clinics, public toilets, pubs and clubs).
- **National awareness campaigns to promote safer sexual practices among the general heterosexual population is urgently required.**
- **Health promotion campaigns to offer positive images of drug users, rather than negative stereotypes**.

Future Research

In Ireland, there is as dearth of research on drug use and related issues. Moreover, all the research that has been carried out to date has concentrated specifically on drug users in contact with drug services. To promote harm reduction, there is a need to develop a greater understanding of the social circumstances in which such risk behaviour occurs. Furthermore, research also plays an important legitimating role in service provision and development. To this end research in the following areas needs to be undertaken;

- **Utilising control group methodology to further evaluate the effectiveness of syringe exchanges**.
- **An assessment of the effects of design features of needle exchanges (e.g. geographical location, site characteristics, opening hours, staffing levels) on the effectiveness of the service.**
- **An examination of the effectiveness of harm reduction strategies in sustaining behaviour change**.
- **An investigation into the sexual behaviour of injecting drug users.**
- **An ethnographic examination of the sharing practices and culture of injecting drug users in Dublin.**

Policy Issues

It is clear that drug use is a problem of public health, rather than a question of individual pathology. Throughout this Report harm reduction, as a public health response to injecting drug uses, has been recognised as providing a short term intervention, with long term value. It is just one approach across a continuum, which caters for the needs of drug users. At its most basic, it operates at the level of current drug using practices. It seeks within this limited context to tackle the consequences of the drug using behaviour, rather then the issue of drug use itself.

All services, whether statutory or voluntary, which deal primarily with injecting drug users must be subject to regular and reflective review. The services provided must begin and end with a vision of a comprehensive, integrated and coherent policy. To this end, the following are recommended;

- **The reduction of drug related harm explicitly stated as a primary objective of a national drug policy.**
- **Any legal restrictions in Ireland on the adoption of extensive harm reduction strategies need to be addressed.**
- **In light of the increasing numbers of under age injecting drug user, harm reduction strategies must be extended to youth services.**
- **Development of needle exchanges in prisons.**

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